2023-1095

United States Court of Appeals for the Federal Circuit

REALTEK SEMICONDUCTOR CORPORATION,

Appellant

v.

INTERNATIONAL TRADE COMMISSION,

Appellee

DIVX, LLC,

Intervenor

Appeal from the United States International Trade Commission in Investigation No. 337-TA-1222.

APPELLANT'S CORRECTED NON-CONFIDENTIAL PRINCIPAL OPENING BRIEF

May 23, 2023

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CERTIFICATE OF INTEREST

Counsel for Appellant Realtek Semiconductor Corporation certifies the following:

1. The full name of every entity represented by us is:

Realtek Semiconductor Corporation

2. The name of the real party in interest for the entity. Do not list the real parties if they are the same as the entities.

None/Not Applicable

3. Provide the full names of all parent corporations for the entities and all publicly held companies that own 10% or more stock in the entities.

None/Not Applicable

4. List all law firms, partners, and associates that (a) appeared for the entities in the originating court or agency or (b) are expected to appear in this court for the entities. Do not include those who have already entered an appearance in this court. Fed. Cir. R. 47.4(a)(4).

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5. Provide the case titles and numbers of any case known to be pending in this court or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal. Do not include the originating case number(s) for this case. Fed. Cir. R. 47.4(a)(5). See also Fed. Cir. R. 47.5(b).

Future Link Systems LLC v. Realtek Semiconductor Corp. (Fed. Cir. No. 23-1056)	Future Link Systems LLC v. Realtek Semiconductor Corp. (Fed. Cir. No. 23-1057)

6. Provide any information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6).

None/Not Applicable

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The materials marked for redaction herein comprise CONFIDENTIAL BUSINESS INFORMATION ("CBI") pursuant to the October 15, 2020 Protective Order entered in the underlying International Trade Commission Investigation and which remains in force pursuant to Federal Circuit Rule 25.1(c)(1). The omitted material contains highly sensitive confidential business and proprietary technological information of Appellant, Appellee, and/or third parties.

Confidential material has been marked for redaction within this brief on the following pages: iv, 6, 10-21.

Page Numbers	General Descriptor
iv, 6, 10 - 21	"Technical CBI"
17 - 20	"Third Party Product"
18 - 20	"Third Party Technical CBI"

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STATEMENT OF RELATED CASES

This is an appeal from a final determination of the International Trade Commission ("Commission"). DivX, LLC ("DivX") initiated this action by filing a complaint with the Commission against Realtek Semiconductor Corp. ("Realtek"). The complaint alleged that certain processors that Realtek sells for use in smart televisions infringed DivX's patents. DivX's complaint also accused processors sold by MediaTek Inc., MediaTek USA Inc., and MStar Semiconductor, Inc. (collectively, "MediaTek"). In addition to targeting Realtek and MediaTek, DivX sued three sets of companies that allegedly used the accused processors in their smart televisions: (1) Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Electronics HCMC CE Complex, Co. Ltd. (collectively, "Samsung"); (2) LG Electronics Inc. and LG Electronics U.S.A., Inc. (collectively, "LG"); and (3) TCL Corporation, TCL Technology Group Corporation, TCL Electronics Holdings Limited, TTE Technology, Inc., Shenzhen TCL New Technologies Co. Ltd., TCL King Electrical Appliances (Huizhou) Co. Ltd., TCL MOKA International Limited, and TCL Smart Device (Vietnam) Co., Ltd (collectively, "TCL").

Along with its ITC complaint, DivX sued Realtek and LG in the U.S. District Court for the District of Delaware. *See DivX, LLC v. LG Elecs. Inc.*, No. 20-cv-1202-CFC-JLH (D. Del.). The district court action involves the same allegations of

patent infringement that were at issue before the Commission. On June 3, 2021, the U.S. Magistrate Judge assigned to the district court case stayed all proceedings pending resolution of proceedings before the Commission. *Id.* Dkt. No. 55.

JURISDICTIONAL STATEMENT

In response to DivX's complaint, the Commission instituted Investigation Number 337-TA-1222. During the Investigation, Realtek asked the Administrative Law Judge ("ALJ") to award sanctions against DivX pursuant to 19 C.F.R. § 210.4(d)(1)(i) and to issue an order to show cause, pursuant to 19 C.F.R. § 210.4(d)(1)(ii). On April 22, 2022, in Order No. 75, the ALJ denied Realtek's request for sanctions but did not rule on Realtek's request for an order to show cause. *See* Appx2232-2233. On August 24, 2022, the Commission "determined not to review, and thus adopt[ed], Order No. 75[.]" Appx0017. The Commission Opinion and its Notice both state that its rulings are a "determination" of the Commission, and they are the Commission's final action on Realtek's request. Accordingly, they are final determinations under Section 19 U.S.C. § 1337(h) and 28 U.S.C. § 1295(a)(6) and subject to this Court's jurisdiction.

