IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor:	David. J. Russek
U.S. Patent No.:	8,856,030
Filed:	April 7, 2004
Issued:	October 7, 2014
For:	METHOD, SYSTEM AND SOFTWARE FOR ASSOCIATING ATTRIBUTES WITHIN DIGITAL MEDIA PRESENTATIONS
Confirmation No:	6083
Examiner:	Cameron Saadat
Art Unit:	3992

Certificate of Electronic Filing under 37 C.F.R. § 1.8
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office's electronic filing system in accordance with 37 C.F.R. § 1.6(a)(4).

Dated: November 20, 2023 Electronic Signature for MacAulay S. Rush: /MacAulay Rush/

Office of Patent Legal Administration
Commissioner for Patent Examination Policy
P.O. Box 1450
Alexandria, VA 22313-1450

PATENT OWNER'S PETITION UNDER 37 C.F.R. § 1.182 TO DENY *EX PARTE* REEXAMINATION REQUEST PURSUANT TO 35 U.S.C. § 325(d)

Dear Sir/Madam:

Pursuant to 37 C.F.R. § 1.182, Patent Owner 10Tales, Inc. ("10Tales" or "Patent Owner") respectfully requests the Director to exercise discretionary authority under 35 U.S.C. § 325(d) to deny the Request for *Ex Parte* Reexamination (Control No. 90/015,310) ("Request") of claims 1-2 of U.S. Patent No. 8,856,030 filed by TikTok Inc. of Beijing, China ("TikTok" or "Requestor").[1]

[1] This Petition is filed prior to the Office acting on the Request. Accordingly, Patent Owner has concurrently filed, pursuant to 37 C.F.R. § 1.183, a request that the Director waive the provisions

The Requestor is once again challenging the patentability of claims 1-2 of U.S. Patent No. 8,856,030 (the "Challenged Claims" of the "'030 patent") before the USPTO. Most recently, TikTok sought to invalidate the very same claims in a failed petition for *inter partes* review that was denied institution on the merits. *See* IPR2021-00476 (the "'476 IPR").

This time, TikTok seeks to leverage its most recent PTAB failure as a roadmap to backfill its past deficiencies. Its newly launched USPTO reexamination campaign seeks to invalidate the very same claims—and thus represents an impermissible "second bite at the apple." Still worse, the Requester hopes to commandeer agency resources to manufacture claim construction exhibits for its planned appeal from its string of PTAB and district court losses. The Requester, already barred from one door of the USPTO, seeks to slip into a second door for a second chance. The Office should not embrace such brazen gamesmanship years into a litigation dispute between a large Chinese company and a small U.S. company.

Denial of the Request is appropriate under § 325(d) to avoid harassment of the Patent Owner through multiple and duplicative proceedings that abuse Office resources and fail to serve the public interest.

I. FACTS

- U.S. Patent No. 8,856,030 was filed on April 7, 2004, and claims priority to Provisional Application No. 60/460,998 filed April 7, 2003, and issued on October 7, 2014.

---

of 37 C.F.R. § 1.530(a) and the second sentence of 37 C.F.R. § 1.540 on the basis that this Petition is limited to issues involving 35 U.S.C. § 325(d).

- On September 2, 2020, 10Tales filed suit against TikTok in the Western District of Texas ("Texas District Court"), asserting infringement of the '030 patent. *See 10Tales, Inc. v. TikTok, Inc.* (No. 6-20-cv-00810, W.D. Cal.).
- On February 9, 2021, TikTok filed a petition for *inter parties* review of claims 1-2 of the '030 patent. *See* IPR2021-00476, Paper 1 (Feb. 9, 2021) (the '476 Petition"). In the '476 Petition, TikTok argued that claims 1-2 were unpatentable as being obvious over WO 99/26415 ("Bar-El") in view of U.S. 2011/0219419 ("Reisman"), as being obvious over Bar-El in view of Reisman and U.S. 6,587,127 ("Leeke"), and as being obvious over Leeke in view of Reisman. *See* IPR2021-00476, Paper 1 at 3 (Feb. 9, 2021).
- On May 21, 2021, the Texas District Court suit was transferred to the Northern District of California ("California District Court"). *See 10Tales, Inc. v. TikTok, Inc.* (No. 5-21-cv-03868, N.D. Cal.).
- On August 13, 2021, the PTAB denied institution of the '476 IPR, stating, *inter alia*, that it "[did] not find Petitioner has carried its burden of showing Reisman discloses a system that retrieves user social network information from at least one source external to the presented first composite digital media display, wherein the user social network information contains one or more user attributes." *See* IPR2021-00476, Paper 13 at 18-20 (Aug. 13, 2021).
- On September 13, 2021, TikTok filed a Petitioner's Request for Rehearing in the '476 IPR, arguing that the PTAB improperly construed terms in claim element 1[g] and that Reisman teaches the "critical claim element [1G]." *See* IPR2021-00476, Paper 14.

- On December 5, 2022, the PTAB denied Petitioner's Request for Rehearing. *See* IPR2021-00476, Paper 15 (Dec. 5, 2022). The PTAB held that the Petitioner ignored the express language of independent claim 1 in arguing that "user attributes" do not need to be sourced from a social network. *Id*. at 4-5. In this regard, the PTAB stated that "the plain meaning of the 'retrieving limitation' to a skilled artisan requires the 'user attributes' to be obtained (i.e., sourced) via the retrieval of user social network information." *Id*. at 5. The PTAB further stated that the Petitioner misunderstood the August 13, 2021 Institution Decision. While the Petitioner argued that "[t]he Board's sole basis for denying the Petition is because *Reisman* purportedly failed to teach 'user attributes,'" the PTAB's Decision "determined instead that Petitioner failed to show Reisman discloses 'retrieving user social network information . . . wherein the user social network information contains one or more user attributes." *Id*. at 6 (emphasis in original).
- On October 10, 2023, TikTok filed its Request for *Ex Parte* Reexamination of U.S. Patent No. 8,856,030 in the instant proceeding.

II. THE DIRECTOR HAS THE AUTHORITY TO DENY THIS REEXAMINATION AS A MATTER OF DISCRETION

By the statute's plain language, the Director can exercise discretion under 35 U.S.C. § 325(d) and reject TikTok's Request. The second sentence of 35 U.S.C. § 325(d) provides, in pertinent part:

> "In determining whether to … order a proceeding under … chapter 30, … the Director may take into account whether, and reject the … request because, the same or substantially the same prior art or arguments previously were presented to the Office."

The statute's purpose is to avoid the duplicative, serial invalidity attacks like the one Patent Owner faces here that unduly multiply proceedings, and safeguard agency resources from

being hijacked to harass patent owners. 157 Cong. Rec. S1376 (Statement of Sen. Kyl) ("[T]he present bill also authorizes the Directed ***to reject any request for ex parte reexamination*** or petition for post-grant or *inter partes* review ***on the basis that the same or substantially the same prior art or arguments previously were presented*** to the Office. This will ***prevent parties from mounting attacks on patents that raise issues that are substantially the same as issues that were already before the Office with respect to the patent***.") (emphasis added).

The Director's discretion under § 325(d) is independent of whether a request presents a substantial new question of patentability, including requests that present "new" prior art not presented in prior proceedings before the Office. As made clear by the legislative History, "[u]nder section 325(d), second sentence . . . the Office could nevertheless refuse a subsequent request for *ex parte* reexamination with respect to such an issue, ***even if it raises a substantial new question of patentability***, because the issue previously was presented to the Office in the petition for inter partes or post-grant review." *Id*. (emphasis added).

Indeed, the Office has confirmed that "35 U.S.C. § 325(d), taken together with the provisions of 35 U.S.C. § 304, permit the Office to exercise discretion and issue an order denying reexamination on the basis that the same or substantially the same prior art or arguments previously were presented to the Office, ***even if a substantial new question of patentability is determined to be raised by the request***." Office of Patent Legal Administrations Decision Dismissing Petition, at 24, *Ex Parte* Reexamination Control No. 90/013,808 (June 15, 2018) ("OPLA Decision"); *see also* IPR2014-01093, Paper 81, 9 (May 24, 2016) terminating granted *ex parte* reexamination because "325(d) gives us the discretion to terminate the *ex parte* reexamination"); *id*., 13 (§ 325(d) "expressly contemplates denial of review when the art applied in two petitions is different by the arguments are substantially the same.").

In exercising discretion under § 325(d), the Office considers the facts of each case including the entire record before it, including any art, arguments, and issues previously raised during prosecution or subsequently requested post-grant proceedings, whether granted/instituted or not. *See* OPLA Decision, at 15-16 ("When determining whether to exercise its discretion under 35 U.S.C. § 325(d) in an *ex parte* reexamination proceeding, ***the Office reviews the entire record of the patent requested to be reexamined, including the original prosecution of the patent and any post grant Office proceedings involving the patent***, including reexamination proceedings, reissue applications, and PTAB trial proceedings such as *inter partes* reviews.") (emphasis added); *id*., 22 ("The determination pursuant to 35 U.S.C. § 325(d) in an *ex parte* reexamination proceeding is conducted on a case-by-case basis."); *id*., 29 ("Congress intended to provide the Office with the option to reject a request for *ex parte* reexamination in the particular case where an issue raised in the request was previously raised, for example, in an earlier filed request for reexamination or petition for *inter partes* review, and reexamination was not ordered, or review was not instituted, with respect to that issue.").

In this proceeding, the Request explicitly rehashes claim construction arguments settled by the PTAB years ago in the '476 IPR. As such, the Request should be denied under § 325(d) for at least this reason alone.

A. The Request Seeks to Re-litigate the Same Arguments

TikTok's re-framing of past, present, and potential claim constructions highlights the true purpose behind its Request—to relitigate PTAB and district court claim constructions. TikTok first explains that because the BRI standard is applied during reexamination—in contrast with the *Phillips* standard applied in district court and *inter partes* review—it now has license to re-argue claim constructions of the PTAB. Request, 36-37. It acknowledges, as it must, that the

district court's construction followed the earlier PTAB determination. But TikTok submits that these same, previously argued issues must once again be revisited by the agency (presumably to aid its litigation appeal): namely, "1) the claim interpretation argued by the Patent Owner during claim construction in the district court; 2) Judge DeMarchi's claim construction order using the *Phillips* standard in the parallel district court litigation; and 3) the claim interpretation used by the PTAB in the previous IPR and in its denial of TikTok's Request for Rehearing in IPR2021-00476." Request, 37 (emphasis added). TikTok plainly seeks to relitigate the PTAB's earlier claim construction determinations in this reexamination by cloaking its rehashed arguments with other district court developments that aligned with the earlier PTAB determination.

TikTok could have opted for a BRI construction via patent reexamination years ago, but it chose IPR instead. Only now that it has lost in multiple forums under *Phillips* does it urge another, entirely new claim construction review. That is, not only does TikTok seek to argue the same claim terms again, it seeks to apply a new claim construction standard in doing so.

The same arguments should not be relitigated, nor should the agency permit changing of the rules to revisit the same question. The Request should be denied under § 325(d).

B. The Request Improperly Uses the Earlier PTAB Decision as a Roadmap

Even where prior proceedings do not involve the same exact art or arguments (as is the case here), it has been held that "allowing ***similar***, serial challenges to the same patent, by the same petitioner, risks harassment of patent owners and frustration of Congress's intent in enacting the [AIA]." *In re Vivint, Inc.*, 14 F.4th 1342, 1353-54 (Fed. Cir. 2021) (emphasis in original) (*citing Alarm.com Inc. v. Vivint, Inc.*, IPR2016-01091, Paper 11, at 11-12 (P.T.A.B. Nov. 23, 2016)). Describing its own role in applying § 325(d), the PTAB has stated:

> [I]n making the determination whether Petitioner's current challenges present the same or substantially the same art or arguments as those previously presented to the Office, ***we may consider whether Petitioner uses information gleaned from our earlier decisions to bolster challenges it advanced unsuccessfully***.

Id. (emphasis added). Indeed, the use of a prior PTAB decision as a "roadmap to correct past deficiencies" is improper and frustrates Congressional intent. *Alarm.com Inc. v. Vivint, Inc.*, IPR2016-01091, Paper 11, at 12 (P.T.A.B. Nov. 23, 2016). In this proceeding, TikTok clearly advances art and arguments that specifically uses the failed IPR as a "roadmap," and therefore the Request should be denied under § 325(d) for this additional reason.

Other factors may also be considered in a § 325(d) determination. For example, while the *General Plastics* factors for determining whether to institute *inter partes* review under 35 U.S.C. § 314(a) are not directly applicable to *ex parte* reexamination proceedings, "[t]his is not to say that some of the factors that happen to be relevant to a determination under 35 U.S.C. 314(a) in an *inter partes* review may never be considered in an *ex parte* proceeding." OPLA Decision, at 22. At least the first *General Plastics* factor generally coincides with § 325(d) and may be considered by the Office when determining whether to reject a reexamination request. *See id*., ("some of the [*General Plastics*] factors (such as, e.g., the first factor) may be considered in an *ex parte* reexamination proceeding"). Indeed, all of the *General Plastics* factors show that granting the Request would be inequitable to the Patent Owner and an inefficient use of resources.

C. General Plastics Factors

1. Factor 1: Whether the same petitioner previously filed a petition directed to the same claims of the same patent

Favoring denial, TikTok is the Requestor here and the Petitioner in the '476 IPR.

2. Factor 2: Whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it

Favoring denial, TikTok was well-aware of the bulk of the references applied in the Request: Haberman (Request Ex. B used in SNQs 1-2 and 5-6) and Achlioptas (Request Ex. F used in SNQs 5-8). *See* Request, 65 (Haberman was identified in an IDS during prosecution of the '030 patent), 28 (Achlioptas was applied in a child application of the '030 patent); *see also* IPR2021-00476, Paper 1 at 76-78 (the Petitioner citing Achlioptas as evidence that a POSITA would have modified Bar-El and Leeke in view of Reisman). Furthermore, Haberman, Achlioptas, and Byers (Request Ex. C used in SNQs 3-4 and 7-8) and the '476 IPR art were all cited in TikTok's district court invalidity contentions served on Patent Owner on March 1, 2021, less than three weeks after the filings of its'476 IPR Petition. *See* attached Ex. A, 7-8.

3. Factor 3: Whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review in the first petition

Favoring denial, at the time of filing the Request, the '476 IPR had already concluded, with filings including the Patent Owner's Preliminary Response, Petitioner's Preliminary Reply, the PTAB's Decision Denying Institution, Petitioner's Request for Rehearing, and the PTAB's Decision Denying Rehearing.

4. Factor 4: The length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition

Favoring denial, while it is unknown when and whether learned of *all* the art used in the Request, TikTok knew of at least Haberman and Achlioptas at the time of the '476 IPR Petition's

filing—more than **two years** before the filing of the Request—and also likely knew of Byers in that same timeframe. *See* Factor 2 above.

TikTok's delay in filing the Request with art it has held onto for over two years is an aggravating factor militating in favor of discretionary denial. Even if the Request were proper, which is it not, the lengthy delay appears to have been a purposeful delay that only ended to coincide with pre-trial efforts and maximize its gamesmanship value. Given that there have already been substantial briefings and decisions, relating to claim constructions and combinations of prior art, from the Office, the district court, and the parties between the filing of the '476 IPR and the instant reexamination Request, TikTok's arguments regarding the superficial differences between the Request art and the art previously before the Office are insufficient to explain why TikTok is resurrecting long-known art *now*. Request, 60-65.

5. Factor 5: Whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent

Favoring denial, TikTok does not provide any explanation as to its delay in filing the Request.

6. Factor 6: The finite resources of the Board

Favoring denial, the Office's resources are finite and, as discussed, it has already seen and decided the entirety of the '476 IPR proceeding. That '476 IPR proceeding has already decided the same claim construction arguments—which the Office should not be forced to revisit—and decided that the '030 patent claims were not unpatentable in the face of TikTok's then-best asserted prior art—which should not serve as a roadmap for serial attacks having adjusted art and arguments. The resources of the Office are finite and are not at the mercy of Requestor's litigation designs.

7. Factor 7: The requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review

This factor is inapplicable as the '476 IPR has already concluded and should not be revisited.

The *General Plastics* factors overwhelmingly weigh in favor of denying the Request as an attempt to relitigate previously failed claim construction arguments and to leverage earlier decisions of the PTAB as a means of harassment. Accordingly, the Request should be denied under § 325(d) for this additional reason.

III. THE DIRECTOR SHOULD EXCERCISE DISCRETION AND DENY THE REQUEST FOR REEXAMINATION

The Director should exercise discretion and deny the Request because it is a serial and incremental attack by TikTok against the '030 patent that seeks to improperly leverage prior PTAB opinions and revisit claim constructions already handed down by the PTAB in the hopes of creating inconsistent results across different branches of the same agency.

Indeed, denial of the Request would serve the public interest by preserving the Office's limited resources and shutting down abusive filing practices designed to create conflicting results across different sections of the agency.

A. The Request Should Be Denied Under § 325(d) Because It Attempts to Rehash Long Settled PTAB Claim Construction Determinations

As discussed in detail above in Section II, TikTok's Request spends page after page questioning existing PTAB and district court claim constructions to entice the examiner into relitigating those claim constructions at its behest. All at once, TikTok criticizes the PTAB's constructions as being different from the district court (though based on the same standard), acknowledges that the district court's construction was made with the benefit of full briefing and

the PTAB's construction, yet cannot agree with the district court constructions, concludes that its art discloses limitations under both BRI and *Phillips*, and finally reserves all rights and defenses if it doesn't like the newly requested results. *See* Section II *supra*; *see also* Request, 10-11, 36-40.

For example, Requester insists that Patent Owner's claim construction briefing to the district court was broader than the PTAB's interpretation, and that it "does not necessarily agree with the court's constructions." Request, 40-41. Tellingly, TikTok never offers any BRI constructions of its own. Request, 68-180. That is, the agency should sort it all out by revisiting the PTAB's earlier conclusions through the lens of TikTok's new spin. TikTok asks the Office to wade through all the PTAB, district court, and BRI constructions to reach brand new conclusions—again after the PTAB already resolved these issues years earlier in the '476 IPR. It is simply not enough for TikTok to utter its disagreement with constructions from two other venues, throw its hands in the air by arguing that the claims are obvious no matter what, and then expect the Office to come to a clear and logical conclusion on its own. 35 U.S.C. § 1.510(b)(2) requires that the Request include a "detailed explanation" of the "pertinency and manner of applying the cited prior art." TikTok failed to do that here, and the agency's limited resources should not be commandeered to create appellate fodder for an aging district court dispute. The Request for Reexamination is nothing more than an invitation to "reexamine" TikTok's failed IPR in the hopes of rewriting that unsuccessful litigation history. This second review, urged by the by the same party, years later, flies in the face of § 325(d) as a blatant attempt to misuse the agency's limited resources.

Misuses of Office resources—like TikTok's here—burden all patent owners and have grown to such an intensity that Congress is seeking to proactively promote fairness and

efficiency—particularly in the face of Chinese technological pressure—by limiting serial requests and seeking to "end" duplicative challenges.[2]

Section 325(d) is designed to prevent follow-on proceedings from treading the same exact ground as earlier proceedings. As that is exactly what TikTok urges, the Request should be denied.

B. The Request Should Be Denied Under § 325(d) Because It Improperly Leverages a Prior Board Decision as a Roadmap

1. The '476 IPR Identified Deficiencies with the Prior Art

Element 1[g] of the '030 patent recites "retrieving user social network information from at least one source external to the presented first composite digital media display, wherein the user social network information contains one or more user attributes." *See* '030 patent, claim 1.

In the '476 IPR, TikTok argued that art in combination with Reisman disclosed element 1[g] of the '030 patent. For example, TikTok argued that "Reisman identifies user attributes including user interests and relationships in 'virtual communities'…," which "are social networks," and which are "retrieve[d] … from portal services" and "use[d] … for personalizing digital media content." *See* IPR2021-00476, Paper 1 at 36-38, 65-66 (Feb. 9, 2021). TikTok further argued that combinations with Reisman would have been obvious to "establish[] a 'strong communit[y]'" and "yield[] the predictable result of user attributes in the social network information used for personalization." *See* IPR2021-00476, Paper 1 at 76-81 (Feb. 9, 2021).

---

[2] The "Promoting and Respecting Economically Vital American Innovation Leadership Act." *See* https://www.coons.senate.gov/imo/media/doc/prevail_act_fact_sheet.pdf, https://www.coons.senate.gov/imo/media/doc/prevail_act_bill_text.pdf, and https://www.coons.senate.gov/imo/media/doc/prevail_act_section_by_section.pdf.

The PTAB rejected these arguments in denying institution of the '476 IPR. The PTAB "[did] not find Petitioner has carried its burden of showing Reisman discloses a system that retrieves user social network information from at least one source external to the presented first composite digital media display, wherein the user social network information contains one or more user attributes." *See* IPR2021-00476, Paper 13 at 18-20 (Aug. 13, 2021). The PTAB explained the Petitioner's deficiencies in applying Reisman, in detail:

> "Petitioner has not shown sufficiently that Reisman discloses or suggests a system that **retrieves user attribute information from a social network external to the system**."
>
> "Absent from Petitioner's proffered evidence is anything sufficient to demonstrate that the Reisman system **actually obtains user attribute information from an external social network source**."
>
> "Petitioner, however, does not show sufficiently that the Reisman system **communicates with a social network**, which gathers user social network information including user attributes, to retrieve information about a user's attributes."
>
> "What is missing in the cited evidence from Reisman, however, is any evidence that Reisman discloses or suggests **getting the user attribute information from an external social network**."
>
> "[T]estimony suggests **Reisman uses the conventional method of getting user attributes from the user**, instead of going to a social network to get the user attribute information."
>
> "This evidence cuts against Petitioner's contentions because it demonstrates that Reisman's system has a user's "buddy list" before a community is created and, thus, it was **not received from a social network**."

See IPR2021-00476, Paper 13 at 16-18 (Aug. 13, 2021) (emphasis added).

In denying TikTok's Request for Rehearing, the PTAB reiterated that TikTok's failure with respect to Reisman was a deficiency in showing the retrieval of social network information:

> The Decision does not rest on Petitioner failing to show Reisman discloses retrieving user attributes. In the Decision, we determined instead that Petitioner **failed to show Reisman discloses "retrieving user social network information . . . wherein the user social network information contains one or more user attributes."**

See IPR2021-00476, Paper 15 at 6 (Dec. 5, 2022) (emphasis added).

2. The Request Purports to Follow the PTAB Roadmap

In considering whether to deny the Request under § 325(d), the Director must take into account whether "the same or substantially the same prior art or arguments previously were presented to the Office," including "whether Petitioner uses information gleaned from our earlier decisions to bolster challenges it advanced unsuccessfully." Here, that answer is "yes." TikTok uses the PTAB's prior opinions from the '476 IPR as a roadmap to bolster its attack on the '030 patent and advance prior art that purports to avoid TikTok's past mistakes.

Now, in the present reexamination, TikTok carefully and repeatedly describes the asserted prior art with such detail as to forcibly illustrate that it, unlike the main '476 IPR prior art, obtains social network information, obtains information from an external social network source, and does not solely rely on information from a user. In small part, TikTok states:

> "Hupert-Graff identified a deficiency in the prior art that providing **recommendations to users historically required significant input by the user.**" Request, 98.
>
> "Haberman similarly identified a **deficiency in the prior art that required the user to interact with the viewed program** to determine user preferences." Request, 98-99.
>
> "Haberman suggests **retrieving information about the user from other sources**, and specifically teaches that user profile information could come from 'user interactions on web sites." Request, 99, 112.

"Hupert-Graff also recognizes and teaches that **user social network information in the form of a community profile based on the history and interactions of all users** in the community can be used to determine user preferences." Request, 99.

"[U]sing Hupert-Graff's system overcomes the **deficiencies of the prior art that used only the user's interactions with the presented media** to collect information regarding the user profile." Request, 99.

"Hupert-Graff uses the **external community profiles and real-time monitoring** to update and improve its recommendation and selection engine." Request, 100.

"The benefit of using Hupert-Graff's community profiles and real-time monitoring of the user's internet activities to obtain user social network information for use in obtaining better more personalized content in Haberman's system would have been apparent to a person of ordinary skill in the art, because Haberman suggested **such information could be obtained from 'user interactions on web sites,'** and from **collecting information** about a user's environment **from the Internet and/or private internet or intranet**." Request, 100.

"A person of ordinary skill in the art would have reasonably expected success because **using community profiles based on external user social network information and real-time monitoring** to make recommendations and selections was known in the art." Request, 102.

"[A] person of ordinary skill in the art would have been motivated to combine Haberman with Hupert-Graff to use Hupert-Graff's additional **information about the user from the community profiles (generated from external social network information)**." Request, 102.

"Hupert-Graff provides **two data sources for additional user profile data**-online community profiles and real-time monitoring of Internet activity including users chatting online." Request, 103.

"Hupert-Graff's **community profiles are a function of the activity of all users** that belong to that community." Request, 103.

"Hupert-Graff also teaches that its learning **system 'can be implemented as a central service application located at gateway servers or partly as add-ons application (WG user interaction model) at the user communication device, or any combination [of] these implementations.'** *Id* at p. 7, ll. 14-17. At the very least, to the extent that the learning system is at the user's communication device, **it must communicate with other users that are external to the recommendation system** in order to update the community profile based on other users." Request, 106.

"Gutta also recognizes and teaches **information derived from a user's interactions in an online community in the form of selected third-party recommenders** that can be used to adjust recommendations for a user." Request, 112-113.

"Gutta teaches that the user and these third party recommenders **communicate in an online community** as they exchange recommendations **through any 'wired or wireless link.'**" Request, 113.

"Each of those third parties and their recommendations is an example of **information derived from a user's interactions in an online community** and contains user attribute information regarding which shows that they like and are recommending. Gutta provides a source of additional **information that comes from third parties**. Furthermore, **the third parties must be selected** by the user-**the act of selecting specific third-party recommenders by the user, and exchanging recommendations through a 'wired or wireless link' is an example of the user interacting with the online community** by indicating from which third parties, e.g., friends, colleague, or trendsetter, the user listens, follows, and/or wants to and does receive recommendations." Request, 113-114.

"[U]sing Gutta's **third-party recommendations overcomes the deficiencies of the prior art that used only the user's interactions with the presented media** to collect information regarding the user profile." Request, 114.

"Gutta also describes using both **implicit and explicit sources of information to generate user profiles** and preference information about the user." Request, 116.

> "Gutta extends this idea to make **recommendations that are 'influenced by recommendations generated by one or more third parties**, such as a friend, colleague or trendsetter.'" Request, 116.
>
> "Gutta **provides an external data source for making recommendations-third-party recommendations that can be sourced from a 'wired or wireless link' demonstrating that the information is external** to Gutta's recommendation system and is other than both Gutta's and Haberman's presentation of media content." Request, 117.
>
> "This **selection of third-party recommenders by the user is an example of information derived from the user's interactions in an online community**. Gutta explicitly refers to the information received from the third-party recommenders as **coming from a 'wired or wireless link' meaning that the network of third-party recommenders is online**." Request, 119.
>
> "Byers teaches **retrieving user attributes from beyond the user's input**. Byers' system retrieves the stored user profile from a source other than the presented first composite digital media display." Request, 137.
>
> "Byers teaches that user information is **retrieved from a source external to and/or other than the presented first composite digital media display**—i.e., a memory or database that is not part of a display." Request, 138.
>
> "[A] person of ordinary skill in the art would have been motivated to combine Byers with Hupert-Graff to use Hupert-Graff's additional **information about the user from the community profiles (generated from external social network information)** and Hupert-Graff's **real-time monitoring of Internet forums and Internet chatting (external user social network interactions in an online community)** to select replacement images for use in Byers' system." Request, 150.
>
> "Achlioptas expands on this concept and suggests that **other information gathering schemes such as 'cookies, data scavenging, 3rd party providers …' could be used** to obtain profile information based on social networks." Request, 173.

(Emphasis added.) *See also* Request, 96-121, 145-168, 170-181.

These repeated representations from the Request purport to directly address the deficiencies identified by the PTAB in the '476 IPR. Clearly, TikTok is attempting to correct its past mistakes and is determined not to be denied by the Office for the same old reasons. The fact that this Request comes years later is, however, a blatant display of impermissible gamesmanship—leveraging earlier proceedings in the follow-on Request—and an abuse of Office resources.

C. The Director Must Not Permit the Commandeering of Patent Reexamination Resources to Rewrite PTAB Decisions

Allowing reexaminations to be used as a means of litigation gamesmanship was not Congress' intent. Indeed, Congress intended the provisions of § 325(d) to complement and add to the protections already provided by the substantial new question of patentability standard for reexaminations. *See* OPLA Decision at 31. TikTok's Request here is a collateral attack on a finalized PTAB IPR proceeding that was fully briefed on the issues of claim construction and patentability. The discretionary power afforded to the Director under § 325(d) safeguards against this abuse of the Office's administrative processes, in which reexamination or other post-grant proceedings become "tools for harassment" of patent owners rather than "quick and cost effective alternatives to litigation." *See* H.R. Rep. No. 112-98, pt. 1, at 48 (2011). The Director should apply and exercise § 325(d) in situations such as this, where a litigation defendant employs a wait-and-see approach after having failed in a first Office proceeding, only to bring a serial attack years later with the purpose of relitigating failed issues and interfering with the underlying litigation of an Article III court.

In the nearly three years since TikTok filed the '476 IPR, lost, and then lost again on rehearing, a claim construction order has been issued in the litigation that was guided by the

PTAB's determination—after the parties had briefed the claim construction issues twice. *See* Request, 11-12. The deliberate timing of the Request is such that Patent Owner (a small U.S. company) is forced to divert attention away from its pre-trial preparations because a large Chinese-based company will stop at nothing to avoid a final judgment from the court. The Request is harassment, plain and simple.

IV. CONCLUSION

Requesting that this Office *once again* review previously determined claim construction and patentability issues serves no meaningful public interest, rather it serves only to harass the Patent Owner in a duplicative, unnecessary, and wasteful proceeding.

For the reasons stated above, the Director should exercise discretion under § 325(d) and deny the Request.

* * *

Please charge our Credit Card in the amount of $168.00 covering the fee set forth in 37 C.F.R. § 1.17(f). The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed with this Petition under 37 CFR 1.182 to our Deposit Account No. 23/2825, under Docket No. T0926.70000US01

Respectfully submitted,

Dated: November 20, 2023

By: /Scott A. McKeown/

Scott A. McKeown
Registration No.: 42,866
WOLF, GREENFIELD & SACKS, P.C.
601 Massachusetts Avenue NW
Washington, DC 20001
Attorneys for Patent Owner

Customer No. 23628

EXHIBIT A

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

10TALES, INC., Plaintiff, v. TIKTOK INC., TIKTOK PTE. LTD., BYTEDANCE LTD., and BYTEDANCE INC., Defendants.	CIVIL ACTION NO. 6:20-CV-810-ADA **JURY TRIAL DEMANDED**

DEFENDANTS' PRELIMINARY INVALIDITY CONTENTIONS

Pursuant to the Court's January 14, 2021 Scheduling Order (ECF No. 14), Defendants TikTok Inc., TikTok Pte. Ltd., ByteDance Ltd., and ByteDance Inc., collectively ("Defendants"), by and through counsel, hereby provide their Preliminary Invalidity Contentions with respect to the claim that Plaintiff 10Tales, Inc., ("10Tales") identified in its Preliminary Infringement Contentions dated December 14, 2020, as set forth in the table below:

No.	Asserted Patent Number	Asserted Claim
1	U.S. Patent No. 8,856,030 ("the '030 Patent")	1

In these Preliminary Invalidity Contentions, with respect to the '030 Patent and the asserted claim identified by 10Tales, Defendants provide: (1) a chart setting forth where in the prior art references each element of the Asserted Claim is found; (2) an identification of any limitations the Defendants contend are indefinite or lack written description under 35 U.S.C. § 112; and (3) an identification of any claims the Defendants contend are directed to ineligible subject matter under 35 U.S.C. § 101.

I. RESERVATION OF RIGHTS

Defendants reserve their rights to amend, modify, and/or supplement these Preliminary Invalidity Contentions. Specifically, Defendants reserve the right to amend these Invalidity Contentions based upon the Court's claim construction. Defendants additionally reserve the right to amend these Invalidity Contentions if 10Tales later provides any information that it failed to provide in its Preliminary Infringement Contentions, or if 10Tales amends or alters its Preliminary Infringement Contentions in any way. Further, these Preliminary Invalidity Contentions are based on information obtained by Defendants to date. Discovery in this case is ongoing. In particular, fact discovery is not complete, the Asserted Claim has not been construed, and expert discovery has not begun. Defendants intend to seek discovery from 10Tales and third parties regarding public use and/or the on-sale bar under 35 U.S.C. § 102, additional prior art under 35 U.S.C. §§ 102 and 103, and/or applicant's failure to comply with 35 U.S.C. §§ 112 and 101. Based on discovery, Defendants may uncover additional prior art and invalidity arguments, and the Court's construction of one or more terms from the Asserted Claim may require that Defendants supplement or amend these Preliminary Invalidity Contentions. Accordingly, Defendants reserve the right to revise and/or supplement these Preliminary Invalidity Contentions as this case proceeds. Moreover, Defendants reserve the right to supplement and/or amend these Preliminary Invalidity Contentions based on any findings as to the priority date of the Asserted Claims, and/or positions that 10Tales or its expert witnesses may take concerning claim interpretation, infringement, and/or invalidity issues. In addition, none of these Preliminary Invalidity Contentions constitute an admission concerning the proper construction of the claims.

Prior art not included in this disclosure, whether known or unknown to Defendants, may become relevant. In particular, Defendants are currently unaware of the extent, if any, to which 10Tales will contend that limitations of the Asserted Claim are not disclosed in the prior art that

Defendants identifies, or will contend that any of the identified references do not qualify as prior art under 35 U.S.C. § 102. The identification of any patents and/or patent publications as prior art shall be deemed to refer to the application that was submitted for the same and to include identification of any foreign counterpart patents and applications as well as international applications. To the extent that such an issue arises, Defendants reserve the right to identify additional teachings in the same references or in other references that anticipate or would have rendered the addition of the allegedly missing limitation to the device or method obvious. Defendants' claim charts submitted as part of these Preliminary Invalidity Contentions cite to particular teachings and disclosures of the prior art as applied to features of the Asserted Claim. Persons having ordinary skill in the art, however, may view an item of prior art generally in the context of other publications, literature, products, and understanding. Accordingly, the cited portions are only examples, and Defendants reserve the right to rely on uncited portions of the prior art references and on other publications and expert testimony as aids in understanding and interpreting the cited portions, as providing context thereto, and as additional evidence that a claim limitation is known or disclosed. Where Defendants cite to a particular figure in a reference, the citation should be understood to encompass the caption and description of the figure and any text in the reference relating to the figure. Similarly, where Defendants cite to particular text referring to a figure, the citation should be understood to include the figure and caption as well. Defendants further reserve the right to rely on uncited portions of the prior art references, other publications, and testimony to establish bases for combinations of certain cited references that render the Asserted Claim obvious. Further, for any combination, Defendants reserve the right to rely additionally on information generally known to those skilled in the art and/or common sense.

The references discussed in the claim charts may disclose the elements of the Asserted Claim explicitly and/or inherently, and/or they may be relied upon to show the state of the art in the relevant time frame. The suggested obviousness combinations are sometimes provided in the alternative to Defendants' anticipation contentions and are not meant to suggest that any reference included in the combinations is not by itself anticipatory. Furthermore, nothing stated herein shall be treated as an admission or suggestion that Defendants' Accused Instrumentalities meet any limitation of any Asserted Claim. Defendants deny that they infringe any and all claims of the '030 Patent.

II. IDENTIFICATION OF PRIOR ART

Subject to Defendants' reservations of rights set out above, Defendants identify the following references which show elements of the Asserted Claim and which may invalidate the Asserted Claim of the '030 Patent. In addition to the references cited on the face of the '030 Patent, the admitted prior art in the specification of the '030 Patent, and the prosecution history of the '030 Patent, the prior art references, systems, and products listed below disclose the elements of the Asserted Claim either explicitly, inherently, or via an obvious combination, and may also be relied upon to show the state of the art in the relevant timeframes.

Defendants further incorporate by reference the prior art references related to the '030 Patent, including without limitation all prior art produced by or otherwise known to Plaintiff and all prior art known to the named inventors, any past or current owner, or any individual substantively involved in the prosecution of the '030 Patent.

Defendants contend that at least some of the systems and products disclosed in one or more of the prior art references identified here or in the attached exhibits are prior art under 35 U.S.C. §§ 102 and/or 103. Defendants' reference to any particular component, device, machine, or other product in these Preliminary Invalidity Contentions should also be interpreted as a reference to the

product itself and any corresponding patents, publications, or product literature cited here or in the attached exhibits that relate to the cited component, device, machine, or other product. As discovery is ongoing, Defendants do not yet have complete information regarding the dates by which some of the cited products were publicly disclosed, used, sold, or offered for sale, the circumstances under which the research, design, and development activities were conducted, and the identities of the particular individuals involved in such activities through publicly available patents, publications, and product literature. Defendants anticipate that the actual dates, circumstances, and identities of individuals will be the subject of third-party discovery during this lawsuit. Additionally, some of the cited products requires a membership to view material on its website, and Defendants reserve the right to amend based on third party discovery presenting the material's capability and features, deposition testimony, and/or source code.

It is understood that a person of ordinary skill in the art reads a prior art reference as a whole and in the context of other publications, literature, and general knowledge in the field. To understand and interpret any specific statement or disclosure in a prior art reference, a person of ordinary skill in the art also relies upon other information including other publications and general scientific, engineering, or other relevant knowledge. Defendants reserve the right to rely upon the general scientific, engineering, or other relevant knowledge in the field in interpreting the disclosure of the prior art references. In addition, Defendants reserve the right to rely upon other publications and on expert testimony to provide context and to aid in the understanding of the prior art references. For example, Defendants reserve the right to rely on well-known prior art publications, such as relevant mobile device, cloud networking, data center, recommendation software, and server standards or specifications to demonstrate the state of the art at the relevant time period. Defendants also reserve the right to rely upon other portions of the prior art

references, other publications, and the testimony of experts to establish that the alleged inventions would have been obvious to a person of ordinary skill in the art, including the basis for modifying or combining the prior art references. Furthermore, Defendants reserve the right to rely upon any admissions relating to prior art found in the intrinsic evidence for the '030 Patent.

Each exemplary printed publication listed below that describes or relates to a prior art system should be understood to discuss the system's capabilities generally and also to discuss specific implementation examples of specific installations of the particular system. To the extent the exemplary references describe various implementations of the same underlying system, that underlying system is a single reference under 35 U.S.C. §102. The exemplary references are evidence of the capabilities of the prior art system, and each chart provided for a prior art system should be understood to incorporate by reference all printed publications describing or relating to that prior art system and all charts provided for those printed publications. In addition, each reference itself also qualifies as prior art on separate grounds as a publication under 35 U.S.C. §102. Even if the exemplary references are not treated as a single prior art reference, at the very least it would have been obvious to combine the features described in those references inasmuch as the individual references discuss the same system.

A. Patent References

Exhibits A-01 to A-* include charts directed to the following prior art patents and/or prior art patent publication references, which are identified below by patent/publication number, name, country of origin, issue date, publication date, filing date, and earlier priority date. Each listed patent became prior art at least as early as the dates provided on the face of the document. Defendants reserve the right to rely upon earlier dates of publication or public availability to the extent such information is uncovered during discovery.

No.	Number and Name	Country of Origin	Issue Date/Date of Publication	Filing Date	Earlier Priority Date
1	WO 1999/026415 A1 to Bar-El	PCT	5/27/1999	11/9/1998	11/13/1997
2	US 6,587,127 B1 to Leeke et al.	US	7/1/2003	11/24/1998	11/25/1997
3	US 8,161,172 B2 to Reisman	US	4/17/2012	9/2/2009	5/8/2003
4	U.S. 6285983 to Jenkins	U.S.	9/4/2001	3/19/1999	10/21/1998
5	US 2003/0177063 A1 to Currans et al.	US	9/18/2003	3/12/2002	N/A
6	US 6,357,042 to Srinivasan et al.	US	3/2/2002	1/22/1999	9/16/1998
7	U.S. Patent Pub. No. 2003/0093311 to Knowlson	U.S.	5/15/2003	11/5/2001	N/A
8	US. Patent No. 6,389,372 to Glance et al.	US	5/14/2002	6/29/1999	N/A
9	US 7,472,110 to Achlioptas	US	12/30/2008	1/29/2003	N/A
10	US 2002/0010757 A1 to Granik et al.	US	1/24/2002	12/1/2000	12/3/1999
11	US 7,483,871 B1 to Herz	US	1/27/2009	10/1/2002	12/9/1996
12	US 2003/0105682 to Dicker et al.	US	6/5/2003	10/7/2002	9/18/1998
13	US 6,032,156 A to Marcus	US	2/29/2000	4/1/1998	4/1/1997
14	WO 2003/015406 A2 to Dempski et al.	PCT	2/20/2003	8/6/2002	8/8/2001

	US 6,714,916 to Robertson et al.	US	009/08/2011	05/11/2011	11/2/1997
16	U.S. Patent Pub. 2001/0032133 to Moran	U.S.	10/18/2001	2/23/2001	1/28/2000
17	US 7,370,004 to Patel et al.	US	5/6/2008	5/4/2000	11/15/1999
18	U.S. Patent Pub. 2003/0191816 to Landress et al.	U.S.	10/9/2003	1/10/2001	N/A
19	US 7,904,922 to Haberman et al.	US	3/8/2011	4/7/2000	N/A
20	US 2003/0066078 A1 to Bjorgan et al.	US	4/3/2003	4/19/2002	4/20/2001
22	US. Patent No. 5,861,881 to Freeman et al.	U.S.	1/19/2001	2/8/1996	11/25/1991
23	US. Patent No. 7,200,801 to Agassi et al	U.S.	4/3/2007	8/30/2002	N/A
24	U.S. Patent No. 7,334,249 to Byers	U.S.	2/19/2008	4/26/2000	N/A
25	U.S. Patent No. 7,403,910 to Hastings et al.	U.S.	7/11/2008	6/18/2001	N/A
32	US 2004/0088325 to Elder et al.	US	05/06/2004	10/31/2002	N/A
28	US 6,122,658 to Chaddha	US	9/19/2000	7/3/1997	N/A
33	WO 2001/077876 A2 to Bolnick et al.	PCT	10/18/2001	4/11/2001	4/11/2000
34	20040205157 to Biebelnieks et al.	US	10/14/2004	6/31/2002	N/A

35	20030028451 to Ananian	US	02/06/2003	6/26/2002	N/A
29	2003/0028432 to Troyansky et al.	US	02/06/2003	8/1/2002	N/A
31	6014638 to Burge et al.	US	01/11/2000	5/29/1996	N/A
32	2002/0049783 to Berk	US	04/25/2002	8/1/2001	N/A
33	5,948,061 to Merriman et al	US	09/07/1999	10/29/1996	N/A

B. Prior Art Systems and Knowledge

Each of the patents and publications identified above evidence prior knowledge under 35 U.S.C. § 102 and/or 103. Discovery is ongoing, however, and Defendants reserve the right to assert any of the preceding items of prior art under 35 U.S.C. §102 and/or 103. Additionally, Defendants reserve the right to identify and rely upon as prior art under 35 U.S.C. §§ 102 and/or 103 any system, product, or public knowledge or use that embodies or otherwise incorporates any of the prior art patents or publications listed above. Defendants also identify the following systems that were offered for sale and/or publicly known in the United States. On information and belief, the below systems that were offered for sale and/or publicly known in the United States are prior art under 35 U.S.C. §102 and/or 103.

No.	Item Offered for Sale or Publicly Used or Known	Date	Person or Entity
35	Amazon.com	1994	Amazon.com, Inc.
36	Knowledge Pump	1997	Xerox Corporation
37	GeoCities	1998	Yahoo!
38	Ringo	1994	MIT Media-Lab

39	AdForce	1998	AdForce
40	Film Conseil	2001	Computer Science Laboratory of Paris 6 University (Sorbonne)
41	eharmony	2000	eHarmony
42	MovieLens	2002	Group Lens Group
43	GroupLens	1994	Group Lens Group
44	videos@bellcore.com	1993	Bellcore
45	Match.com	1997	Match.com LP
46	iTunes 3	2002	Apple, Inc.
47	Netflix.com	1997	Netflix.com, Inc.
48	DoubleClick	1997	DoubleClick

C. Publication References

Exhibits A-1 to A-45 include charts directed to the following prior art publication reference which is identified below by title, date of publication, author and publisher (when available). A single chart is also provided in Exhibit A-46. Each listed publication became prior art at least as early as the dates provided on the face of the document. Defendants reserve the right to rely upon earlier dates of publication or public availability to the extent such information is uncovered during discovery.

No.	Title	Date of Publication	Author(s) and Publisher
49	Web-based Personalization and Management of Interactive Video by Hjelsvold et al.	April 1, 2001	Rune Hjelsvold, Subu Vdaygiri, and Yves Léauté

			Association of Computing Machinery
50	Amazon.com Recommendations Item-to-Item Collaborative Filtering by Linden et at.	January-February 2003	Greg Linden, Brent Smith, and Jeremy York IEEE Internet Computing
51	Virtual Communities of Transaction: The Role of Personalization in Electronic Commerce by Shubert et al.	June 7 - 9, 1999	Petra Schubert, Mark Ginsburg Global Networked Organizations
52	"Knowledge Pump: Supporting the Flow and Use of Knowledge," in Information Technology for Knowledge Management, Eds. New York:, pp. 35-45.	1998	U. Borghoff and R. Pareschi (Editors) Springer-Verlag
53	RECOMMENDING AND EVALUATING CHOICES IN A VIRTUAL COMMUNITY OF USE by Hill et al.	May 7-11 1995	Will Hill, Larry Steadm Nark Rosenstein, George Furnas ACM Press/Addison-Wesley Publishing Co.
54	Augmenting Recommender Systems by Embedding Interfaces into Practices	January 4-7, 2000	Antonietta Grasso, Jean-Luc Meunier, Christopher Thompson Proceedings of the 33rd Hawaii International Conference on System Sciences
55	Reinforcing and Opening Communities Through Innovative Technologies by Agostini et al.	December 1999	Valeria Giannella Antonietta Grasso

			Michael Koch David Snowdon Alessandra Valpiani Published in the Book Community Informatics by Publisher: Hershey
56	Knowledge Management and Knowledge Agents in Campiello	December 1997	Michael Koch Proc. Workshop on Intelligent Agents in CSCW
57	Design and deployment of community systems: reflections on the Campiello experience	December 2002	Agostini et al. Interacting with Computers, the Interdisciplinary Journal of Human-Computer Interaction
58	Digital Perspective (Xerox Whitepaper)	May 2002	Peter Hawes Xerox Global Services
59	Recommendation and personalization: a survey	May 22, 2002	Saverio Perugini
60	Content-Independent Task-Focused Recommendation	November 2001	Jon Herlocker Joseph A. Konstan IEEE
61	The GroupLens Research Project: Collaborative Filtering Recommender Systems	Winter 2002	Joseph A. Konstan GroupLens Research Group University of Minessota

62	Jumping Connections: A Graph-Theoretic Model for Recommender Systems	February 8, 2001	Batul J. Mirza Virginia Polytechnic Institute and State University
63	GroupLens: An Open Architecture for Collaborative Filtering of Netnews	1994	Paul Resnick, Neophytos Iacovou, Mitesh Suchak, Peter Bergstrom, John Riedl Proceedings of the 1994 ACM conference on Computer Supported Cooperative Work

D. Invalidity Charts

The Asserted Claim is anticipated and/or rendered obvious by the prior art. Defendants have provided the accompanying exemplary charts for the Asserted Claim of the '030 Patent as listed in the table below. Individual claim charts illustrate examples of where each element of the Asserted Claim can be found in each item of the listed prior art. To the extent that any reference identified in the Exhibits does not identify every aspect of an element, the reference still anticipates the Asserted Claim for at least the reason that any such aspect of an element is inherently disclosed. For all of the reasons stated herein, Defendants reserve the right to supplement the charts, and the table below. To the extent that the Court finds that a reference does not expressly disclose certain limitations in the Asserted Claim, such limitations would have been inherent and/or obvious. By mapping the claim language of the '030 Patent to the references, Defendants do not imply or admit that the claim language satisfies Section 112 of the Patent Act or that the claim language has patentable weight. Citations from the listed references are not a ratification or acceptance of the manner in which 10Tales applies particular claim elements to the features and functions of the

Accused Instrumentalities. The citations are instead intended to demonstrate that, if certain claim elements are applied against the prior art in the same manner as 10Tales applies them in its Infringement Contentions, then certain prior art discloses those claim elements to the same extent. The prior art may also disclose these same claim elements if the claim elements are applied differently than in the Infringement Contentions. Nothing in these Preliminary Invalidity Contentions is in any way an admission that the Infringement Contentions correctly describe the scope of the '030 Patent or that Defendants infringe the Asserted Claim.

In the tables below, "Prior Art No." corresponds to the number of the prior art reference identified above. "A" indicates where Defendants have charted anticipation, "O" indicates where Defendants have charted obviousness, and "A/O" indicates where Defendants have charted both anticipation and obviousness. "Chart" refers to the designation of the attached charts that identify where specifically in each item of prior art each Asserted Claim is found, including for each element governed by 35 U.S.C. § 112(6), the identity of the structure(s), act(s), or material(s) in each item of prior art that performs the claimed function.

Prior Art No.	Prior Art Reference	Anticipation / Obviousness	Chart
01	WO 1999/026415 A1 to Bar-El	A/O	A-01
02	US 6,587,127 B1 to Leeke et al.	A/O	A-02
03	US 8,161,172 B2 to Reisman	A/O	A-03
04	U.S. 6285983 to Jenkins	A/O	A-04
05	US 2003/0177063 A1 to Currans et al.	O	A-05
06	US 6,357,042 to Srinivasan et al.	A/O	A-06
07	U.S. Patent Pub. No. 2003/0093311 to Knowlson	A/O	A-07
08	US. Patent No. 6,389,372 to Glance et al.	A/O	A-08
09	US 7,472,110 to Achlioptas	O	A-09

10	US 2002/0010757 A1 to Granik et al.	A/O	A-10
11	US 7,483,871 B1 to Herz	A/O	A-11
12	US 2003/0105682 to Dicker et al.	A/O	A-12
13	US 6,032,156 A to Marcus	A/O	A-13
14	Web-based Personalization and Management of Interactive Video by Hjelsvold et al	A/O	A-14
15	WO 2003/015406 A2 to Dempski et al.	A/O	A-15
16	U.S. Patent Pub. 2001/0032133 to Moran	A/O	A-16
17	US 7,370,004 to Patel et al.	A/O	A-17
18	U.S. Patent Pub. 2003/0191816 to Landress et al.	A/O	A-18
19	US 7,904,922 to Haberman et al.	A/O	A-19
20	US 2003/0066078 A1 to Bjorgan et al.	A/O	A-20
21	Knowledge Pump	A/O	A-21
22	US. Patent No. 5,861,881 to Freeman et al.	A/O	A-22
23	US. Patent No. 7,200,801 to Agassi et al	A/O	A-23
24	U.S. Patent No. 7,334,249 to Byers	A/O	A-24
25	Netflix	A/O	A-25
26	U.S. Patent No. 2002/0049783 to Berk	A/O	A-26
27	Robertson	A/O	A-27
28	US 6,122,658 to Chaddha	A/O	A-28
29	2003/0028432 to Troyansky et al.	A/O	A-29
30	Film Conseil	A/O	A-30
31	U.S. Patent No. 6014638 to Burge et al.	A/O	A-31
32	US 2004/0088325 to Elder et al.	O	A-32
33	WO 2001/077876 A2 to Bolnick et al.	A/O	A-33
34	20040205157 to Biebelnieks et al.	A/O	A-34
35	20030028451 to Ananian	A/O	A-35

36	iTunes	A/O	A-36
37	Amazon.com	A/O	A-37
38	GroupLens	A/O	A-38
39	MovieLens	A/O	A-39
40	Ringo	A/O	A-40
41	videos@bellcore	A/O	A-41
42	GeoCities/AdForce	A/O	A-42
43	Match.com	A/O	A-43
44	eHarmony	A/O	A-44
45	DoubleClick	A/O	A-45

E. Obviousness

In determining whether a claim is obvious, "[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007). In that regard, a patent claim may be obvious if the combination of elements was obvious to try or there existed at the time of the invention a known problem for which there was an obvious solution encompassed by the patent's claims. The obviousness determination includes consideration of inferences and creative steps that a person of ordinary skill in the art might use. A reference may be deemed analogous prior art where the reference (i) is from the same field of endeavor, regardless of the problem addressed; and (ii) if not within the same field of endeavor, is reasonably pertinent to the particular problem with which the challenged claim is involved. *In re Bigio*, 381 F.3d 1320, 1325. In addition, when a

reference is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, 35 U.S.C. § 103 likely bars its patentability.

No showing of a specific motivation to combine prior art is required to combine the references disclosed above and in the attached charts, as each combination would have expected results, and at most would simply represent a known alternative to one of skill in the art. *See KSR* at 415-18 (2007) (rejecting the Federal Circuit's "rigid" application of the teaching, suggestion, or motivation to combine test, instead espousing an "expansive and flexible" approach); *Q.I. Press Controls, B.V. v. Lee,* 732 F.3d 1371, 1379 (Fed. Cir. 2014). Indeed, the Supreme Court held that a person of ordinary skill is "a person of creativity, not an automaton" and "in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." *Id.* at 420-21; *see also* Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in View of the Supreme Court Decision in *KSR International Co. v. Telefax Inc.*, 72 Fed. Reg. 57,526 (Oct. 10, 2007). Nevertheless, in addition to the information contained elsewhere in these contentions, Defendants hereby identify exemplary motivations and reasons to combine.

One or more combinations of the prior art references identified above would have been obvious because these references would have been combined using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another to obtain predictable results; and/or a teaching, suggestion, or motivation in the prior art generally. *See Q.I. Press Controls*, 732 F.3d at 1379; *Randall Mfg. v. Rea*, 733 F.3d 1355, 1363 (Fed. Cir. 2013). In addition, it would have been obvious to try combining the prior art references identified above because there were only a finite number of

predictable solutions and/or because known work in one field of endeavor prompted variations based on predictable design incentives and/or market forces either in the same field or a different one. *See KSR*, 127 S. Ct. at 1742; *Sanofi-Aventis Deutschland GmbH v. Glenmark Pharms. Inc., USA*, 748 F.3d 1354, 1360 (Fed. Cir. 2014); *Comaper Corp. v. Antec, Inc*., 596 F.3d 1343, 1352 (Fed. Cir. 2010); *In re Kubin*, 561 F.3d 1351, 1359 (Fed. Cir. 2009). Further, the combinations of the prior art references identified above and in the claim charts would have been obvious because the combinations represent known potential options with a reasonable expectation of success. *See InTouch Techs., Inc. v. VGO Comms., Inc*., 751 F.3d 1327, 1347 (Fed. Cir. 2014).

For example, Leeke provides evidence that a POSITA would have understood that computer readable storage medium containing digital media assets and programming instructions. Hunt provides a motivation for systems to store digital media assets and programming instructions for creating composite digital media displays in the same computer readable storage medium. Hunt discloses that programming instructions for creating a composite digital media display must be in the same memory as the digital media assets used to create the composite, so that transitions in the composite are made instantaneously and delays are minimized. Hunt, 1:46-58, 1:65-2:6, 2:18-30.

As another example, Achlioptas provides evidence that a POSITA would have been motivated to retrieve user social network information with attributes for selecting digital media assets. Achlioptas described that human social networks are abstracted into a searchable database populated with information related to individuals, including user attributes. Achlioptas, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16 (database includes relationships and buddy list). In its Background of the Invention, Achlioptas teaches that social networks are useful and used for recommending opportunities and movies—and thus that this motivation was well-established—

before the alleged priority date of the Asserted Patent. Achlioptas, 1:33-39 (recommendations about movies), 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16 (database includes relationships, and buddy list).

As another example, Reisman provides evidence that a POSITA would have been motivated to retrieve user social network information with attributes for selecting digital media assets. Reisman discloses that associating user attributes from virtual communities with media content for content personalization establishes a "strong communit[y]," which allows for "premium subscription revenue" and rates from advertisers. 1005, ¶608:(self-reinforcing market of viewers, content providers, and advertisers), ¶¶632-642 (once content viewers become part of a virtual community they are reluctant to leave, and linkage of content providers to virtual communities strengthens the community). That is, the strong community and premium subscription revenue and rates from advertisers enabled by a virtual community would be present when using social network information in the combinations, and this motivation was well-established—before the alleged priority date of the Asserted Patent.

Generally, the plethora of information on the early internet led to user spending a tremendous amount of energy to navigate the information so that they may retrieve relevant and interesting information. Herz, 2:11-21, Shardanand, 1 (Introduction). This motivated digital information retrieval systems to learn and use information about the individual (such as their interests or other characteristics or attributes) to select relevant and interesting digital information (e.g. media) or otherwise personalize information. Herz, 2:11-21, 9:44-54; Perugini, 5, 7. This problem further motivated system developers to retrieve more targeted and timely information about the user, as well as retrieve this information from various sources. Herz, 2:11-21. System designers, in view of the vast amount of digital information, encountered the

impossibility of directly asking a user if he is interested in each of them. System developers recognized that individuals value suggestions for information from other individuals in their social network and automated the process of "word of mouth" recommendations. Shardanand, 1 (Introduction), Hill, 194, 195. Thus systems also utilized the interest of other individuals in a social network or virtual community (for example online communities of common interest) to determine the inquiring individual's interest in digital information. Schubert, 2, 5, Hill, 194, 195.

Additionally, at least as early as 1999, server based online communities or virtual communities were sources for information related to individuals. A wide variety of server based online communities developed shortly thereafter to meet the demand for connecting individuals. Schubert (1016) described various online communities, including arranged by community of interest, social interest, community of relationship, examples of which include The WELL, IRC, Usenet Newsgroups, GeoCities, and Amazon.com. Schubert, 2,3,5. As merely an example, founded in 1994, GeoCities was one of the first Web-based communities, where user attributes, such as information on "personal interests and hobbies," was posted and accessible. GeoCities, 3-4.

By the mid 1990's, and early 2000's, it was recognized that combining online communities or social networks with media or content delivery systems would allow for providing personalized content based on more information about the user related to their social network or from a social network. This information could also be retrieved from such server based social networks, online/virtual communities. Such systems also allowed for users to share personalized content and viewing/listening experiences in many ways.

For example, in the late 1990's, as shown by the Amazon.com system, Amazon.com utilized user information from online/virtual community networks to personalize media recommendations. Amazon.com was (and is) an example of a "successful online community where customers [were] united in a community of common interests[, and] Amazon.com employ[ed its customers] as information providers." Schubert, 2 (Amazon employed community-based structured information), 9-10. Customer's in Amazon's online community of common interest (a social network), fed information to Amazon's Recommendation Center, which in turn provided personalized media content (such as suggestions as images or text, representing the books, music, or videos) to Amazon's customers. Schubert, 9-10; Linden, 3 (showing example recommendations for books and DVDs in the form of digital representative images of these books and DVDs). As another example, user's information from GeoCities, was used to select and provide advertisements. Thus, the motivation to personalize content to better engage the consumer existed long before the alleged priority date of the Asserted Patent, and the particular solution of selecting media content based on user attributes from user social network information existed before the alleged priority date of the Asserted Patent.

Additional evidence that there would have been a motivation to combine the prior art references identified above includes the interrelated teachings of multiple prior art references; the effects of demands known to the device community or present in the marketplace; the existence of a known problem for which there was an obvious solution encompassed by the asserted claims; the existence of a known need or problem in the field of the endeavor at the time of the alleged invention(s); and the background knowledge that would have been possessed by a person having ordinary skill in the art. *See Norgren Inc. v. Int'l Trade Comm'n*, 699 F.3d 1317, 1322-23

(Fed. Cir. 2012); *Rolls-Royce, PLC v. United Techs. Corp.*, 603 F.3d 1325, 1339 (Fed. Cir. 2010); *Honeywell Int'l, Inc. v. U.S.*, 609 F.3d 1292, 1306-07 (Fed. Cir. 2010).

The motivation to combine the teachings of the prior art references disclosed herein is also found in the references themselves and in: (1) the nature of the problem being solved; (2) the express, implied, and inherent teachings of the prior art; (3) the knowledge of persons having ordinary skill in the art; (4) the predictable results obtained in combining the different elements of the prior art; (5) the predictable results obtained in simple substitution of one known element for another; (6) the use of a known technique to improve similar devices, methods, or products in the same way; (7) the predictable results obtained in applying a known technique to a known device, method, or product ready for improvement; (8) the finite number of identified predictable solutions that had a reasonable expectation of success; and (9) known work in various technological fields that could be applied to the same or different technological fields based on design incentives or other market forces. *KSR*, 550 U.S. at 415–21.

Accordingly, the teachings of the individual prior art references disclosed in these Preliminary Invalidity Contentions combined with the industry knowledge of a person of ordinary skill in the art at the time of the alleged invention of the '030 Patent would have rendered obvious the Asserted Claim. Provided below are some additional examples of motivations to combine the various prior art references disclosed in these Preliminary Invalidity Contentions. These are only examples of the teachings, suggestions, motivations, and/or reasons a person of ordinary skill in the art would have had to modify or combine the prior art noted in Exhibits A-01 to A-*. Such teachings, suggestions, motivations, and/or reasons are also further identified in Exhibits A-01 to A-* with reference to disclosure of particular limitations. Exhibits A-01 to A-* describe example points in the prior art references at which a particular aspect of the

claims are taught. Each of these teachings noted in Exhibits A-01 to A-* would teach, suggest, motivate, and/or provide a reason to a person of ordinary skill the art to modify or combine prior art references in relation to embedded content on photographs. For these reasons and others, a person of ordinary skill in the art would have been motivated to combine any one of the prior art references listed in Exhibits A-01 to A-*, or herein, with one or more of those prior art references list in Exhibits A-01 to A-* or herein.

1. Illustrative Obviousness Combinations and Motivations to Combine for the '030 Patent.

No.	Primary Reference	Secondary Reference(s)	Motivation(s) to Combine
1	Bar-El	Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine the computer readable storage medium with programming instructions and digital media assets stored therein, as taught by Leeke, with Bar-El so that delays in Bar-El's presentation of composite digital media displays are minimized, and the system design is simplified. The references are also analogous art, in that they are directed towards providing targeted advertisements. Bar-El, 4:3-14, Leeke, 48:55-67, Claim 1.
2	Bar-El	Reisman	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642. Bar-El would further motivate a POSITA to seek any fact about the user which Bar-El's server 11 has the ability to gather. Bar-El, 8:19-23.

3	Leeke	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642. Leeke motivates a POSITA to seek additional information about the user. Leeke, 49:26-29, Claim 4.
4	Bar-El	Leeke and Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642. Leeke motivates a POSITA to seek additional information about the user. Leeke, 49:26-29, Claim 4. One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine the computer readable storage medium with programming instructions and digital media assets stored therein, as taught by Leeke, with Bar-El so that delays in Bar-El's presentation of composite digital media displays are minimized, and the system design is simplified. The references are also analogous art, in that they are directed towards providing targeted advertisements. Bar-El, 4:3-14, Leeke, 48:55-67, Claim 1.

5	Bar-El	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are in the same field of art because they aim to provide personalized information to users. Bar-El, 4:3-5; Bolnick, 2:18-25, 7:14-16 (video); 7:23-8:2. Bolnick solves a problem pertinent to Bar-El, which is selecting media, such as images that is relevant to user based on information about the user. Bolnick, 2:18-25, 7:14-16 (video); 7:23-8:2; Bar-El, 8:19-23. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 19:21-20:6. Bar-El would further motivate a POSITA to seek any fact about the user which Bar-El's server 11 has the ability to gather, and has the ability to gather this information from another server (such as Bolnick's real-time social network). Bar-El, 8:19-23, Claims 5-6.
6	Leeke	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). Bolnick identifies shortcomings in systems which provide only general information (e.g. by profile category). Bolnick, 2:18-20. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6. Leeke also motivates a POSITA to seek additional information about the user, and has the ability to retrieve this information from another server (such as Bolnick's Real-time social network). Leeke, 49:26-29, Claim 4.

7	Leeke	Robertson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). POSITA would have been motivated to retrieve user social network information with user attributes as taught by Robertson, because social network information is recently updated and would reflect recent information about the user. Leeke also motivates a POSITA to seek additional information about the user, and has the ability to retrieve this information from another server. Leeke, 49:26-29, Claim 4.
8	Bar-El	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized composite digital media displays. Achlioptas solves a problem pertinent to Bar-El, which is determining relevant information about a user, and selecting images that would be relevant to a user (Achlioptas' opportunities). Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. Bar-El would further motivate a POSITA to seek any fact about the user which Bar-El's server 11 has the ability to gather. Bar-El, 8:19-23.
9	Leeke	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Achlioptas and Leeke are both related to providing content (Achlioptas' opportunities and Leeke's advertisements) according to user profile. Leeke 48:55-67, Claim 1; Achlioptas, 2:33-35. Achlioptas solves a problem pertinent to Leeke, which is determining relevant information about a user, and selecting media that would be relevant to the user (Achlioptas' opportunities). Leeke, Claim 1, Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15,

			5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). Leeke, 48:15-16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. Leeke also motivates a POSITA to seek additional information about the user. Leeke, 49:26-29, Claim 4.
10	Bar-El	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. Bar-El would further motivate a POSITA to seek any fact about the user which Bar-El's server 11 has the ability to gather. Bar-El, 8:19-23.
11	Leeke	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. Leeke also motivates a POSITA to seek additional information about the user. Leeke, 49:26-29, Claim 4.

12	Bar-El	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Both references are in the same field of art and disclose systems for providing targeted advertisements together with other media. Bar-El 6:3-9; Knowlson, ¶1, 16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising. Knowlson, ¶1. Further, Knowlson recognizes a limitation of Bar-El with respect to Bar-El's information from users, unlike direct feedback from users, Knowlson states it has limitations, for example users "commonly lie." Knowlson, ¶¶ 1, 2, 3, 27; Bar-El, 8:19-23. Bar-El would further motivate a POSITA to seek any fact about the user which Bar-El's server 11 has the ability to gather. Bar-El, 8:19-23.
13	Leeke	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Both references are in the same field of art and disclose systems for targeted advertisements in relation to content players (see Leeke's Player and Knowlson's jukebox). Leeke, Abstract, 1:20-28; Knowlson, ¶1, 16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising. Knowlson, 2. Leeke also motivates a POSITA to seek various information about the user. Leeke, 49:26-29, Claim 4.

14	Bar-El	MovieLens	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Bar-El and MovieLens both relate to systems that provide personalized media or items to users. Leeke, 1:10-11, Abstract, Claim 1; Glance, Abstract, 1:14-19. Glance is directed towards predicting a user's level of interest in information. Glance 1:5-19. Glance identifies a cold-start problem in collaborative filtering systems which leads to inaccurate predictions. Glance, 1:30-67. Bar-El is one such system that describes collaborative filtering because it selects personalized images by matching user profiles to group profiles. Bar-El 4:19-23; Glance 1:30-44. Glance solves the problem by providing relationships between users as part of the filtering system. Glance, Abstract, 1:5-10. A POSITA would have been motivated to combine Bar-El with Glance, because they are in the same field of art and Glance addresses a problem of collaborative filtering systems, which would further Bar-El's goal of providing personalized content. Bar-El 4:3-5. Bar-El would further motivate a POSITA to seek any fact about the user which Bar-El's server 11 has the ability to gather (e.g. user social network information). Bar-El, 8:19-23. Further, Bar-El already has information about relationships between users and selects images based on this information. Bar-El, 10:14-20. Thus Bar-El's principal of operation would not change.
15	Bar-El	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are directed towards providing personalized advertisements. Bar-El, 4:3-14; Currans, Abstract. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user of the advertising and a greater likelihood of the user's reading the advertising and possibly utilizing the advertised service and/or purchasing the advertised product" which is a goal of Bar-El and Currans. Currans, ¶¶2, 11 (increased effectiveness of advertisements). Bar-El would further motivate a POSITA to seek any fact about

			the user which Bar-El's server 11 has the ability to gather. Bar-El, 8:19-23.
16	Bar-El	Herz	Herz relates to systems which select target objects based on user's target profiles. Herz, 1:25-50; Similarly, Bar-El identifies a specific problem in the field of electronic media of enabling a user to access relevant and interesting information without the user expending tremendous amount of time and resources in view of the overwhelming amount of online information. Herz, 1:51-2:13. Herz' solution includes identifying information of relevance and interest to the user, including advertisements. Herz, 4:30-36. Bar-El would further motivate a POSITA to seek any fact about the user which Bar-El's server 11 has the ability to gather. Bar-El, 8:19-23.
17	Bar-El	Glance or Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Bar-El, Glance and Knowledge Pump relate to systems that provide personalized media or items to users. Bar-El, 4:1-5, Abstract, Claim 1; Glance, Abstract, 1:14-19. Glance and Knowledge Pump are directed towards predicting a user's level of interest in information. Glance 1:5-19. Glance and Knowledge Pump identify a cold-start problem in recommendation systems which leads to inaccurate predictions. Glance, 1:30-67; Knowledge pump, Arregui, 3; Bar-El 4:19-23; Glance 1:30-44. Glance and Knowledge Pump solve the problem by providing relationships between users as part of the filtering system. Glance, Abstract, 1:5-10. A POSITA would have been motivated to combine Bar-El with Glance or Knowledge Pump, because they are in the same field of art and the references address a problems pertinent to Bar-El would further Bar-El's goal of providing personalized content. Bar-El 4:3-5. Bar-El would further motivate a POSITA to seek any fact about the user which Bar-El's server 11 has the ability to gather (e.g. user social network information). Bar-El, 8:19-23. Further, Bar-El already has information about relationships between users and selects images based on

			this information. Bar-El, 10:14-20. Thus Bar-El's principal of operation would not change.
18	Bar-El	Amazon.com or Dicker	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Bar-El, Dicker, and Amazon.com relate to systems that provide personalized media or items to users, such as by targeted marketing and are thus in the same field of art. Bar-El, 4:1-5, Abstract, Claim 1; Amazon.com, Linden, 76, 78 (recommendations as a targeted marketing tool), 79, FIG 1. Amazon.com solves a potential scaling problem of Bar-El, allowing for the algorithm for selecting personalized media content to scale with large datasets, and would also allow another approach for selecting content without directly asking the user. Amazon, Linden, 76. Amazon.com and Dicker solves a problem pertinent to Leeke which is selecting media that would be relevant to the user. Amazon.com, Linden 76, 77. Thus Bar-El's principle of operation would not change, and a POSITA would have been motivated to retrieve user social network information with user attributes as taught in Amazon.com or Dicker for selecting media content.
19	Bar-El	Moran	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are both towards providing media content with embedded advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). The references are analogous art. Moran identifies a problem for advertisers, in that they are competing for attention from an audience, and that its solution allows for advertisers to encounter less barriers for getting audience attention. Moran, ¶ ¶ 39, 40, 41. A POSITA would have been motivated to retrieve user social

			network information as taught by Moran, in order to better capture the user's attention.
20	Bar-El	Robertson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Robertson, because social network information is recently updated and would reflect recent information about the user. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to provide more impactful and personalized advertisements.
21	Leeke	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are directed towards providing personalized advertisements. Leeke, 1:10-11, Abstract, Claim 1. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user of the advertising and a greater likelihood of the user's reading the advertising and possibly utilizing the advertised service and/or purchasing the advertised product" which is a goal of Leeke and Currans. Currans, ¶¶2, 11 (increased effectiveness of advertisements). Leeke would further motivate a POSITA to seek additional information about the user. Leeke, 49:26-29, Claim 4. Thus, a POSITA would have been encouraged to seek other references such as Currans.
22	Leeke	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are from the same field of art. Herz relates to systems which select target objects based on user's target profiles. Herz, 1:25-

			50. Similarly, Leeke identifies a specific problem in the field of electronic media of enabling a user to access relevant and interesting information without the user expending tremendous amount of time and resources in view of the overwhelming amount of online information. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Herz, 1:51-2:13. Herz' solution includes identifying information of relevance and interest to the user, including advertisements. Herz, 4:30-36. Thus Herz solves a problem that is pertinent to Leeke, providing content and advertisements which are targeted to users. Leeke, 48:15-24. Leeke would further motivate a POSITA to seek additional information about the user. Leeke, 49:26-29, Claim 4. Thus, a POSITA would have been encouraged to seek other references such as Herz.
23	Leeke	Elder	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Elder, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Elder, in order to determine social network information from Leeke's audience.
24	Leeke	Glance	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Reisman and Glance both relate to systems that provide personalized media or items to users. Leeke, 1:10-11, Abstract, Claim 1; Glance, Abstract. Glance is directed towards predicting a user's level of interest in information. Glance 1:5-10. Glance identifies a cold-start problem in collaborative filtering systems which leads to inaccurate predictions. Glance, 1:30-67. Leeke is one such system that describes collaborative filtering. Leeke, 28:1-3. Glance solves the problem by providing relationships between users as part of the filtering system. Glance, Abstract, 1:5-10. A POSITA would have been motivated to combine Leeke

			with Glance, because they are in the same field of art and Glance addresses a problem of collaborative filtering systems, which would further Leeke's goal of providing accurate personalized content. Leeke would further motivate a POSITA to seek additional information about the user. Leeke, 49:26-29, Claim 4.
25	Leeke	Dicker, Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Leeke and Amazon.com both relate to systems that provide personalized media or items to users, such as by targeted marketing and are thus in the same field of art. Leeke, Claim 1; Amazon.com, Linden, 76, 78 (recommendations as a targeted marketing tool), 79, FIG 1. Amazon.com solves a potential scale problem of Leeke allowing for the algorithm to select personalized advertisements to scale with large datasets (which would be a problem of Leeke's large audience) and would also allow another approach for selecting content without directly asking the user. Amazon, Linden, 76. Leeke describes a collaborative filtering product, that Amazon.com addresses problems for. Leeke. 28:1-3. Amazon.com, Linden 76. Bar-El would further motivate a POSITA to seek any fact about the user which Bar-El's server 11 has the ability to gather (e.g. user social network information). Leeke would further motivate a POSITA to seek additional information about the user. Leeke, 49:26-29, Claim 4.
26	Leeke	Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Leeke and Knowledge Pump both relate to systems that provide personalized content or items to a community of users. Leeke, Claim 1. Knowledge Pump, Hawes, 13, Knowledge Pump, Glance, Abstract; Knowledge Pump, Arregui, 3. To the extent that Leeke describes a collaborative filtering product, Knowledge Pump identifies and addresses a cold-start problem in collaborative filtering products which leads to inaccurate predictions. Leeke, 28:1-3; Knowledge pump, Arregui, 3. Knowledge Pump solves this problem by providing information from a social network. Knowledge Pump, Arregui, 3. Knowledge Pump, Glance, Abstract, 1:5-10. A POSITA would have

			been motivated to combine Leeke with Knowledge Pump, because they are in the same field of art and Knowledge Pump addresses problems which would be pertinent in Leeke which would further Leeke's goal of providing targeted advertisements. Leeke's principal of operation would not change, because it already has information from multiple users in an audience, that communicate about the content. 15:5-8, 28:1-3, 28:1-3, 48:19-29.
27	Leeke	Moran	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). The references are analogous art. Moran identifies a problem for advertisers, in that they are competing for attention from an audience, and that its solution allows for advertisers to encounter less barriers for getting audience attention. Moran, ¶ ¶ 39, 40, 41. A POSITA would have been motivated to retrieve user social network information as taught by Moran, in order to better capture the user's attention.
28	Reisman	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Reisman and Bolnick both relate to systems that provide personalized content to users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). Bolnick identifies shortcomings in information portals (which Reisman describes many examples of), in that they provide only general information (e.g. by profile category), and could suffer from disloyal users. Bolnick, 2:18-20. Reisman identifies a similar problem. Reisman ¶ 633 (switching costs). Bolnick provides one such solution to the problem. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent

			information about the user. Bolnick, 2:18-20, 19:21-20:6.
29	Reisman	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are directed towards providing personalized advertisements. Reisman, ¶¶ 294, 204, 355, 371-373, 465, 522, 595-602, 642, 820; Currans, Abstract. They also provide similar solutions (replacement or insertion of personalized content based on profile), as such, Reisman's principle of operation would not change. ¶¶ 294, 204, 355, 371-373, 465, 522, 595-602, 642, 820; Currans, Abstract, 11, 12. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user" which is a goal of Reisman and Currans. Reisman, ¶10, 598. Currans, ¶¶2, 11 (increased effectiveness of advertisements).
30	Reisman	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are from the same field of art. Herz relates to systems which select target objects based on user's target profiles and based on information from a "virtual community." Herz, 1:25-50, 73:25-24, Claim 4. Similarly, Reisman, provides advertisements and other enhancement content based on user's interest and information from a virtual community. Reisman, ¶¶ 294, 204, 355, 371-373, 465, 522, 595-602, 632, 634, 637, 642, 820. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Herz, 1:51-2:13. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in

			Herz, in order to provide more personalized content. Reisman's principal of operation would not change, because Reisman already contemplates the sources of user interests and information from virtual community services described in Herz. Reisman, ¶¶ 632, 633.
31	Reisman	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized content resources. Achlioptas solves a problem pertinent to Reisman, which is determining relevant information about a user, and selecting content resources that would be relevant to a user (Achlioptas' opportunities) based on that information. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16; Reisman, ¶820. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. Reisman already has information that is similar to that provided in Achlioptas. For example, Reisman retrieves information from "virtual communities" which provide a "social service," and has information on buddies. Reisman, ¶¶633-641, 642; Achlioptas, 4:24-27, 6:51-7:16. Further Reisman acknowledges this information is pertinent to selecting content resources. ¶642. Reisman also uses user attributes to select media. Reisman ¶820. Thus Reisman's principle of operation would not change.
32	Reisman	Dicker, Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are from the same field of art. Reisman provides advertisements and other enhancement content based on user's interest and information from a virtual community. Reisman ¶¶ 294, 204, 355, 371-373, 465, 522, 595-602, 632, 634, 637, 642, 820. Reisman also utilizes collaborative filtering.

			Reisman, ¶¶ 678, 718, 722. Dicker and Amazon.com select items for users based on analyzing the interest of a community of users and improve upon collaborative filtering algorithms. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker and/or Amazon.com, in order to provide more personalized content. Dicker, ¶10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker and/or Amazon.com, in order to overcome limitations with collaborative filtering. ¶¶6-11. Reisman's principal of operation would not change, because Reisman already contemplates the sources of user social network information by identifying common interest in virtual communities. Reisman, ¶¶ 632, 636, 633.
33	Reisman	Glance	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Reisman and Glance both relate to systems that provide personalized content or items to users. Reisman, ¶¶ 678, 718, 722; Glance, Abstract. Glance is directed towards predicting a user's level of interest in information. Glance 1:5-10. Glance identifies a cold-start problem in collaborative filtering systems which leads to inaccurate predictions. Glance, 1:30-67. Reisman is one such system that describes collaborative filtering. Reisman, ¶¶ 678, 718, 722. Glance solves the problem by providing relationships between users as part of the filtering system. Glance, Abstract, 1:5-10. A POSITA would have been motivated to combine Reisman with Glance, because they are in the same field of art and Glance addresses a problem of collaborative filtering systems, which would further Reisman's goal of providing accurate personalized content. Reisman's principal of operation would not change, because it retrieves, and already utilizes social network information of users (e.g. information from buddies of a user) to select and present content. Reisman. ¶609, ¶633, ¶642, ¶618.

34	Reisman	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Both references are in the same field of art and disclose systems for providing content target to users. Reisman, ¶¶ 678, 718, 722; Knowlson, ¶1, 16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more personalized content and advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising. Knowlson, ¶1. Reisman's principal of operation would not change. For example, like Knowlson, Reisman similarly retrieves information about a community of users to provide content. Knowlson, ¶9. Reisman. ¶609, ¶633, ¶642, ¶618
35	Reisman	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65.
36	Reisman	Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Reisman and Knowledge Pump both relate to systems that provide personalized content or items to users. Reisman, ¶¶ 678, 718, 722; A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Knowledge Pump in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). Knowledge pump identifies a cold-start problem in collaborative filtering systems which leads the filtering to work poorly. Knowledge Pump, Arregui, 3. Reisman is one such system that describes

			collaborative filtering. Reisman, ¶¶ 678, 718, 722. Knowledge Pump solves the problem by providing relationships between users as part of the filtering system. Knowledge Pump, Arregui, 3 (Section 2.3). A POSITA would have been motivated to combine Reisman with Knowledge Pump, because they are in the same field of art and Knowledge Pump addresses a problem of collaborative filtering systems, which would further Reisman's goal of providing accurate personalized content. Reisman's principal of operation would not change, because it retrieves, and already utilizes social network information of users (e.g. information from buddies of a user) to select and present content. Reisman. ¶609, ¶633, ¶642, ¶618.
37	Reisman	Moran	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). The references are analogous art. Moran identifies a problem for advertisers, in that they are competing for attention from an audience, and that its solution allows for advertisers to encounter less barriers for getting audience attention. Moran, ¶ ¶ 39, 40, 41. A POSITA would have been motivated to retrieve user social network information as taught by Moran, in order better capture the user's attention, which would further a goal of Reisman.
38	Reisman	Robertson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to determine social network information. A POSITA would have been motivated to retrieve user social network as taught in

			Robertson, because Reisman already contemplates a contact manager.
39	iTunes 3	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Herz, 1:51-2:13. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to provide more personalized selection of songs on iTunes' playlist. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to fully address user iterests.
40	iTunes 3	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). It is important to iTunes 3 to provide selections of movies that a user likes. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide a more impactful and personalized playlist. Achlioptas solves a problem pertinent to iTunes, which is determining relevant information about a user, and selecting content that would be relevant to a user (Achlioptas' opportunities) based on that information. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16; Reisman, ¶820. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16.

41	iTunes 3	Dicker or Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Dicker and Amazon.com select items for users based on analyzing the interest of a community of users and improve upon collaborative filtering algorithms. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker and Amazon.com, in order to provide more personalized content. Dicker, ¶10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker and/or Amazon, in order to provide a recommendation for a song from a source other than the user's past music selection. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker and/or Amazon because the algorithm scales with many users and content.
42	iTunes3	Glance	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Reisman and Glance both relate to systems that provide personalized content or items to users. Reisman, ¶¶ 678, 718, 722; Glance, Abstract. Glance is directed towards predicting a user's level of interest in information. Glance 1:5-10. This is pertinent to iTunes. For example, iTunes dynamically updates a playlist based on the user's past listening behavior. POSITA would have been motivated to retrieve user social network information with user attributes as taught in Glance, in order to a playlist more tailored to user interest.
43	iTunes 3	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more impactful and personalized composite digital media displays (e.g. the Playlist). A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours."

			Jenkins, 5:23-44, 7:43-65. This is a shared goal of iTunes 3, which updates the Playlist based on immediately prior listening behavior. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide a more personalized selection of music, with privacy in mind.
44	iTunes 3	Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Knowledge Pump in order to provide more impactful and personalized composite digital media displays (e.g. Playlists).
45	iTunes 3	Elder	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Elder, in order to provide a more personalized playlist. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Elder, in order to determine social network information from many users of iTunes 3. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Elder, in order to personally profile and receive updates from iTunes's users.
46	iTunes 3	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). iTunes and Bolnick both relate to systems that provide personalized information to users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). Bolnick identifies shortcomings in information portals (which Netflix.com describes many examples of), in that they provide only general information (e.g. by profile category), and could suffer from disloyal users. Bolnick, 2:18-20. Netflix.com identifies a similar problem. Netflix.com ¶ 633

			(switching costs). Bolnick provides one such solution to the problem. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6.
47	iTunes 3	Robertson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to provide more personalized selection of movies. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to determine social network information from iTune's target audience. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to personally profile and receive updates from Netflix's community. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to communicate personal data.
48	Netflix	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are directed towards providing personalized content. They also provide similar solutions (replacement or insertion of personalized content based on profile), as such, Netflix.com's principle of operation would not change. ¶¶ 294, 204, 355, 371-373, 465, 522, 595-602, 642, 820; Currans, Abstract, 11, 12. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user" which is a goal of Netflix.com and Currans. Netflix.com, ¶10, 598. Currans, ¶¶2, 11 (increased effectiveness of advertisements).

49	Netflix.com	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Netflix.com and Bolnick both relate to systems that provide personalized content to users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). Bolnick identifies shortcomings in information portals (which Netflix.com describes many examples of), in that they provide only general information (e.g. by profile category), and could suffer from disloyal users. Bolnick, 2:18-20. Netflix.com identifies a similar problem. Netflix.com ¶ 633 (switching costs). Bolnick provides one such solution to the problem. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6.
50	Netflix.com	Robertson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to provide more personalized selection of movies. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to determine social network information from Netflix's target audience. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to personally profile and receive updates from Netflix's community. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to communicate personal data.

51	Netflix.com	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are directed towards providing personalized advertisements. Netflix.com, ¶¶ 294, 204, 355, 371-373, 465, 522, 595-602, 642, 820; Currans, Abstract. They also provide similar solutions (replacement or insertion of personalized content based on profile), as such, Netflix.com's principle of operation would not change. ¶¶ 294, 204, 355, 371-373, 465, 522, 595-602, 642, 820; Currans, Abstract, 11, 12. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user" which is a goal of Netflix.com and Currans. Netflix.com, ¶10, 598. Currans, ¶¶2, 11 (increased effectiveness of advertisements).
52	Netflix.com	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Similar to Netflix.com, Herz specifically outlines a solution for identifying which movies a user may like, based on ratings that that user and other users has provided. Herz, 9:13-14, 9:52-10:54. Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Netflix.com is one such with a plethora of information that aims to allow users to navigate this information (movies) and retrieve movies they may like. Netflix.com, Ex-3, 4. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves a problem pertinent to Netflix.com. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz,

			because the user would not need to expend time and energy to locate movie titles.
53	Netflix.com	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized content resources. Achlioptas solves a problem pertinent to Netflix.com, which is determining relevant information about a user, and selecting content resources that would be relevant to a user (Achlioptas' opportunities) based on that information. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16; Netflix.com, ¶820. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16.
54	Netflix.com	Dicker	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Dicker and Netflix.com relate to presenting recommendations for movies to users and are in the same field of art. Netflix.com, Ex-3, 2, Netflix.com, Hastings, 1:21-23, 1:66-2-1, 2:9-11; Dicker, ¶2. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker, in order to provide more personalized recommendations for movies. Dicker, ¶3 (referencing videos). To the extent that Netflix.com uses a collaborative filtering algorithm, Dicker identifies various problems related to these algorithms, Dicker. ¶¶ 4-11. Dicker's solution to these and other problems include "automatically identifying items that are related to one another based on the activities of a community of users." Dicker, ¶2, 12. Netflix.com already identifies

			items related to one another based on the ratings of multiple users who may have "expressed their taste from a range of similar and dissimilar items." Netflix.com, Ex-3, 2 (e.g. "Liked The Royal Tenenbaums?, Try Ghost World"), Netflix.com, Hastings, 16-31. Thus Netflix.com's principal of operation would not change and a POSITA would be motivated to combine in order to provide more personalized recommendations for movies. Dicker, ¶3 (referencing videos).
55	Netflix.com	Glance	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Netflix.com and Glance both relate to systems that provide personalized content or items to users. Netflix.com, ¶¶ 678, 718, 722; Glance Abstract. Glance is directed towards predicting a user's level of interest in information. Glance 1:5-10. Glance identifies a cold-start problem in collaborative filtering systems which leads to inaccurate predictions. Glance, 1:30-67. Netflix.com is one such system that describes collaborative filtering. Netflix.com, ¶¶ 678, 718, 722. Glance solves the problem by providing relationships between users as part of the filtering system. Glance, Abstract, 1:5-10. A POSITA would have been motivated to combine Netflix.com with Glance, because they are in the same field of art and Glance addresses a problem of collaborative filtering systems, which would further a goal of providing accurate personalized content.
56	Netflix.com	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Both references are in the same field of art and disclose systems for providing targeted media. Netflix.com, EX-3, 1, 2; Knowlson, ¶1, 16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising, such as Netflix.com's suggested movies. Knowlson, ¶1.

57	Netflix.com	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65.
58	Netflix.com	Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Netflix.com and Amazon.com are related art, because they both aim to provide potential items of interest (e.g. movies, books) to users, and solve the same problem of recommending items of interest to users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Amazon.com, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). As evidenced by Linden which compares various algorithms, the selection of a recommendation algorithm would have been an implementation level detail known to a POSITA. Amazon.com, Linden, 76-79. Amazon.com identified a problem pertinent to Netflix.com in view of multiple items which the user could not directly rate because of the scale of information. Netflix.com, 3 (12,000 titles); Amazon.com, Linden, 76 (millions of catalog items). A POSITA would have been motivated to combine Amazon.com's retrieving user social network information in the manner described by Amazon.com with Netflix.com, because it would allow Netflix.com's algorithm to scale with more titles, and would provide higher quality results. Amazon.com, Linden, 77, 8.

59	Netflix.com	Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Netflix.com and Knowledge Pump are related art, because they both aim to provide potential items of interest (e.g. movies, books) to users based on predicted user interest. A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Knowledge Pump in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). Further, a POSITA would have been motivated POSITA would have been motivated to retrieve user social network information as taught by Knowledge Pump in order to overcome limitations of collaborative filtering algorithms. Netflix.com already determines common interest between users in order to recommend items, thus Netflix.com already contemplates the communities defined by common interests described by Knowledge Pump as social networks. Knowledge Pump, Arregui, 1 (Section 1), 3. Thus, Netflix.com's principal of operation would not change.
60	Netflix.com	MovieLens	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by MovieLens, in order to provide more relevant recommendations for movies.
61	Moran	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized campaigns. Bolnick identifies shortcomings in information portals, in that they provide only general information (e.g. by profile category), and could suffer from disloyal users. Bolnick, 2:18-20. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide selections of information based on more specific information about the user. A POSITA would have been motivated to retrieve user social network information

			with user attributes as taught in Bolnick in order to provide users with "desired information." Bolnick 14:15-21. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have more loyal users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6.
62	Moran	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are directed towards providing personalized advertisements. Moran, Abstract. Currans, Abstract. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, because it would further Moran's goal of having the combined content with the advertising message have a "desirability to the audience." Moran, Abstract. POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans in order to better target individual users. Moran, ¶119. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user …. and a greater likelihood of the user's reading the advertising and possibly utilizing the advertised service and/or purchasing the advertised product." Currans, ¶¶2, 11 (increased effectiveness of advertisements).

63	Moran	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Moran and Herz are analogous art because they are directed towards providing content such as advertisements, based on user profiles. Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves problem pertinent to Moran. A POSITA would have been motivated to combine user social network information as taught by Herz in order to address these problems. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to provide more impactful and personalized advertisements and /or address user's interest at a deeper level. Moran's principal of operation would not change, because it already interfaces with community sites, such as Herz' virtual community services.
64	Moran	Elder	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Elder, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Elder, in order to determine social network information from Moran's audience. A POSITA would have been motivated to retrieve user social network information from individuals interacting with Moran's content.

65	Moran	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized content resources. Achlioptas solves a problem pertinent to Moran, which is determining relevant information about a user, and selecting content resources that would be relevant to a user (Achlioptas' opportunities) based on that information. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16.
66	Moran	Dicker or Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Dicker and Amazon.com relate to presenting recommendations for movies to users and are in the same field of art. Dicker, ¶2. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker, in order to provide more personalized recommendations for movies. Dicker, ¶3 (referencing videos). Amazon.com, Linden, 76, 78 (recommendations as a targeted marketing tool), 79, FIG 1. To the extent that Netflix.com uses a collaborative filtering algorithm, Dicker and Amazon.com identify various problems related to these algorithms, Dicker. ¶¶ 4-11. Dicker and Amazon.com's solution to these and other problems include "automatically identifying items that are related to one another based on the activities of a community of users." Dicker, ¶2, 12. Amazon.com, Linden 76, 77. Netflix.com already identifies items related to one another based on the ratings of multiple users who may have "expressed their taste from a range of similar and dissimilar items." Netflix.com, Ex-3, 2 (e.g. "Liked The Royal Tenenbaums?, Try Ghost World"), Netflix.com, Hastings, 16-31. Thus Netflix.com's principal of operation would not change and a POSITA would be

			motivated to combine in order to provide more personalized recommendations for movies. Dicker, ¶3 (referencing videos).
67	Moran	Glance or Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine retrieving user social network information as taught by Glance or Knowledge Pump, with Moran, in order to better determine a user's level of interest in Moran's advertising and/or content. Glance, 1:5-10; Knowledge Pump, Arregui, 3 (Section 2.3). A POSITA would have been motivated to combine retrieving user social network information as taught by Glance or Knowledge Pump with Moran, in order to develop a more complete user profile. A POSITA would have been motivated to combine retrieving user social network information as taught by Glance or Knowledge Pump with Moran, in order provide an algorithm for better selecting content based on information about the user. A POSITA would have been motivated to combine retrieving user social network information as taught by Glance or Knowledge Pump in order to build a community loyal to the content provider. Moran, 73.
68	Moran	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Both references are in the same field of art and disclose systems for providing targeted media such as advertising. Knowlson, ¶1, 16. A POSITA would have been motivated to combine Moran with Knowlson to retrieve user social network information as taught by Knowlson in order to further Moran's goal of getting the message to the audience. Moran, ¶ 39. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson in order to provide more personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable

			information" for advertising and would thus further a goal of Moran. Knowlson, ¶1.
69	Moran	Jenkins	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more personalized messages and advertisements. A POSITA would have been motivated to combine Moran with Jenkins in order to further Moran's goal of getting the message to the audience. Moran, ¶ 39. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to determine more information about the user. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to maintain user privacy in the information used. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. Further, Moran's principal of operation would not change, because Moran already has information from the type of web community sites Jenkins retrieves information from. Moran, ¶ 132.
70	Moran	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Moran identifies a problem for advertisers, in that they are competing for attention from an audience, and that its solution allows for advertisers to encounter less barriers for getting audience attention. Moran, ¶ 39, 40, 41. A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Reisman, in order to provide more impactful and personalized content and messages. A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Reisman, in order to better capture the user's attention. A POSITA would have been motivated to retrieve user social network information

			with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642.
71	Moran	GeoCities	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by GeoCities in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). Moran specifically selects content according to a criteria which is a context of a website, and specifically calls out GeoCities as one example website. Moran, ¶ 132, Claim 4. Because the context of Geocities includes user social network information, Moran's principal of operation would not change.
72	Moran	Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to monitor the first composite digital media display for the presence of a trigger point as taught in Leeke, in order to embed Moran's advertising message into the content and/or provide more personalized composite. A POSITA would have been motivated to monitor the first composite digital media display for the presence of a trigger as taught in Leeke, in order to embed Moran's advertising message into the content and/or provide more personalized composite.
73	Moran	Freeman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to monitor the first composite digital media display for the presence of a trigger point as taught in Leeke, in order to embed Moran's advertising message into the content and/or provide more personalized composite. A POSITA would have been motivated to monitor the first composite digital media display for the presence of a trigger as taught in Leeke, in order to

			embed Moran's advertising message into the content and/or provide more personalized composite.
74	Chaddha	Freeman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to monitor the first composite digital media display for the presence of a trigger as taught in Freeman, in order to combine Chaddha's local content and global content and/or to provide a more personalized composite. A POSITA would have been motivated to monitor the first composite digital media display for the presence of a trigger point as taught in Freeman, in order to embed Moran's advertising message into the content.
75	Chaddha	Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to monitor the first composite digital media display for the presence of a trigger as taught in Freeman, in order to combine Chaddha's local content and global content and/or to provide a more personalized composite. A POSITA would have been motivated to monitor the first composite digital media display for the presence of a trigger point as taught in Freeman, in order to embed Moran's advertising message into the content.
76	Chaddha	Byers, Bar-El, Granik, Dempski, or Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers with Chaddha, in order to in order to combine Chaddha's local content with global content and/or to provide a more personalized composite. A POSITA would have been motivated to monitor the first composite digital media display for the presence of a trigger point as taught in Leeke, in order to embed Moran's advertising message into the content and/or provide more personalized composite.

77	Dempski	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are in the same field of art, providing enhanced television, for example with interactive content. Dempski, 3:12-20; Reisman, ¶2. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642.
78	Dempski	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized campaigns. Bolnick identifies shortcomings in information portals, in that they provide only general information (e.g. by profile category), and could suffer from disloyal users. Bolnick, 2:18-20. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide selections of information based on more specific information about the user. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide users with "desired information." Bolnick 14:15-21. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have more loyal users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is

			recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6.
79	Dempski	Moran	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are both towards providing media content with advertisements. Dempski, 3:12-20. Moran, ¶ 16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). The references are analogous art. Moran identifies a problem for advertisers, in that they are competing for attention from an audience, and that its solution allows for advertisers to encounter less barriers for getting audience attention. Moran, ¶ ¶ 39, 40, 41. A POSITA would have been motivated to retrieve user social network information as taught by Moran, in order to better capture the user's attention.
80	Dempski	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are directed towards providing personalized advertisements. Dempski, 3:12-20; Currans, Abstract. They also provide similar solutions (replacement or insertion of personalized content based on profile information), as such, Dempski's principle of operation would not change. Dempski, 3:12-20, 8:12-26, 9:29-10:6, Claim 1; Currans Abstract, ¶¶11, 12. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user" which is a shared goal of Dempski and Currans that would be furthered. Dempski, 3:12-20, 8:12-26; Currans, ¶¶2, 11 (increased effectiveness of advertisements).

81	Dempski	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Dempski and Herz are analogous art because they are directed towards providing content such as advertisements, based on user profile. Dempski, 3:12-20; Herz, 9:13-14, 9:52-10:54, Claim 1. Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves a problem pertinent to Dempski. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to provide more impactful and personalized advertisements and /or address user's interest at a deeper level.
82	Dempski	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Achlioptas and Dempski are both related to providing content (Achlioptas' opportunities and Dempski's personalized information or content) according to user profile. Dempski, 2:18-20, 6:21- 7:9; Achlioptas, 2:33-35. Achlioptas solves a problem pertinent to Dempski, which is determining relevant information about a user, and selecting information. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized advertisements. Dempski, 1:15-20 (describing a need for customized, personalized enhancements to the television experience). Dempski already describes that user profiles including information about the user is needed for tailoring content to the user's needs, and that it could be retrieved from the internet.

			Dempski, 6:21-28, 12:15-18. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas (which also includes this information in user profiles), because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16.
83	Dempski	Dicker and Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Dicker and Amazon.com solve a problem related to Dempski's goal of selecting media content a user would be interested in. Dicker, ¶2. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker and Amazon, in order to provide more personalized recommendations for movies. Dicker, ¶3 (referencing videos). Amazon.com, Linden, 76, 78 (recommendations as a targeted marketing tool), 79, FIG 1. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker and Amazon in order to provide an algorithm for selecting content. Dicker, ¶¶ 4-11.
84	Dempski	Elder	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Elder, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Elder, in order to determine social network information from Dempski's audience.
85	Dempski	Glance	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Dempski is directed towards provides personalized content according to user interest. Dempski, 1:21-2:1, 2:18-20, 6:9-15, 6:21-7:9. Glance is directed towards predicting a user's interest in items. Glance, Abstract, 1:5-10, 2:40-52. Glance solves the problem by providing relationships between users as part of the filtering system. Glance, Abstract, 1:5-10. A

			POSITA would have been motivated to combine Glance with Dempski, because they are in the same field of art and address the same problem, which would further a goal of providing accurate personalized content. Dempski's principal of operation would not change, because Dempski already stores information about users, including their interests and preferences according to a social network (e.g. family). Dempski, 6:9-20. Thus Dempski can already identify the type of social network map that Glance uses to determine user interest in items.
86	Dempski	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Both references are in the same field of art and disclose systems for providing targeted media such as advertising. Dempski, 1:21-2:1, 2:18-20, 6:9-15, 6:21-7:9, 12:15-16; Knowlson, ¶1, 16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising and would thus further a goal of Dempski. Knowlson, ¶1. Further, Dempski's principal of operation would not change, because Dempski already stores information about users, including their interests and preferences according to a social network (e.g. family). Dempski, 6:9-20. Thus Dempski already identifies the type of relationships between users that Knowlson uses to target advertisements. Knowlson, ¶9.
87	Dempski	Jenkins	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to better select and target advertisements. A POSITA would have been motivated to combine Dempski with Jenkins in order to further Dempski's goal of retrieving "information known about the target user". Haberman, 5:28-34. POSITA would have been motivated to combine Dempski with Jenkins in order to provide privacy of user data. Jenkins, Abstract, 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to determine more information about the user. A

			POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide recent information about the user. Further, Dempski's principal of operation would not change, because Dempski already stores information about users, including their interests and preferences according to a social network (e.g. family). Dempski, 6:9-20. Thus Dempski already contemplates the type of information retrieved from Jenkins' community sites.
88	Dempski	Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Dempski and Knowledge Pump are in the same field of art. They are directed towards systems for providing personalized content or media. Dempski, 1:21-2:1, 2:18-20, 6:9-15, 6:21-7:9, 12:15-16; Knowledge Pump, Hawes, 13, Knowledge Pump, Glance, Abstract; Knowledge Pump, Arregui, 3. A POSITA would have been motivated to combine Dempski with Knowledge Pump, because they are in the same field of art and Knowledge Pump addresses problems which would be pertinent in Dempski in order to select more relevant content. Dempski's principal of operation would not change, because it also uses information about users to select content, and it already stores information about users, including their interests and preferences according to a social network (e.g. family). Dempski, 6:9-20.
89	Bjorgan	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they relate to providing personalized content (such as advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain

			premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642.
90	Bjorgan	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are in the same field of art because they aim to provide personalized information to users. Bjorgan, Abstract, ¶¶3, 8, 9, 10, 12; Bolnick, 2:18-25, 7:14-16 (e.g. video); 7:23-8:2. Bolnick solves a problem pertinent to Bjorgan, which is selecting media, such as images, that are relevant to user based on information about the user. Bolnick, 2:18-25, 7:14-16 (video), 7:23-8:2; Bjorgan, Abstract. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 19:21-20:6. Further, Bjorgan identifies a means to retrieve user social network information remotely from Bjorgan's system by a network. Bjorgan, ¶18, Claim 8. Thus a POSITA would have been motivated to combine Bolnick with Bjorgan.
91	Bjorgan	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are directed towards providing personalized advertisements. Bjorgan, Abstract, ¶¶3, 8, 9, 10, 12; Currans, Abstract. They also provide similar solutions (replacement or insertion of personalized content based on profile information). Bjorgan, 3, 8, 9, 10, 12, 58, Claim 1; Currans, Abstract, 11, 12. Bjorgan also has information on family of users, which would be the type of user social network information of Currans. Bjorgan, 58. As such, Bjorgan's principle of operation would not change. A POSITA would have been motivated to retrieve user social network information

			with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user" which is a shared goal of Bjorgan and Currans that would be furthered. Bjorgan, 3, 8, 9, 10, 11, 12; Currans, ¶¶2, 11 (increased effectiveness of advertisements).
92	Bjorgan	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Similar to Bjorgan, which provides personalized advertisements based on user profile information, Herz provides personalized advertisements based on a user's target profile interest summary. Herz, Claim 1. Bjorgan, Abstract, ¶¶3, 8, 9, 10, 12. Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Similarly, Bjorgan identifies that profiles should go beyond mere demographics and identifies a solution that more accurately targets content towards users how have profiles that are difficult to target. Bjorgan, ¶9, ¶10. Thus Herz identifies and solves a problem pertinent to Bjorgan. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, because the user would not need to expend time and energy to locate content, and the content targeted to individuals would be selected with more complete user profiles, furthering a goal of Bjorgan.
93	Bjorgan	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Achlioptas and Bjorgan are both related to providing content (Achlioptas' opportunities and Bjorgan's content) according to user profile. Bjorgan, Abstract, ¶¶3, 8, 9, 10, 12; 6:21- 7:9;

			Achlioptas, 2:33-35. Achlioptas solves a problem pertinent to Bjorgan, which is determining relevant information about a user, and selecting information based on that (the opportunity). Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized advertisements. A POSITA would have been further motivated to retrieve user social network information with user attributes as taught in Achlioptas (which also includes this information in user profiles), because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. Further, Bjorgan already profiles a family of users, and thus already contemplates the user social network information in Achlioptas. Bjorgan, ¶58. Thus Bjorgan's principal of operation would not change.
94	Bjorgan	Dicker	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Bjorgan and Dicker are in the same field of art and relate to providing targeted advertisements . Dicker, Abstract, ¶2. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker, in order to provide more personalized advertisements or recommendations. Dicker, Abstract, ¶96 (referencing advertisements).
95	Bjorgan	Glance	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Bjorgan and Glance are in the same field of art and are directed towards providing content based on user interest. Bjorgan, Abstract, ¶63, Glance, Abstract, 1:5-10, 2:40-52. Glance uses the relationships between users and their interest to provide content. Glance, Abstract, 1:5-10. A POSITA would have been motivated to combine Glance with Bjorgan, because they are in the same field of art and address the same problem, which would further a goal of providing personalized content. Further, Bjorgan already profiles a family of users, and thus already contemplates the user

			social network information in Glance. Thus Bjorgan's principal of operation would not change.
96	Bjorgan	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Both references are in the same field of art and disclose systems for providing targeted advertisements. Bjorgan, Abstract, ¶¶3, 8, 9, 10, 12; Knowlson, ¶¶1, 16. Bjorgan also has information on family of users, which would be the type of user social network information of Knowlson. Bjorgan, ¶58, Knowlson, ¶¶1,9, 10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising, which would further a goal of Bjorgan of providing targeted advertisements and other content that addresses the current needs of the audience. Bjorgan already profiles a family of users, and thus already contemplates the user social network information in Knowlson. Bjorgan, ¶58; Knowlson, ¶13. Thus Bjorgan's principal of operation would not change.
97	Bjorgan	Moran	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Both references provide media content with embedded advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran, in order to provide more impactful and personalized advertisements. Moran identifies a problem for advertisers, in that they are competing for attention from an audience, and that its solution allows for advertisers to encounter less barriers for getting audience attention. Moran, ¶ ¶ 39, 40, 41. A POSITA would have been motivated to retrieve user social network information as taught by Moran, in order to

			better capture the user's attention. Bjorgan's principal of operation would not change, because it already describes systems connected to the internet.
98	Bjorgan	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more personalized messages and advertisements. A POSITA would have been motivated to combine Bjorgan with Jenkins in order to further Haberman's goal of retrieving "information known about the target user". Haberman, 5:28-34. POSITA would have been motivated to combine Dempski with Jenkins in order to further Haberman's goal of solving problems of timeliness and privacy. Haberman, 5:28-35. Jenkins, Abstract., 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to determine more information about the user. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. Further, Dempski's principal of operation would not change, because Dempski already stores information about users, including their interests and preferences according to a social network (e.g. family). Dempski, 6:9-20. Thus Dempski already identify the type of information retrieved from Jenkin's community sites.
99	Haberman	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are directed towards providing personalized information or messaging, such as advertisements. Haberman, Abstract, 1:5-9, 4:33-51; Reisman, ¶ 69. As such, Haberman's principle of operation would not change. A POSITA would have

			been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to which is a shared goal of Haberman and Reisman that would be furthered. Haberman, 4:11-14 (changing "elements of the advertising [to gain] the viewer attention the advertisers desire"); Reisman,
100	Haberman	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are directed towards providing personalized information or messaging, such as advertisements. Haberman, Abstract, 1:5-9, 4:33-51. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful, useful, desired, and personalized messaging and information, which is a shared goal of Haberman and Bolnick. Haberman, 4:11-14 (changing "elements of the advertising [to gain] the viewer attention the advertisers desire"); Bolnick 2:18-25 (providing desired information "overcomes the shortcomings of conventional information portals"); 14:15-21 (desired and useful information). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-25, 19:21-20:6. Bolnick acknowledges the benefit of timely and recent information for personalization. Haberman, 1:29-40 (goal of topically relevant information); 4:33-51 (on demand); 10:39-51 ("enhance the timeliness and relevance of the personalized communication");13:47-54.
101	Haberman	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are directed towards providing personalized messaging, such as advertisements. Haberman, Abstract, 1:5-9, 4:33-51; Currans, Abstract. They also provide similar solutions (replacement or insertion of personalized content based on profile information). Haberman, 5:3-26, 8:25-37; Currans, Abstract, 11, 12. As such, Haberman's principle of

			operation would not change. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user" which is a shared goal of Haberman and Currans that would be furthered. Haberman, 4:11-14 (changing "elements of the advertising [to gain] the viewer attention the advertisers desire"); Currans, ¶¶2, 11 (increased effectiveness of advertisements).
102	Haberman	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous to each other. Similar to Haberman, which provides personalized advertisements based on user profile information, Herz provides personalized advertisements based on a user's target profile interest summary. Haberman, Abstract, 1:5-9, 4:33-51; Herz, Claim 1. Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves a problem pertinent to Haberman. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information as taught in Herz, because the content targeted to individuals would be selected with more complete user profiles, furthering a goal of Haberman.

103	Haberman	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Achlioptas and Haberman are both related to providing content (Achlioptas' opportunities and Bjorgan's content) according to user profile, and are thus analogous. Haberman, Abstract, 1:5-9, 4:33-51; Achlioptas, 2:33-35. Achlioptas solves a problem pertinent to Haberman, which is determining relevant information about a user which is used for opportunities (such as for selecting media). Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized advertisements. A POSITA would have been further motivated to retrieve user social network information with user attributes as taught in Achlioptas (which also includes this information in user profiles), because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to combine Haberman with Achlioptas in order to further Haberman's goal of retrieving "information known about the target user". Haberman, 5:28-34. POSITA would have been motivated to combine Haberman with Achlioptas in order to further Haberman's goal of solving problems of timeliness and privacy. Haberman, 5:28-35. Haberman's principal of operation would not change, because it already "gather[s] user profile information from a variety of sources and databases." Haberman, 5:40-45.
104	Haberman	Dicker or Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine retrieving user social network information as taught by Dicker and Amazon.com in order to improve the selection of items such as messages or advertisements by analyzing the interest of a community of users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com,

			in order to provide a more personalized message. Dicker, ¶10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to overcome limitations with filtering algorithms. Dicker, ¶¶6-11. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to improve upon Haberman's rules applied to user profiles. Haberman, Abstract. A POSITA would have been motivated to combine Haberman with Glance in order to further Haberman's goal of retrieving "information known about the target user". Haberman, 5:28-34. Haberman's principal of operation would not change, because it already "gather[s] user profile information from a variety of sources and databases." Haberman, 5:40-45.
105	Haberman	Glance or Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine retrieving user social network information as taught by Glance or Knowledge Pump, with Haberman, in order to better determine a user's level of interest in Haberman's advertising or messages. Glance, 1:5-10; Knowledge Pump, Arregui, 3 (Section 2.3). A POSITA would have been motivated to combine retrieving user social network information as taught by Glance or Knowledge Pump with Haberman, in order to develop a more complete user profile. A POSITA would have been motivated to combine retrieving user social network information as taught by Glance or Knowledge Pump with Haberman to interpret user profile data in addition to or alternatively to Haberman's expert rules. A POSITA would have been motivated to combine Haberman with Glance in order to further Haberman's goal of retrieving "information known about the target user". Haberman, 5:28-34. Haberman's principal of operation would not change, because it already "gather[s] user profile information from a variety of sources and databases." Haberman, 5:40-45.

106	Haberman	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more personalized content and advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising. Knowlson, ¶1. A POSITA would have been motivated to combine Haberman with Knowlson in order to further Haberman's goal of retrieving "information known about the target user". Haberman, 5:28-34. POSITA would have been motivated to combine Haberman with Knowlson in order to further Haberman's goal of solving problems of timeliness and privacy. Haberman, 5:28-35.Knowlson, ¶14. Haberman's principal of operation would not change, because it already "gather[s] user profile information from a variety of sources and databases." Haberman, 5:40-45.
107	Haberman	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more personalized messages and advertisements. A POSITA would have been motivated to combine Haberman with Jenkins in order to further Haberman's goal of retrieving "information known about the target user". Haberman, 5:28-34. POSITA would have been motivated to combine Haberman with Jenkins in order to further Haberman's goal of solving problems of timeliness and privacy. Haberman, 5:28-35. Jenkins, Abstract., 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to determine more information about the user. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. Haberman's principal of

			operation would not change, because it already "gather[s] user profile information from a variety of sources and databases." Haberman, 5:40-45.
108	Haberman	Robertson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to provide more personalized messages and advertisements. A POSITA would have been motivated to combine Haberman with Robertson in order to further Haberman's goal of retrieving "information known about the target user". Haberman, 5:28-34. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to have up to date information about the user. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Robertson, because it would allow Haberman to "gather[s] user profile information from a variety of sources and databases." Haberman, 5:40-45. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to retrieve personal information updates.
109	Haberman	Elder	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to provide more personalized messages and advertisements. A POSITA would have been motivated to combine Haberman with Robertson in order to further Haberman's goal of retrieving "information known about the target user." Haberman, 5:28-34. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to have up to date information about the user. A POSITA would haves been motivated to

			retrieve user social network information with user attributes as taught in Robertson, because it would allow Haberman to "gather[s] user profile information from a variety of sources and databases." Haberman, 5:40-45. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Elder, because it would allow for retrieving user social network information based on Haberman's messages.
110	Marcus	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are in the same field of art, providing media content to users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642.
111	Marcus	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful, useful, desired, and media and information, which would further a goal of Marcus. Bolnick 2:18-25 (providing desired information "overcomes the shortcomings of conventional information portals"); 14:15-21 (desired and useful information). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-25, 19:21-20:6. Bolnick acknowledges the benefit of timely and recent information for personalization. Haberman, 1:29-40 (goal of topically relevant information); 4:33-51 (on demand); 10:39-51 ("enhance the timeliness and relevance of the personalized communication");13:47-54. A POSITA would have been motivated to retrieve user social network information with user attributes as

			taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have more loyal users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6.
112	Marcus	Moran	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). Moran identifies a problem for advertisers, in that they are competing for attention from an audience, and that its solution allows for advertisers to encounter less barriers for getting audience attention. Moran, ¶ ¶ 39, 40, 41. A POSITA would have been motivated to retrieve user social network information as taught by Moran, in order better capture the user's attention, which would further a goal of Marcus.
113	Marcus	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, so that the advertisements have "more impact on the user" which is a shared goal of Marcus and Currans that would be furthered. Currans, ¶¶2, 11 (increased effectiveness of advertisements).

114	Marcus	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous to each other. Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves a problem pertinent to Marcus. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information as taught in Herz, because the content targeted to individuals would be selected with more complete user profiles, furthering a goal of Marcus. A POSITA would have been motivated to retrieve user social network information as taught in Herz, because the content targeted to individuals would be selected with more complete user profiles, furthering a goal of Marcus.
115	Marcus	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Achlioptas solves a problem pertinent to Marcus, which is determining relevant information about a user which is used for opportunities (such as for selecting media). Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized advertisements. A POSITA would have been further motivated to retrieve user social network information with user attributes as taught in Achlioptas (which also includes this information in user profiles), because social network information includes a

			"tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16.
116	Marcus	Dicker or Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine retrieving user social network information as taught by Dicker and Amazon.com in order to improve the selection of content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to content selected based on user profile. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to provide a filtering algorithm.
117	Marcus	Glance or Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine Marcus with Glance or Knowledge Pump with respect to retrieving user social network information as taught by Glance or Knowledge Pump, in order to provide an algorithm for better targeting the user. Glance, 1:30-67; Knowledge Pump, Arregui, 3; Glance 1:30-44. A POSITA would have been motivated to combine Marcus with Glance or Knowledge Pump because the references address a problems pertinent to Marcus which would Marcus' goal of providing more customized content.
118	Marcus	Knowlson	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more personalized content and advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising. Knowlson, ¶1. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson in order to provide user privacy. A POSITA would have been motivated to combine Marcus

			with Knowlson in order to further Marcus' goal of providing customized programming. Marcus, 1:10-20. Knowlson, ¶14.
119	Marcus	Jenkins	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more personalized messages and advertisements. A POSITA would have been motivated to combine Marcus with Jenkins in order to provide user profiles with user privacy. Jenkins, Abstract., 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to determine more information about the user. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65.
120	Granik	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are in the same field of art, providing media content, including advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642.
121	Granik	Moran	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). Moran identifies a problem for advertisers, in that they are

			competing for attention from an audience, and that its solution allows for advertisers to encounter less barriers for getting audience attention. Moran, ¶ ¶ 39, 40, 41. A POSITA would have been motivated to retrieve user social network information as taught by Moran, in order better capture the user's attention, which would further a goal of Granik.
122	Granik	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are in the same field of art because they aim to provide content information to users. Bolnick, 2:18-25, 7:14-16 (e.g. video), 7:23-8:2. Bolnick solves a problem pertinent to Granik, which is selecting media, such as images, that are relevant to the user based on information about the user. Bolnick, 2:18-25, 7:14-16 (video), 7:23-8:2; Granik, Abstract. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 19:21-20:6.
123	Granik	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are analogous art because they are directed towards providing content that users are likely to be receptive towards and interested in viewing. Granik, ¶17. Currans, Abstract. They also provide similar solutions (replacement or insertion of content based on profile information).Currans, Abstract, ¶¶11, 12; Granik, ¶¶ 13, 17. Granik further retrieves the information from the internet. As such, Granik's principle of operation would not change. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more desirable advertisements, which is a goal of Granik. Granik, ¶¶ 4, 5. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful

			and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, so that the advertisements have "more impact on the user" which is a shared goal of Granik and Currans that would be furthered. Currans, ¶¶2, 11 (increased effectiveness of advertisements).
124	Granik	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves a problem pertinent to Granik. Granik, Abstract. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to provide more desirable advertisements, which is a goal of Granik. Granik, ¶¶ 4, 5. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information as taught in Herz, because the content targeted to individuals would be selected with more complete user profiles, furthering a goal of Granik. A POSITA would have been motivated to retrieve user social network information as taught in Herz, because the content targeted to individuals would be selected with more complete user profiles, furthering a goal of Granik.

125	Granik	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Achlioptas and Haberman are both related to providing content (Achlioptas' opportunities and Bjorgan's content) according to user profile, and are thus analogous. Haberman, Abstract, 1:5-9, 4:33-51; Achlioptas, 2:33-35. Achlioptas solves a problem pertinent to Granik, which is determining relevant information about a user which is used for opportunities (such as for selecting media). Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more desirable advertisements, which is a goal of Granik. Granik, ¶¶ 4, 5. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized advertisements. A POSITA would have been further motivated to retrieve user social network information with user attributes as taught in Achlioptas (which also includes this information in user profiles), because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16.
126	Granik	Dicker or Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine retrieving user social network information as taught by Dicker and Amazon.com in order to improve the selection of content. A POSITA would have been motivated to combine retrieving user social network information as taught by Dicker and Amazon.com in order to provide more desirable advertisements, which is a goal of Granik. Granik, ¶¶ 4, 5. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to select content based on user profile. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to provide a filtering algorithm.

127	Granik	Glance or Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine retrieving user social network information as taught by Glance or Amazon.com in order to provide more desirable advertisements. A POSITA would have been motivated to combine Granik with Glance or Knowledge Pump with respect to retrieving user social network information as taught by Glance or Knowledge Pump, in order to provide an algorithm for better targeting the user. Glance, 1:30-67; Knowledge Pump, Arregui, 3; Glance 1:30-44. A POSITA would have been motivated to combine Granik with Glance or Knowledge Pump because the references address a problems pertinent to Granik which would further Granik's goal of providing more customized content.
128	Granik	Knowlson	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more personalized content and advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising. Knowlson, ¶1. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson in order to provide user privacy. A POSITA would have been motivated to combine Marcus with Knowlson in order to further Granik's goal of providing desirable advertisements. Granik, ¶¶ 4, 5. Knowlson, ¶14.
129	Granik	Jenkins	POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more personalized messages and advertisements. A POSITA would have been motivated to combine Granik with Jenkins in order to provide user profiles with user privacy. Jenkins, Abstract., 5:23-44, 7:43-65. A POSITA would have been motivated to combine retrieving user social network information as taught by Dicker and Amazon.com in order to provide more desirable advertisements. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to determine more information about the user. A POSITA would haves been motivated to

			retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65.
130	Patel	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are in the same field of art, the communication of information. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642.
131	Patel	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized campaigns. Bolnick identifies shortcomings in information portals, in that they provide only general information (e.g. by profile category), and could suffer from disloyal users. Bolnick, 2:18-20.). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide selections of information based on more specific information about the user. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide users with "desired information." Bolnick 14:15-21. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve

			user social network information with user attributes as taught in Bolnick in order to have more loyal users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6. A POSITA would have been motivated to combine retrieving user social network information as taught Bolnick in order to further Patel's goals of "totally personalizing the relationship between the customer and the information/service/product provider based upon using all the knowledge which can be obtained from past and present interactions with the customer to personalize the relationship with the customer." Patel 2:25-30. A POSITA would have been motivated to combine retrieving user social network information as taught by Bolnick in order to further Patel's goal of pushing information, products, etc. that would be of interest to the customer. Patel 2:35-33.
132	Patel	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide content that users are likely to be receptive towards and interested in viewing. Currans, Abstract. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide campaigns that are imactful on the user. Currans, ¶¶2, 11 (increased effectiveness of advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to combine retrieving user social network information as taught by Currans in order to further Patel's goals of "totally personalizing the relationship between the customer and the information/service/product provider based upon using all the knowledge which can be obtained from past and present interactions with the customer to personalize the relationship with the customer." Patel 2:25-30. A POSITA would have been motivated to combine retrieving user social network

			information as taught by Currans in order to further Patel's goal of pushing information, products, etc. that would be of interest to the customer. Patel 2:35-33.
133	Patel	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves a problem pertinent to Patel. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to provide more desirable advertisements, which is a goal of Granik. Granik, ¶¶ 4, 5. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information as taught in Herz, because the content targeted to individuals would be selected with more complete user profiles. A POSITA would have been motivated to combine retrieving user social network information as taught by Herz in order to further Patel's goals of "totally personalizing the relationship between the customer and the information/service/product provider based upon using all the knowledge which can be obtained from past and present interactions with the customer to personalize the relationship with the customer." Patel 2:25-30. A POSITA would have been motivated to combine retrieving user social network information as taught by Herz in order to further Patel's goal of pushing

			information, products, etc. that would be of interest to the customer. Patel 2:35-33.
134	Patel	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Achlioptas solves a problem pertinent to Patel, which is determining relevant information about a user which is used for opportunities (such as for selecting content, e.g. for campaigns). Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized advertisements and campaigns. A POSITA would have been further motivated to retrieve user social network information with user attributes as taught in Achlioptas (which also includes this information in user profiles), because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to combine retrieving user social network information as taught by Achliptas in order to further Patel's goals of "totally personalizing the relationship between the customer and the information/service/product provider based upon using all the knowledge which can be obtained from past and present interactions with the customer to personalize the relationship with the customer." Patel 2:25-30. A POSITA would have been motivated to combine retrieving user social network information as taught by Achliptas in order to further Patel's goal of pushing information, products, etc. that would be of interest to the customer. Patel 2:35-33.
135	Patel	Dicker or Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Dicker or Amazon.com,

			in order to provide more impactful and personalized campaigns. A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Dicker or Amazon.com in order to provide selections of information based on more specific information about the user. Patel utilizes a collaborative filtering algorithm. Patel, 12:28-32. 13:37-59. A POSITA would have been motivated to combine Dicker or Amazon.com with Patel, in order to benefit from specific solutions to problems of collaborative filtering algorithms as explained by Dicker and Amazon.com, such as scaling and computational problems. Dicker. ¶¶ 4-11; Amazon.com, Linden, 76-79. A POSITA would have been motivated to combine retrieving user social network information as taught by Dicker or Amazon.com in order to further Patel's goals of "totally personalizing the relationship between the customer and the information/service/product provider based upon using all the knowledge which can be obtained from past and present interactions with the customer to personalize the relationship with the customer." Patel 2:25-30. A POSITA would have been motivated to combine retrieving user social network information as taught by Dicker or Amazon.com in order to further Patel's goal of pushing information, products, etc. that would be of interest to the customer. Patel 2:35-33.
136	Patel	Glance or Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Glance or Knowledge Pump, in order to provide more impactful and personalized campaigns. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Glance or Knowledge Pump, in order to provide selections of information based on more specific information about the user. Patel utilizes a collaborative filtering algorithm. Patel, 12:28-32. 13:37-59. Glance and Knowledge Pump identify and solve a cold-start problem in collaborative filtering which leads to inaccurate predictions. Glance, 1:30-67; Knowledge pump, Arregui, 3. A POSITA would have been motivated to combine Glance or Knowledge Pump, in order to benefit from solutions to problems of collaborative filtering algorithms as explained by Glance

			or Knowledge Pump. A POSITA would have been motivated to combine retrieving user social network information as taught by Glance or Knowledge Pump in order to further Patel's goals of "totally personalizing the relationship between the customer and the information/service/product provider based upon using all the knowledge which can be obtained from past and present interactions with the customer to personalize the relationship with the customer." Patel 2:25-30. A POSITA would have been motivated to combine retrieving user social network information as taught by Dicker or Amazon.com in order to further Patel's goal of pushing information, products, etc. that would be of interest to the customer. Patel 2:35-33. Patel's principal of operation would not change, because it already have information on the organizational relationships as explained in Glance or Knowledge Pump. Patel: 2:38-3:6.
137	Patel	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Both references disclose providing personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising, which would further a goal of Patel.
138	Patel	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more impactful and personalized advertisements. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as

			taught in Jenkins, because it would provide user's privacy with respect to their profile data. Jenkins, 2:30-34.
139	Troyansky	Leeke Knowledge Pump Granik Dicker Amazon.com or, Bar-El and/or Reisman, Bolnick, Achlioptas, Moran, Dicker, Jenkins, Amazon.com, or, Currans and/or Reisman, Bolnick, Achlioptas, Moran, Dicker, Jenkins, Amazon.com, or, Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to include a server and/or display server as taught by Leeke, Knowledge Pump, Granik, Dicker, Amazon.com, and Bar-El, because it would further Troyansky's goal of connecting multiple content providers and users for display of content over the internet and allow for online simultaneous customization of product placement. Troyansky, ¶ 11, 14, 16. Troyansky is directed towards systems for customized product placement and advertisements. Troyansky, ¶17. Specifically, Troyansky inserts product placement advertisements based on user profile. A POSITA would have been motivated to combine retrieving user social network information as taught by to further Troyansky's goal of creating multiple profiles, so that profiles can be created at "user level resolution." Troyansky, ¶¶ 9, 14. Another goal of Troyansky is to update advertisements with time based adaption to the audience. Troyansky, 9. Troyanasky's principal of operation would not change, because Troyansky already uses "outside sources interfacing with the system" to define the user characteristics.
140	Film Conseil	Leeke Knowledge Pump Bar-El Granik, Dicker or Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to include a server and/or display server as taught by Leeke, Knowledge Pump, Granik, Dicker, Amazon.com, and Bar-El, because it would further Film Conseil's goal of providing recommendations over the internet.

141	Herz	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are in the same field of art. Herz relates to systems which select target objects based on user's target profiles and based on information from a "virtual community." Herz, 1:25-50, 73:25-24, Claim 4. Similarly, Reisman, provides advertisements and other enhancement content based on user's interest and information from a virtual community. Reisman, ¶¶ 294, 204, 355, 371-373, 465, 522, 595-602, 632, 634, 637, 642, 820. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642. Herz' principal of operation would not change, because Herz' already uses virtual community information to select content which may of interest to a user.
142	Herz	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful, useful, desired, and media and information, which would further a goal of Marcus. Bolnick 2:18-25 (providing desired information "overcomes the shortcomings of conventional information portals"); 14:15-21 (desired and useful information). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent

			information about the user. Bolnick, 2:18-25, 19:21-20:6. Bolnick acknowledges the benefit of timely and recent information for personalization. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have more loyal users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because it is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6. A POSITA would have been motivated to retrieve social network information as taught by Bolnick, because it would target Herz's identification "in the field of information retrieval, [of] a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. A POSITA would have been motivated to combine Bolnick with Herz to retrieve user social network information as taught in Bolnick, to "address the user's interests on [more than] a superficial level or provide greater depth and intelligence" and "fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Herz's principal of operation would not change, because it already retrieves information from virtual community services and uses this to select media items and advertisements.
143	Herz	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user" which is a goal of Herz. Currans, ¶¶2, 11 (increased effectiveness of advertisements). A POSITA would have been motivated to retrieve social network information as taught by Currans, because it would meet needs identified by Herz. Herz identifies "in

			the field of information retrieval, [of] a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. A POSITA would have been motivated to combine Currans with Herz to retrieve user social network information as taught in Currans, to "address the user's interests on [more than] a superficial level or provide greater depth and intelligence" and "fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Currans. Herz's principal of operation would not change, because it already retrieves information from virtual community services and uses this to select media items and advertisements. Currans merely shows another design implementation of the value of community information known in the field of targeted advertising.
144	Herz	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized media and advertisements (example target objects). Achlioptas solves a problem pertinent to Herz, which is determining relevant information about a user, and selecting content resources that would be relevant to a user (Achlioptas' opportunities) based on that information. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve social network information as taught by Achlioptas, because it would meet needs identified by Herz. Herz identifies "in the field of information retrieval, [of] a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. A POSITA would have been motivated to combine Achlioptas with Herz to retrieve user social network information as taught in Achlioptas, to "address the user's interests on [more

			than] a superficial level or provide greater depth and intelligence" and "fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Achlioptas. Herz's principal of operation would not change, because Herz already retrieves information from virtual community services and uses this to select media items and advertisements.
145	Herz	Dicker or Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to provide more personalized content. Dicker, ¶10. Herz utilizes collaborative filtering. 61:27-48. Dicker and Amazon.com select items for users based on analyzing the interest of a community of users and improve upon collaborative filtering algorithms. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to overcome various limitations with collaborative filtering described by the references, such as scaling and computational problems. Dicker, ¶¶6-11; Amazon.com, Linden, 76-79. A POSITA would have been motivated to retrieve social network information as taught by Dicker or Amazon.com, because it would meet needs identified by Herz. Herz identifies "in the field of information retrieval, [of] a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. A POSITA would have been motivated to combine Dicker or Amazon.com with Herz to retrieve user social network information as taught in Dicker or Amazon, to "address the user's interests on [more than] a superficial level or provide greater depth and intelligence" and "fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Herz' principal of operation would not change, because Herz already retrieves information from virtual community services and uses this to select media items and advertisements.

146	Herz	Glance or Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Herz, Glance, and Knowledge Pump both relate to systems that provide personalized content or items to users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Glance and Knowledge Pump in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). Knowledge pump and Glance identify a cold-start problem in collaborative filtering systems which leads the filtering to work poorly. Knowledge Pump, Arregui, 3. Herz is one such system that describes collaborative filtering, thus the references solve a problem pertinent to Herz. Knowledge Pump and Glance solve the problem by providing relationships between users as part of the filtering system. Knowledge Pump, Arregui, 3 (Section 2.3). A POSITA would have been motivated to retrieve social network information as taught by Dicker or Amazon.com, because it would meet needs identified by Herz. Herz identifies "in the field of information retrieval, [of] a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. A POSITA would have been motivated to combine Dicker or Amazon.com with Herz to retrieve user social network information as taught in Dicker or Amazon, to "address the user's interests on [more than] a superficial level or provide greater depth and intelligence" and "fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. A POSITA would have been motivated to combine Herz with Glance or Knowledge Pump, because they would further Reisman's goal of providing accurate personalized content. Herz's principal of operation would not change, because Herz already has information about a community of users.
147	Herz	Knowlson	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more personalized content and advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising. Knowlson, ¶1. A POSITA would have been motivated to retrieve user social network information with user attributes as taught

			in Knowlson in order to provide user privacy. A POSITA would have been motivated to combine Herz with Knowlson in order to "address the user's interests on [more than] a superficial level or provide greater depth and intelligence" and "fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Herz' principal of operation would not change, because Herz already retrieves information from virtual community services and uses this to select media items and advertisements.
148	Herz	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more impactful and personalized advertisements. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it would provide user's privacy with respect to their profile data which is also a goal of Herz. Jenkins, 2:30-34.
149	Dicker	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642. Dicker, ¶ 96.

150	Dicker	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful, useful, desired, and media and information, which would further a goal of Dicker. Dicker, ¶96. Bolnick 2:18-25 (providing desired information "overcomes the shortcomings of conventional information portals"), 14:15-21 (desired and useful information). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-25, 19:21-20:6. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because it is recently updated and would reflect recent information about the user. Bolnick acknowledges the benefit of timely and recent information for personalization. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have more loyal users. Bolnick, 2:18-20, 19:21-20:6.
151	Dicker	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to provide more personalized advertisements for products. Dicker and Herz both relate to using information filtering and data mining to present recommended items to users. Dicker, ¶2; Herz, Abstract, 7:13-29. Both references select items or target objects (for example advertisements for products) based on user profiles, including from a community of users. Herz, 1:25-50,

			4:30-36, 73:29-33, Claim 12; Dicker, 3, 12. Herz identifies a specific problem in the field of electronic media of enabling a user to access relevant and interesting information without the user expending tremendous amount of time and resources in view of the overwhelming amount of online information. Herz, 1:51-2:13. As previously noted, Herz specifically describes providing recommendations for products to buy, which would further Herz and Dicker's shared goal. Herz 70:44-71:26.
152	Dicker	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more targeted selections of advertisements and products. Achlioptas solves a problem pertinent to Dicker, which is determining relevant information about a user, and selecting advertisements and items that would be relevant to a user (Achlioptas' opportunities) based on that information. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. Dicker's principal of operation would not change, because Dicker already uses information about a community to select items and advertisements.
153	Dicker	Glance or Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Dicker, Glance and Knowledge Pump relate to systems that provide personalized recommendations for content to users by filters. Dicker, Abstract, ¶2; Glance, Abstract. Glance and Knowledge Pump are directed towards predicting a user's level of interest in information. Glance 1:5-10. Glance and Knowledge Pump identifies a cold-start problem in collaborative filtering systems which leads to inaccurate predictions, and specifically identifies problems in

			Amazon.com (which is described in Dicker). Glance, 1:30-67; Dicker, ¶ 42. Dicker is one such system that describe recommending content by filtering, and Dicker also identifies the same cold start problem with collaborative filtering. Dicker, ¶9, 42. Glance and Knowledge Pump solves the problem by providing relationships between users as part of the filtering system. Knowledge Pump, Arregui, 3 (Section 2.3); Glance, Abstract, 1:5-10. A POSITA would have been motivated to combine Dicker with Glance or Knowledge pump, because they are in the same field of art and address the same problem, which would further a goal of providing accurate personalized content.
154	Dicker	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more personalized advertisements for products. Dicker, ¶ 96. Dicker and Knowlson both relate to using information filtering and data mining to present recommended items (e.g. as advertisements) to users. Dicker, Abstract, ¶2; Knowlson, ¶¶1, 16. Both references select items or target objects (for example advertisements for products) based on user profiles, including from a community of users. Dicker, 3, 6, 12, FIG. 16; Knowlson, 1, 13. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising, which would further Dicker's stated "need[] for targeting advertising to users." Dicker, ¶3, Knowlson, ¶1.
155	Dicker	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more personalized advertisements for products. Dicker, ¶ 96. Dicker and Knowlson both relate to using

			information filtering and data mining to present recommended items (e.g. as advertisements) to users. Dicker, Abstract, ¶2; Knowlson, ¶¶1, 16. Both references select items or target objects (for example advertisements for products) based on user profiles, including from a community of users. Dicker, 3, 6, 12, FIG. 16; Knowlson, 1, 13. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising, which would further Dicker's stated "need[] for targeting advertising to users." Dicker, ¶3, Knowlson, ¶1.
156	Dicker	Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are in the same field of art and they refer to the same implementations. Dicker specifically refers to implementation specific details of Amazon.com. Dicker ¶ 42. As such, a POSITA would have been motivated to combine teachings of Amazon.com with Dicker.
157	Srinivasan	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642.
158	Srinivasan	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful, useful, desired, and media and

			information, which would further a goal of Srinivasan. Bolnick 2:18-25 (providing desired information "overcomes the shortcomings of conventional information portals"), 14:15-21 (desired and useful information). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-25, 19:21-20:6. Bolnick acknowledges the benefit of timely and recent information for personalization. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have more loyal users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because it is recently updated and would reflect recent information about the user. Srinivasan's principal of operation would not change, because it is already connected to the internet, which would be amenable to retrieving user social network information from Bolnick's real-time social network.
159	Srinivasan	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user" which is a goal of Srinivasan. Currans, ¶¶2, 11 (increased effectiveness of advertisements).

160	Srinivasan	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Similar to Srinivasan, which provides providing content such as video according to user profile, Herz provides personalized content, such as video and advertisements based on a user's profile or a user's target profile interest summary. Srinivasan, 29:12-16; Herz, Claim 1. Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves a problem pertinent to Srinivasan. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, because the user would not need to expend time and energy to locate content, and the content targeted to individuals would be selected with more complete user profiles, furthering a goal of Srinivasan.
161	Srinivasan	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Achlioptas and Srinivasan are both related to providing content (Achlioptas' opportunities and Srinivasans' video) according to user profile. Srinivasan, 29:12-16; Achlioptas, 2:33-35. Achlioptas solves a problem pertinent to Srinivasan, which is determining relevant information about a user, and selecting information based on that information (the opportunity). Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized advertisements. A POSITA would have been further motivated to retrieve user social network information with user attributes as taught in Achlioptas

			(which also includes user attributes in user profiles), because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16.
162	Srinivasan	Dicker or Amazon.com	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to provide more personalized content. Dicker, ¶10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to provide an algorithm for better selecting content. Dicker, ¶¶6-11; Amazon.com, Linden, 76-79.
163	Srinivasan	Glance, or Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Srinivasan, Glance, and Knowledge Pump relate to systems that provide personalized media content. Glance, Abstract. Glance and Knowledge Pump predict a user's level of interest in information. Glance 1:5-10. This solves a problem pertinent to Srinivasan relevant to Srinivasan's selection of personalized content. A POSITA would have been motivated to retrieve user social network information as provided in Glance and Knowledge Pump in order to provide a filtering algorithms for selecting media content. A POSITA would have been motivated to combine Srinivasan with Glance or Knowledge in order to utilize further information not provided by the user
164	Srinivasan	Moran	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements). Moran identifies a problem for advertisers, in that they are competing for attention from an audience, and that its

			solution allows for advertisers to encounter less barriers for getting audience attention. Moran, ¶ ¶ 39, 40, 41. A POSITA would have been motivated to retrieve user social network information as taught by Moran, in order better capture the user's attention, which would further a goal of Srinivasan.
165	Srinivasan	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Both references disclose providing personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising, which would further a goal of Srinivasan.
166	Srinivasan	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more impactful and personalized advertisements. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it would provide user's privacy with respect to their user profile data. Jenkins, 2:30-34.
167	Glance	Reisman	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more personalized content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide the relevant information needed to prevent a cold start of a collaborative filtering algorithm. A POSITA would

			have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642.
168	Glance	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to retrieve the information needed as part of Glance's algorithm for solving the cold start problem in collaborative filtering. Bolnick identifies shortcomings in information portals, in that they provide only general information (e.g. by profile category), and could suffer from disloyal users. Bolnick, 2:18-20.). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide selections of information based on more specific information about the user. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide users with "desired information." Bolnick 14:15-21. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have more loyal users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6.

	Glance	Currans	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more personalized content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide the relevant information needed to prevent a cold start of a collaborative filtering algorithm. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized content which has "more impact on the user" that can further a goal of Glance. Currans, ¶¶2, 11 (increased effectiveness of advertisements). Currans solves a problem relevant to Glance, which is retrieving information needed and relevant for selecting media content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, to beter predict user interest.
169	Glance	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves a problem pertinent to Glance. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, because the user would not need to expend time and energy to locate content, and the content targeted to individuals would be selected with more complete user profiles, furthering a goal of Glance. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in

			order to solve the cold start problem in collaborative filtering.
170	Glance	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to retrieve social network information as taught by Achlioptas to include in the Glance's recommendation algorithm. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas to overcome the cold start problem of collaborative filtering systems, which is a goal of Glance. Achlioptas solves a problem pertinent to Glance, which is determining relevant information about a user, and selecting content (Achlioptas' opportunities) based on this information. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas in order to prevent a cold start of Glance's algorithm. Thus Achlioptas solves a problem pertinent to Glance. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16.
171	Glance	Dicker, Amazon	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to provide more personalized content. Dicker, ¶10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to provide an

			algorithm for better selecting content. Dicker, ¶¶6-11; Amazon.com, Linden, 76-79. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to overcome limitations of collaborative filtering algorithms, which would further a goal of Glance.
	Glance	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to select more personalized items. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising, which would further a goal of Glance. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson to overcome the cold start problem of collaborative filtering systems, which is a goal of Glance.
172	Glance	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more impactful and personalized advertisements. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it would provide user's privacy with respect to their user profile data. Jenkins, 2:30-34. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to solve the cold start problem with collaborative filtering.

	Knowledge Pump	Reisman	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more personalized content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide the relevant information needed to prevent a cold start of a collaborative filtering algorithm. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642.
173	Knowledge Pump	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to retrieve the information needed as part of Knowledge Pump's algorithm for solving the cold start problem in collaborative filtering. Bolnick identifies shortcomings in information portals, in that they provide only general information (e.g. by profile category), and could suffer from disloyal users. Bolnick, 2:18-20.). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide selections of information based on more specific information about the user. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide users with "desired information." Bolnick 14:15-21. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have more loyal users. A POSITA would have been motivated to retrieve user

			social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6.
174	Knowledge Pump	Currans	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more personalized content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide the relevant information needed to prevent a cold start of a collaborative filtering algorithm. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user" which is a goal of Srinivasan. Currans, ¶¶2, 11 (increased effectiveness of advertisements). Currans solves a problem relevant to Knowledge Pump, which is retrieving information needed and relevant for selecting media content.
175	Knowledge Pump	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves a problem pertinent to Knowledge Pump. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, because the user would not need to expend time and energy to locate content, and the content targeted to individuals would be selected with more complete user

			profiles, furthering a goal of Knowledge Pump. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to solve the cold start problem in collaborative filtering.
176	Knowledge Pump	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to retrieve social network information as taught by Achlioptas to include in Knowledge Pump's recommendation algorithm. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas to overcome the cold start problem of collaborative filtering systems, which is a goal of Knowledge Pump. Achlioptas solves a problem pertinent to Knowledge Pump, which is determining relevant information about a user, and selecting content (Achlioptas' opportunities) based on this information. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas in order to prevent a cold start of Knowledge Pump's algorithm. Thus Achlioptas solves a problem pertinent to Knowledge Pump. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16.
177	Knowledge Pump	Dicker or Amazon	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to provide more personalized content. Dicker, ¶10. A POSITA would have been motivated to retrieve user social network information with user attributes as

			taught in Dicker or Amazon.com, in order to provide an algorithm for better selecting content. Dicker, ¶¶6-11; Amazon.com, Linden, 76-79. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker or Amazon.com, in order to overcome limitations of collaborative filtering algorithms, which would further a goal of Knowledge Pump.
178	Knowledge Pump	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to select more personalized items. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising, which would further a goal of Knowledge Pump. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson to overcome the cold start problem of collaborative filtering systems, which is a goal of Knowledge Pump.
179	Knowledge Pump	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more impactful and personalized advertisements. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it would provide user's privacy with respect to their user profile data. Jenkins, 2:30-34. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to solve the cold start problem with collaborative filtering.

	Knowledge Pump	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to retrieve the information needed as part of Knowledge Pump's algorithm for solving the cold start problem in collaborative filtering. Bolnick identifies shortcomings in information portals, in that they provide only general information (e.g. by profile category), and could suffer from disloyal users. Bolnick, 2:18-20.). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide selections of information based on more specific information about the user. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide users with "desired information." Bolnick 14:15-21. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have more loyal users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6.
180	Knowledge Pump	Currans	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more personalized content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide the relevant information needed to prevent a cold start of a collaborative filtering algorithm. A POSITA would have been motivated to retrieve user social network

			information with user attributes as taught in Currans, in order to provide more impactful and personalized advertisements, so that the advertisements have "more impact on the user" which is a goal of Srinivasan. Currans, ¶¶2, 11 (increased effectiveness of advertisements). Currans solves a problem relevant to Knowledge Pump, which is retrieving information needed and relevant for selecting media content.
181	Amazon.com	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to retrieve the information needed as part of Amazon.com's algorithm for solving the cold start problem in collaborative filtering. Bolnick identifies shortcomings in information portals, in that they provide only general information (e.g. by profile category), and could suffer from disloyal users. Bolnick, 2:18-20.) A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide selections of information based on more specific information about the user. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide users with "desired information." Bolnick 14:15-21. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have more loyal users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6.

182	Amazon.com	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves a problem pertinent to Amazon.com. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, because the user would not need to expend time and energy to locate content, and the content targeted to individuals would be selected with more complete user profiles, furthering a goal of Amazon.com.
183	Amazon.com	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Achlioptas and Amazon.com are both related to providing content (Achlioptas' opportunities and Amazon.com's items or advertisements) according to information about the user. Amazon.com, Linden, 76; Achlioptas, 2:33-35. Achlioptas solves a problem pertinent to Amazon, which is determining relevant information about a user, and selecting opportunities for the user based on that information. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized advertisements. A POSITA would have been further motivated to retrieve user social network information with user attributes as taught in Achlioptas (which also includes user attributes in user profiles), because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-

			42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to select items based on more information about the user.
184	Amazon.com	Glance	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Amazon.com, Knowledge Pump, or Glance relate to systems that provide personalized recommendations for content to users by filters. Amazon.com, Dicker, Abstract, ¶2; Glance, Abstract. Glance and Knowledge Pump are directed towards predicting a user's level of interest in information. Glance 1:5-10. Glance and Knowledge Pump identify a cold-start problem in collaborative filtering systems which leads to inaccurate predictions, and specifically identifies problems in Amazon.com. Glance, 1:30-67; Amazon.com, Dicker, ¶ 42. Amazon.com is one such system that describe recommending content by filtering, and Amazon.com also identifies the same cold start problem with collaborative filtering. Amazon.com, Dicker, ¶9, 42. Glance and Knowledge Pump solves the problem by providing relationships between users as part of the filtering system. Glance, Abstract, 1:5-10. A POSITA would have been motivated to combine Amazon.com with Glance and Knowledge Pump because they are in the same field of art and address the same problem, which would further a goal of providing accurate personalized content.
	Amazon.com	Knowledge Pump	
185	Amazon.com	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to select more personalized items. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising, which would further a goal of Amazon.com.

186	Amazon.com	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more impactful and personalized advertisements. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it would provide user's privacy with respect to their user profile data. Jenkins, 2:30-34. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to solve problems with collaborative filtering, which is a goal of Amazon.com.
187	Berk	Achlioptas Bolnick Amazon.com Herz Moran Reisman Knowledge Pump Dicker or Glance	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine Berk with Currans, Achlioptas, Bolnick, Amazon.com, Herz, Moran, Reisman, Knowledge Pump, Dicker, or Glance with respect to the retrieving user social network information as taught by these references, in order "to create personalized multimedia content." Berk, Abstract. A POSITA would have been motivated to combine Berk with Currans, Achlioptas, Bolnick, Amazon.com, Herz, Moran, Reisman, Knowledge Pump, Dicker, or Glance to the retrieving user social network information as taught by these references, in order further Berk's marketing efforts. A POSITA would have been motivated to combine Bark with these references with respect to the retrieving user social network information as taught by the respective references, in order to use more traits about the user. A POSITA would have been motivated to combine Berk with these references with respect to the retrieving user social network information as taught by the respective references, in order to infer user interest. A POSITA would have been motivated to combine

			retrieving user social network information as taught by the references, in order to share experiences with friends and family. Berk, ¶21. A POSITA would have been motivated to combine retrieving user social network information as taught by the reference(s), in order to keep the user profile up to date with new information. A POSITA would have been motivated to combine retrieving user social network information as taught by Herz, Jenkins, Reisman, and Knowlson, in order maintain user privacy in their information. A POSITA would have been motivated to retrieve user social network information as described in Moran, Jenkins, Reisman, Bolnick, Amazon.com, Glance, or Knowledge Pump, because Berk retrieves and links to selected personalized content from other websites.
188	Berk	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine Berk with Currans, with respect to the retrieving user social network information as taught by these references, in order "to create personalized multimedia content." Berk, Abstract. A POSITA would have been motivated to combine Berk with Currans, to the retrieving user social network information as taught by these references, in order further Berk's marketing efforts. A POSITA would have been motivated to combine Bark with these references with respect to the retrieving user social network information as taught by the respective references, in order to use more traits about the user. A POSITA would have been motivated to combine Berk with these references with respect to the retrieving user social network information as taught by the respective references, in order to infer user interest. A POSITA would have been motivated to combine retrieving user social network information as taught by the references, in order to share experiences with friends and family. Berk, ¶21. A POSITA would have been motivated to combine retrieving user social network information as taught by the reference(s), in order to keep the user profile up to date with new information. A POSITA would have been motivated to combine retrieving user social network information as taught by Herz, Jenkins, Reisman, and Knowlson, in order maintain user privacy in their information. A POSITA would have been

			motivated to retrieve user social network information as described in Currans, because Berk retrieves and links to selected personalized content from other websites.
189	Biebelnieks	Currans Achlioptas Bolnick Amazon.com Herz Moran Reisman Knowledge Pump Dicker Glance or GeoCities	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine Biebelknicks with Currans, Achlioptas, Bolnick, Amazon.com, Herz, Moran, Reisman, Knowledge Pump, Dicker, or Glance with respect to the retrieving user social network information as taught by these references, in order "to define their customers by a rich set of variables that identify specific traits of each customer so that the customers can be profiled in real time and allow the customers to be segmented according to these traits." Biebelnieks, ¶ 9. A POSITA would have been motivated to combine Biebelknicks with these references with respect to the retrieving user social network information as taught by the respective references, in order to use more traits about the user. Biebelnieks, 8. A POSITA would have been motivated to combine retrieving user social network information as taught by the references, in order to "gather information pertaining to a user of the web site from as many sources as possible." Biebelnieks, ¶10. A POSITA would have been motivated to combine retrieving user social network information as taught by the reference(s), in order to keep the user profile up to date with new information. Biebelnieks, ¶25. A POSITA would have been motivated to combine retrieving user social network information as taught by Herz, Jenkins, Reisman, and Knowlson, in order maintain user privacy in their information. A POSITA would have been motivated to combine retrieving user social network information as taught by Amazon.com and Dicker, because Biebelnicks specifically says it is combined with these reference to provide traits about the user. Biebelknieks, ¶¶8-10. A POSITA would have been motivated to retrieve user social network information as described in Moran, Jenkins, Reisman, Bolnick, Amazon.com, Glance, and/or Knowledge Pump, because Biebelknieks retrieves user information from websites and based on the content of the websites. A POSITA

			would have been motivated to retrieve user social network information as described in GeoCities, because GeoCities one website that provides targeted advertisements. A POSITA would have been motivated to retrieve user social network information as described in GeoCities, because GeoCities one website that provides targeted advertisements.
190	MovieLens	Mirza	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). MovieLens and Mirza both relate to systems that provide personalized recommendations for content to users by filters. Mirza specifically analyses the MovieLens dataset to determine that MovieLens retrieves user social network information and constructs social network graphs with nodes people (and movies), and edges representing relationships between people and movies. Mirza, 19, 21.
191	MovieLens	Reisman	A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more personalized content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to supplement the information in MovieLens' algorithm. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs (i.e. to other movie recommendation systems). Reisman ¶608, ¶¶632-642.
192	MovieLens	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized campaigns. Bolnick identifies shortcomings in information portals, in that they provide only general information (e.g. by profile category), and could suffer from disloyal users. Bolnick, 2:18-20.). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide selections of information based on more specific

			information about the user. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide users with "desired information." Bolnick 14:15-21. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have more loyal users. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6.
193	MovieLens	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves a problem pertinent to MovieLens, because it assists a user in easily finding content. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, because the user would not need to expend time and energy to locate content, and the content targeted to individuals would be selected with more complete user profiles, furthering a goal of MovieLens.

194	MovieLens	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to retrieve social network information as taught by Achlioptas to include in Movie Lens recommendation algorithm. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, because Achlioptas solves a problem pertinent to MovieLens, which is determining relevant information about a user, and selecting items (Achlioptas' opportunities) based on this information. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16.
195	MovieLens	Glance and Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). MovieLens, Glance and Knowledge Pump relate to systems that provide personalized recommendations for content to users by filters. MovieLens, Herlocker, 43; Glance Abstract. Glance is directed towards predicting a user's level of interest in information. Glance 1:5-10. Glance and Knowledge Pump identify a cold-start problem in collaborative filtering systems which leads to inaccurate predictions, and specifically identifies problems in MovieLens. Glance, 1:30-67; MovieLens, FAQ, 2. Movielens is one such system that describe recommending content by collaborative filtering. MovieLens, FAQ, 2. Glance solves the problem by providing relationships between users as part of the filtering system. Glance, Abstract, 1:5-10. A POSITA would have been motivated to combine MovieLens with Glance or Knowledge Pump because they are in the same field of art and address the same problem, which would further a goal of providing accurate personalized content.

196	MovieLens	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to select more personalized items. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising, which would further a goal of MovieLens.
197	MovieLens	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide more impactful and personalized recommendations for content. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it would provide user's privacy with respect to their user profile data. Jenkins, 2:30-34..
198	MovieLens	Amazon.com	MovieLens and Amazon.com are related art, because they both aim to provide potential items of interest (e.g. movies) to users, and solve the same problem of recommending items of interest to users in view of multiple items which the user could not directly rate because of the scale of information. Amazon.com recognizes a potential deficiency in MovieLens, in that MovieLens' algorithm is not scalable to very large datasets. Amazon.com, Linden, 79. A POSITA would have been motivated to combine the Amazon.com's user virtual or online community information with MovieLens, because it would address scaling issues. A POSITA would have also been motivated to provide composites of images and other information as taught by Amazon.com into MovieLens. See also Amazon.com, Konstan, which evaluates both interfaces.

199	MovieLens	Dicker	MovieLens and Dicker are related art, because they both aim to provide potential items of interest (e.g. movies) to users, and solve the same problem of recommending items of interest to users in view of multiple items which the user could not directly rate because of the scale of information. A POSITA would have been motivated to combine retrieving user social network information as taught by MovieLens, in order to overcome scaling issues.
200	MovieLens	Byers, Bar-El, Granik, Dempski, or Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to provide a personalized rank listing.
201	MovieLens	Byers, Bar-El, Granik, Dempski, or Leeke and/or Mirza Reisman Bolnick Herz Achlioptas Glance Knowledge Pump Knowlson Jenkins Amazon.com or Dicker	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to provide a personalized rank listing. A POSITA would have been motivated to combine performing a rule based substitution and taught by Mirza Reisman, Bolnick, Herz, Achlioptas, Glance, Knowledge Pump, Knowlson, Jenkins, Amazon.com, or Dicker, as motivated above.
202	Granik	Freeman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Freeman is directed to a computer based system for providing a personalized graphics, video, or audio presentation. A POSITA would have been motivated to combine monitoring the first the composite for a trigger as taught by Freeman, in order to provide A POSITA would have been motivated to

			combine monitoring the first the composite for a trigger as taught by Freeman, in order to determine when to enable presentation of (personalized) multimedia. Freeman, Abstract. A POSITA would have been motivated to combine monitoring the first the composite for a trigger as taught by Freeman, because it would enable seamless flicker-free switching between presentations. Freeman, Abstract, 4:7-14, 4:42-57.
203	Dempski	Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine the computer readable storage medium with programming instructions and digital media assets stored therein, as taught by Leeke, with Dempski, so that delays in Dempski's presentation of composite digital media displays are minimized, and the system design is simplified. The references are also analogous art, in that they are directed towards provides targeted advertisements synchronized with other content. Dempski, Abstract, 3:12-20, Leeke, 48:55-67, Claim 1.
204	Bjorgan	Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine the computer readable storage medium with programming instructions and digital media assets stored therein, as taught by Leeke, with Bjorgan so that delays in Bjorgan's presentation of composite digital media displays are minimized, and the system design is simplified. The references are also analogous art, in that they are directed towards providing targeted advertisements based on user profile.
205	Haberman	Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine the computer readable storage medium with programming instructions and digital media assets stored therein, as taught by Leeke, with Haberman so that delays in Haberman's presentation of composite digital media displays are minimized, and the system design is simplified. This is especially valid in view of Haberman's disclosure of on-demand composite. Haberman, Abstract. The references are also

			analogous art, in that they are directed towards providing targeted advertisements and they solve similar problems associated with providing multimedia with targeted media. Haberman, Abstract, Leeke, 48:55-67, Claim 1.
206	Marcus	Byers	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, in order to in order to provide personalized content.
	Marcus	Bar-El	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Bar-El, in order to in order to provide personalized content.
	Marcus	Granik	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Granik, in order to in order to provide personalized content.
210	Marcus	Dempski	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Dempski, in order to in order to provide personalized content.
	Marcus	Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Leeke, in order to in order to provide personalized content.

	Marcus	Byers	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, in order to in order to provide personalized content.
	Patel	Byers, Bar-El, Granik, Dempski, or Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to in order to provide personalized campaigns and offerings instead of unpersonalized. A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to in order to "fill the white space' in the customer display with propositions, actions, alerts, notifications etc., decided by rules based on, for example, customer preferences or analysis of the customer profile."
	Herz	Byers, Bar-El, Granik, Dempski, or Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to provide an updated hierarchical cluster tree.
215	Elder	Byers, Bar-El, Granik, Dempski, or Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to provide updated visualizations.
	Biebelnieks	Byers, Bar-El, Granik, Dempski, or Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to provide new personalized content. A POSITA would have been motivated to

			combine performing a rule based substitution and taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to cease displaying unwanted content.
	Berk	Byers, Bar-El, Granik, Dempski, or Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to provide new personalized content. A POSITA would have been motivated to combine performing a rule based substitution as taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to cease displaying unwanted content. A POSITA would have been motivated to combine performing a rule based substitution as taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to create personalized multimedia content.
	Glance	Byers, Bar-El, Granik, Dempski, or Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution as taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to provide a personalized rank listing of items.
	Knowledge Pump	Byers, Bar-El, Granik, Dempski, or Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution as taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to provide a personalized rank listing of items.
220	Amazon.com	Byers, Bar-El, Granik, Dempski, or Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution as taught by Byers, Bar-El, Granik, Dempski, or Leeke, in order to provide a personalized rank listing of products or advertisements.

	Ananian	Byers	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution as taught by Byers, in order to provide a personalized catalog. A POSITA would have been motivated to combine performing a rule based substitution as taught by Reisman, in order to provide enhanced TV content.
	Ananian	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution as taught by Reisman, in order to provide a personalized catalog. A POSITA would have been motivated to combine performing a rule based substitution as taught by Reisman, in order to provide enhanced TV content at Ananian's trigger.
	Ananian	Bar-El	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Bar-El, in order to provide a personalized catalog.
	Ananian	Granik	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Granik, in order to provide a personalized catalog.
	Ananian	Dempski	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Dempski, in order to provide a personalized catalog.

225	Ananian	Reisman	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). The references are in the same field of art, providing enhanced television, for example with interactive content. Ananian, 3:12-20; Reisman, ¶2. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Reisman, in order to obtain premium subscription revenue and rates from advertisers, and minimize viewer switching costs. Reisman ¶608, ¶¶632-642. A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran in order to better personally profile each unique user of the catalog. Ananian, Abstract.
	Ananian	Bolnick	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, in order to provide more impactful and personalized campaigns. Bolnick identifies shortcomings in information portals, in that they provide only general information (e.g. by profile category), and could suffer from disloyal users. Bolnick, 2:18-20. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide selections of information based on more specific information about the user. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to provide users with "desired information." Bolnick 14:15-21. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have what the provider of information "desire[s] above all, the ability to be part of a user's inner circle," and have the "glue for a long-term relationship" with the user. Bolnick, 28:6-10. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick in order to have more loyal users of

			the catalog. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Bolnick, because social network information is recently updated and would reflect recent information about the user. Bolnick, 2:18-20, 19:21-20:6. A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran in order to better personally profile each unique user of the catalog. Ananian, Abstract.
	Ananian	Moran	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran, in order to provide more impactful and personalized composite digital media displays (e.g. advertisements in the catalog). The references are analogous art. Moran identifies a problem for advertisers, in that they are competing for attention from an audience, and that its solution allows for advertisers to encounter less barriers for getting audience attention. Moran, ¶ ¶ 39, 40, 41. A POSITA would have been motivated to retrieve user social network information as taught by Moran, in order to better capture the user's attention. A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran in order to better personally profile each unique user of the catalog. Ananian, Abstract.
	Ananian	Currans	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Currans, in order to provide more impactful and personalized catalog, so that it has "more impact on the user" which is a shared goal of Ananian and Currans that would be furthered. Ananian, 3:12-20, 8:12-26; Currans, ¶¶2, 11 (increased effectiveness of advertisements). A POSITA would have been motivated to retrieve user social network information with user attributes as taught by Moran in order to better personally profile each unique user of the catalog. Ananian, Abstract.A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because the

			audience would have less resistance to the information. Ananian, ¶9.
	Ananian	Herz	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Ananian and Herz are analogous art because they are directed towards providing content such as advertisements, based on user profile. Ananian, 3:12-20; Herz, 9:13-14, 9:52-10:54, Claim 1. Herz identifies a problem in the field, that "in the field of information retrieval, there is a long-standing need for a system which enables users to navigate through the plethora of information." Herz. 2:11-13. Herz notes that "the techniques which have been proposed to date either only address the user's interests on a superficial level or provide greater depth and intelligence at the cost of unwanted demands on the user's time and energy," and that "no one to date has successfully addressed these problems in a holistic manner and provided a system that can fully learn and reflect the user's tastes and interests." Herz, 2:11-25, 4:33-36. Thus Herz identifies and solves a problem pertinent to Ananian. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Herz, in order to provide more impactful and personalized advertisements and /or address user's interest at a deeper level. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because the audience would have less resistance to the information. Ananian, ¶9.
230	Ananian	Achlioptas	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Achlioptas and Ananian are both related to providing content (Achlioptas' opportunities and Ananian's personalized information or content) according to user profile. Ananian, 2:18-20, 6:21- 7:9; Achlioptas, 2:33-35. Achlioptas solves a problem pertinent to Ananian, which is determining relevant information about a user, and selecting information.

			Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas, in order to provide more impactful and personalized advertisements. Ananian, 1:15-20 (describing a need for customized, personalized enhancements to the television experience). Ananian already describes that user profiles including information about the user is needed for tailoring content to the user's needs, and that it could be retrieved from the internet. Ananian, 6:21-28, 12:15-18. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Achlioptas (which also includes this information in user profiles), because social network information includes a "tremendous amount of latent information" about users and opportunities for selecting media. Achlioptas, 1:33-42, 1:52-57, 2:33-37, 2:60-3:10, 3:25-28, 5:12-15, 5:35-56, 6:24-7:16. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because the audience would have less resistance to the information. Ananian, ¶9.
	Ananian	Dicker	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Dicker solves a problem related to Ananian's goal of selecting media content a user would be interested in. Dicker, ¶2. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker, in order to provide more personalized recommendations catalog items. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Dicker and Amazon in order to provide an algorithm for selecting content. Dicker, ¶¶ 4-11. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because the audience would have less resistance to the information. Ananian, ¶9.

	Ananian	Elder	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Elder, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Elder, in order to determine social network information from Ananian's target audience. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Elder, because the audience would have less resistance to the information. Ananian, ¶9.
	Ananian	Robertson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to provide more impactful and personalized advertisements. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to determine social network information from Ananian's target audience. A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Robertson, in order to personally profile and receive updates from Robertson's audience. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Robertson, because the audience would have less resistance to the information. Ananian, ¶9.
	Ananian	Glance	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine Glance with Ananian because they address the same problem of selecting content of interest to a user, and because it would further a goal of providing personalized content. POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Glance, because the audience would have less resistance to the information. Ananian, ¶9.

	Ananian	Knowlson	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, in order to provide more personalized composite digital media displays (e.g. the catalog). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Knowlson, because it is "valuable information" for advertising and would thus further a goal of Ananian. Knowlson, ¶1. POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Knowlson, because the audience would have less resistance to the information. Ananian, ¶9.
	Ananian	Jenkins	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to better select and target the catalog. POSITA would have been motivated to combine Ananian with Jenkins in order to provide privacy of user data. Jenkins, Abstract, 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to determine more information about the user. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, because it allows systems to take advantage of the fact that social network information including user attributes can change frequently, e.g. "within hours." Jenkins, 5:23-44, 7:43-65. A POSITA would haves been motivated to retrieve user social network information with user attributes as taught in Jenkins, in order to provide recent information about the user. POSITA would haves been motivated to retrieve user social

			network information with user attributes as taught in Jenkins, because the audience would have less resistance to the information. Ananian, ¶9.
	Ananian	Knowledge Pump	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). Ananian and Knowledge Pump are in the same field of art. They are directed towards systems for providing personalized content or media. A POSITA would have been motivated to combine Ananian with Knowledge Pump, because they are in the same field of art and Knowledge Pump addresses problems which would be pertinent in Ananian in order to select a more relevant catalog entry. A POSITA would have been motivated to combine Ananian with Knowledge Pump, in order to further personalize the catalog.
	Ananian	Elder	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine Ananian with Elder in order to determine social network information from the users that receive the catalog or television content. addresses problems which would be pertinent in Ananian in order to select a more relevant catalog entry. A POSITA would have been motivated to combine Ananian with Knowledge Pump, in order to further personalize the catalog.
	Match	Byers	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, in order to provide a personalized rank listing of matches.
	Match	Bar-El	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based

			substitution and taught by Bar-El, in order to provide a personalized rank listing of matches.
	Match	Granik	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Granik, in order to provide a personalized rank listing of matches.
	Match	Dempski	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Dempski, in order to provide a personalized rank listing of matches.
	Match	Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Leeke, in order to provide a personalized rank listing of matches.
	eHarmony	Byers	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, in order to provide a personalized rank listing of matches.
	eHarmony	Bar-El	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Bar-El, in order to provide a personalized rank listing of matches.

	eHarmony	Granik	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Granik, in order to provide a personalized rank listing of matches.
	eHarmony	Dempski	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Dempski, in order to provide a personalized rank listing of matches.
	eHarmony	Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Leeke, in order to provide a personalized rank listing of matches.
	eHarmony	Byers	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, in order to provide a personalized rank listing of matches.
	eHarmony	Bar-El	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Bar-El, in order to provide a personalized rank listing of matches.
	eHarmony	Granik	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Granik, in order to provide a personalized rank listing of matches.

	eHarmony	Dempski	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Dempski, in order to provide a personalized rank listing of matches.
	eHarmony	Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Leeke, in order to provide a personalized rank listing of matches.
	DoubleClick	Granik	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Granik, in order to combine the advertising content with content from the affiliate website. A POSITA would have been motivated to combine performing a rule based substitution and taught by Granik, in order to display replacement content at the user node.
	DoubleClick	Dempski	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Dempski, in order to combine the advertising content with content from the affiliate website. A POSITA would have been motivated to combine performing a rule based substitution and taught by Dempski, in order to display replacement content at the user node.
	DoubleClick	Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Leeke, in order to combine the advertising content with content from the affiliate website. A POSITA would have been motivated to combine performing a rule based substitution and taught

			by Leeke, in order to display replacement content at the user node.
	DoubleClick	Byers	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, in order to combine the advertising content with content from the affiliate website. A POSITA would have been motivated to combine performing a rule based substitution and taught by Byers, in order to display replacement content at the user node.
	DoubleClick	Bar-El	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Bar-El, in order to combine the advertising content with content from the affiliate website. A POSITA would have been motivated to combine performing a rule based substitution and taught by Bar-El, in order to display replacement content at the user node.
	DoubleClick	Granik	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Granik, in order to combine the advertising content with content from the affiliate website. A POSITA would have been motivated to combine performing a rule based substitution and taught by Granik, in order to display replacement content at the user node.
	DoubleClick	Dempski	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Dempski, in order to combine

			the advertising content with content from the affiliate website. A POSITA would have been motivated to combine performing a rule based substitution and taught by Dempski, in order to display replacement content at the user node.
	DoubleClick	Leeke	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Leeke, in order to combine the advertising content with content from the affiliate website. A POSITA would have been motivated to combine performing a rule based substitution and taught by Leeke, in order to display replacement content at the user node.
	DoubleClick	GeoCities	One or more of the following combinations may be relied upon to show it would have been obvious to a POSITA to combine the primary reference with the secondary reference(s). A POSITA would have been motivated to combine performing a rule based substitution and taught by Leeke, in order to combine the advertising content with content from the affiliate website.

F. Secondary Considerations of Obviousness

Plaintiff has not identified any secondary consideration or other objective evidence of non-obviousness. Defendants reserve its right to submit contentions and evidence to rebut any secondary consideration or other objective evidence that Plaintiff may later identify.

III. INVALIDITY CONTENTIONS BASED ON 35 U.S.C. §112

Defendants provide below an identification of how the Asserted Claim is—at least as apparently construed by 10Tales in its Infringement Contentions—invalid pursuant to 35 U.S.C. § 112 as indefinite, not enabled, and/or lacking a sufficient written description. A more detailed basis for Defendants' written description, enablement, and/or indefiniteness defenses will be set forth in their expert report(s) on invalidity, to be served in accordance with the Court's scheduling order.

Defendants have not yet taken any depositions related to these issues. Defendants specifically reserve the right to amend and/or supplement these Preliminary Invalidity Contentions based on a failure to comply with the requirements of 35 U.S.C. § 112.

Further, Defendants specifically reserve the right to amend and/or supplement these Preliminary Invalidity Contentions based on a failure to comply with the requirements of 35 U.S.C. § 112(a) which provides that "[t]he specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention."

A. "second composite digital media display"

Claim 1 of the '030 Patent is invalid under 35 U.S.C. § 112, ¶ 2 because the claim language, when read in light of the intrinsic record, fails to inform a person of ordinary skill in the art about the scope of the claimed invention with respect to the claim limitation "the second composite digital media display." For example, because of a lack of antecedent basis, one of ordinary skill in the art cannot know with reasonable certainty what the "the second composite digital media display" is and/or whether it is different than the claimed "user specific composite digital media display" or "first composite digital media display."

B. "display server"

Claim 1 of the '030 Patent is invalid under 35 U.S.C. § 112, ¶ 1 because the patent lacks adequate written description for the term "display server." For example, the '030 Patent does not disclose a "display server" that is separate from the "server." In addition, these claims are invalid under 35 U.S.C. § 112, ¶ 2 because the claim language, when read in light of the intrinsic record, fails to inform a person of ordinary skill in the art the scope of the claimed invention with respect

to the "display server" claim limitation. For example, one of ordinary skill in the art cannot know with reasonable certainty whether the "display server" is part of, or separate from, the claimed system and/or the claimed server.

C. "at least one source external to the presented first composite digital media display"

Claim 1 of the '030 Patent is invalid under 35 U.S.C. § 112, ¶ 2 because the claim language, when read in light of the intrinsic record, fails to inform a person of ordinary skill in the art about the scope of the claimed invention with respect to the claim limitation "at least one source external to the presented first composite digital media display." For example, one of ordinary skill in the art cannot know with reasonable certainty whether the external "source" is merely data other than the presented first composite digital media display or whether the external source is a physical source external to the aspect of the system where the first composite digital media display is presented. In addition, these claims are invalid under 35 U.S.C. § 112, ¶ 1 because the specification and claims fail to enable one of skill in the art to implement the claimed "source external to the presented first composite digital media display." Moreover, the claims are invalid under 35 U.S.C. § 112, ¶ 1 because the patent lacks adequate written description for the term "source external to the presented first composite digital media display."

D. "user social network information"

Claim 1 of the '030 Patent is invalid under 35 U.S.C. § 112, ¶ 2 because the claim language, when read in light of the intrinsic record, fails to inform a person of ordinary skill in the art about the scope of the claimed invention with respect to the claim limitation "user social network information." For example, one of ordinary skill in the art cannot know with reasonable certainty whether the claimed "user social network information" is limited to user attributes, or whether it requires additional information beyond user attributes. In addition, these claims are invalid under

35 U.S.C. § 112, ¶ 1 because the specification and claims fail to enable one of skill in the art to implement the claimed user social network information as claimed. Moreover, the claims are invalid under 35 U.S.C. § 112, ¶ 1 because the patent lacks adequate written description for the term "user social network information."

E. Mixed Subject Matter

Claim 1 is invalid for attempting to claim both a system and a method for using that system. *IPXL Holdings, LLC v. Amazon.com, Inc.*, 430 F.3d 1377, 1383-84 (Fed. Cir. 2005). For example, claim 1 recites "A system for associating user attributes with digital media asset attributes and creating a user specific composite digital media display" and a "computer-readable storage medium [that] contains one or more programming instructions for performing a method of associating user attributes with digital media asset attributes and creating a user specific composite digital media display, the method comprising" (various functional operations that must be performed.) The Plaintiff is still uncertain on the 'metes and bounds' of the claim. Plaintiff's allegations assert the claim is directed to a system, and yet, likewise assert they are directed to software for carrying out a method. ECF 51, 1, 11 (describing a system claim); ECF, 52, 6 (stating "several of the claim limitations are directed to software for carrying out a method on the claimed system.")

IV. INVALIDITY CONTENTIONS BASED ON 35 U.S.C. §101

TTI provides below an identification of the Asserted Claim that is invalid pursuant to 35 U.S.C. § 101 for failure to claim patent eligible subject matter.

No.	Asserted Patent	Asserted Claim Invalid Pursuant to 35 U.S.C. § 101[1]
1	'030 Patent	1

[1] Although not asserted, Claim 2 of the '030 Patent is also invalid pursuant to 35 U.S.C. § 101 for failure to claim patent eligible subject matter.

Courts analyze patent eligibility under a two-step framework. *See Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 217 (2014). At step one, the court determines whether the claims are directed to a law of nature, natural phenomena, or abstract idea. *See id.* At step two, the court determines whether the claims, considered "both individually and as an ordered combination," contain an "inventive concept." *Id.* at 217-18s. In *Alice*, the Supreme Court held that "method claims, which merely require generic computer implementation, fail to transform [an] abstract idea into a patent-eligible invention." *Id.* at 221. Similarly, claim 1 of the '030 Patent claims a patent-ineligible abstract idea without the "inventive concept" necessary to save it from abstraction.

Under *Alice* step one, claim 1 is directed to the abstract idea of personalizing media content presented to a user based on information known about the user. The Federal Circuit has held that "customizing information based on [] information known about the user" is an abstract idea. *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015) ("This sort of information tailoring is a fundamental . . . practice long prevalent in our system." (citation omitted)). Similarly, "the basic concept of customizing a user interface" by, for example, providing "targeted advertising based on demographic information provided by the user" is an abstract idea. *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) (citing *Intellectual Ventures I LLC*, 792 F.3d at 1369). As in *Intellectual Ventures* and *Affinity Labs*, claim 1 of the '030 Patent claims nothing more than the basic concept of tailoring content presented to a user based on information about the user. It is therefore an abstract idea that "covers the general idea of customizing a user interface" without being "limited to any particular form of customization." *See id.*

Under *Alice* step two, the claims and specification must be reviewed to determine if there is any material that "constitutes a concrete implementation of the abstract idea in the form of an 'inventive concept.'" *Affinity Labs*, 838 F.3d at 1271. Here, no such inventive concept is claimed or described with respect to claim 1 of the '030 Patent. For example, the mere fact that claim 1 recites a physical component—e.g. a "server" and "computer readable storage medium"—to perform the recited method does not amount to an "inventive concept" where that physical component is nothing more than a generic computer element. *See Affinity Labs*, 838 F.3d at 1271 ("The features set forth in the claims are described and claimed generically rather than with the specificity necessary to show how those components provide a concrete solution to the problem addressed by the patent.") Here, there is nothing inventive or new about the claimed "server" and "computer readable storage medium." Rather, the server is merely part of the system, and the server and the computer readable storage medium merely act as generic computer components on which the abstract idea is implemented.

Further, the claimed "instructions" are method steps recited in a results-oriented, functional manner such that only the desired result is claimed, rather than a concrete or particular way of achieving the result, which is "a frequent feature of claims held ineligible under § 101, especially in the area of using generic computer and network technology." *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016). For example, claim 1 requires the use "programming instructions" to "associat[e] user attributes with digital media asset attributes" but fails to provide any such "programming instructions" or method by which to associate "user attributes" with "digital media asset attributes," the latter of which is not even mentioned prior to the claims. Further, the element "selecting, based on the user attributes in the social network information, a second set of digital media assets, wherein the second set of digital media assets is associated with

one or more user attributes found in the user social network information" fails to recite a concrete way to associate user attributes to digital media asset attributes. Instead, this element only recites "a second set of digital media assets" associated with one or more user attributes. Moreover, the claims do not identify which vague "user attributes in the social network information" are used, or how they are used to select "digital media assets." By failing to "go beyond stating [the relevant] functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance over conventional computer and network technology," claim 1 of the '030 Patent does not recite an "inventive concept." *See Affinity Labs*, 838 F.3d at 1271. Further, as shown in references cited in Section II, *supra,* and by admissions by the Applicant, the claim elements are well-known, routine, or conventional and the claims do not involve significantly more than the judicially created exception itself. 030, 1:15-52, 13:22-36. As such, claim 1 of the '030 Patent has failed both *Alice* steps and is ineligible under 35 U.S.C. § 101.

V. DOCUMENT PRODUCTION ACCOMPANYING PRELIMINARY INVALIDITY CONTENTIONS

Contemporaneously with these Invalidity Contentions, and in compliance with the Order Governing Proceedings and the Scheduling Order, TTI produces (1) all prior art referenced in the invalidity contentions, (2) technical documents, including software where applicable, sufficient to show the operation of the accused product(s), and (3) summary, annual sales information for the accused product(s) for the two years preceding the filing of the Complaint, unless the parties agree to some other timeframe. These documents are produced at Bates TT0000088 - TT0005827, and may be accessed by following the instructions set forth in the letter serving these Invalidity Contentions. The software is available as a free download at the Apple iTunes or Google Play stores. Additionally, the software is freely accessible at www.tiktok.com.

Dated: March 1, 2021

By: */s/ Stephen S. Korniczky*

Stephen S. Korniczky *(admitted pro hac vice)*
Martin R. Bader *(admitted pro hac vice)*
Ericka J. Schulz *(admitted pro hac vice)*
SHEPPARD, MULLIN, RICHTER & HAMPTON LLP
12275 El Camino Real, Suite 200
San Diego, CA. 92130
T: 858.720.8900
skorniczky@sheppardmullin.com
mbader@sheppardmullin.com
eschulz@sheppardmullin.com

Jason Mueller (State Bar No. 24047571)
SHEPPARD, MULLIN, RICHTER & HAMPTON LLP
2200 Ross Avenue, 24th Floor
Dallas, TX 75201
T: 469.391.7402
jmueller@sheppardmullin.com

Attorneys for Defendants TikTok Inc., TikTok Pte. Ltd., ByteDance Ltd., and ByteDance Inc.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the email.

/s/_____

CONTROL NO.: 90/015,310
U.S. PATENT NO. 8,856,030

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §1.248 and §1.550(f), the undersigned hereby certifies that a copy of this **PATENT OWNER'S PETITION UNDER 37 C.F.R. § 1.182** in Reexamination No.: 90/015,310, including all attachments, exhibits, and documents filed therewith, will be served by first-class mail upon:

SHEPPARD, MULLIN, RICHTER & HAMPTON LLP
650 Town Center Drive, 10th Floor
Costa Mesa, CA 92626

Dated: November 16, 2023

/MacAulay Rush/
MacAulay Rush
Patent Paralegal
WOLF, GREENFIELD & SACKS, P.C.