The Commission's determination is reviewable under the Administrative Procedure Act pursuant to Section 337(c). *See* 19 U.S.C. § 1337(c) ("Determinations by the Commission under . . . subsection (h) with respect to the imposition of sanctions . . . shall also be reviewable in accordance with section 706

of title 5."). The Commission's sanctions order was a final determination relating to both DivX's allegations of unfair practices on Realtek's part and Realtek's allegations, set forth in its motion for sanctions, of DivX's unfair practices. This Court therefore has jurisdiction pursuant to 28 U.S.C. § 1295(a)(6); *see also Viscofan, S.A. v. U.S. ITC*, 787 F.2d 544, 552 (Fed. Cir. 1986) (holding that the Commission's "determinations," once they are final, are reviewable by the Federal Circuit). Realtek timely filed a petition for review on October 21, 2022.

STATEMENT OF THE ISSUES

1. Whether the Commission violated the APA when it completely ignored Realtek's request for an order to show cause, pursuant to 19 C.F.R. § 210.4(d)(1)(ii), to address sanctionable misconduct that was not revealed until the evidentiary hearing and therefore could not practically be addressed through a sanctions motion pursuant to 19 C.F.R. § 210.4(d)(1)(i).

2. Whether the Commission violated the APA when it departed from its rulings in prior adjudications. In prior investigations, unlike in this Investigation, the Commission's ALJs and the Commission expressly considered and decided whether to invoke their authority under 19 C.F.R. § 210.4(d)(1)(ii) to address sanctionable misconduct after determining that such misconduct could not be, or had not been, properly challenged pursuant to 19 C.F.R. § 210.4(d)(1)(i).

INTRODUCTION

This appeal—which addresses a basic violation of administrative law—also raises a more fundamental issue: Complainants who bring patent infringement claims before the Commission are increasingly abusing that forum. Many complainants fail to provide the required factual support for their claims, and once their initial theories are shown to be baseless, they attempt to shift theories well after the governing deadlines. In the Investigation before the Commission under review, DivX, LLC brought numerous claims that were unsupported and unsupportable. It dropped some of those claims as the Investigation proceeded, and when its remaining claims were foreclosed by the rulings of the Administrative Law Judge, DivX tried to shift theories. The ALJ granted a motion *in limine*, excluding the new theory. Rather than accept defeat, however, DivX chose to present false and misleading testimony, and to make false and misleading representations, to the ALJ in hopes of convincing her that it had pursued its new theory all along.

DivX's misconduct was not revealed until the evidentiary hearing, but by that time, DivX had already withdrawn all of its claims against Realtek Semiconductor Corp. Realtek therefore could not serve an ordinary sanctions motion under 19 C.F.R. § 210.4(d)(1)(i) and provide a safe harbor for DivX to withdraw its claims against Realtek prior to filing the motion. Accordingly, Realtek not only filed an ordinary sanctions motion, but also asked the ALJ for an order to show cause under

19 C.F.R. § 210.4(d)(1)(ii), in case that was the only realistic way to address the misconduct revealed at the hearing. The ALJ did not address the request under 19 C.F.R. § 210.4(d)(1)(ii), even though the Commission has a well-established history of considering such motions on the merits. Realtek petitioned for review, but the Commission adopted the ALJ's ruling without further comment.

By refusing to engage in reasoned decision-making, and by treating this Investigation differently than other investigations, the Commission violated the Administrative Procedure Act ("APA"). But the Commission's failures are more profound. They encourage the bad behavior that is of growing concern to Realtek and others. Realtek generally does not seek sanctions to enrich itself. It has long said that it will donate the sanctions it recovers to those in need, in Washington D.C., who suffer from price increases caused, in part, by meritless litigation of the type at issue in this Investigation. Realtek brought its motion, and pursues this appeal, in hopes of vindicating the purpose of an award of sanctions: to educate, to deter, and to punish misconduct that threatens the integrity of the Commission's proceedings.

STATEMENT OF THE CASE

I. Procedural Posture

Throughout the proceedings before the Commission, Realtek informed DivX that its claims against Realtek lacked support and were baseless. Realtek nonetheless deferred filing a motion for sanctions, until it could confirm that DivX

had indeed engaged in the type of truly egregious misconduct that warranted sanctions.

On the eve of the evidentiary hearing before the ALJ, DivX withdrew its complaint against Realtek, and the ALJ orally granted an order and instructed Realtek that it did not need to participate in the hearing.[1] The hearing therefore proceeded only against TCL,[2] which is one of the companies that used relevant SoCs in some of its accused products. During the hearing, it became clear that DivX had indeed engaged in serious misconduct with respect to its claims against Realtek. Although DivX had dismissed all claims against Realtek, the remaining respondent, TCL, used certain relevant chips in its televisions, and TCL's use of those chips was the basis for the subset of claims DivX had asserted against both TCL and Realtek. Accordingly, DivX's claims against Realtek were indirectly adjudicated at the hearing.

The facts presented at the hearing revealed that DivX had presented false and misleading testimony, and had made false and misleading representations, during the Investigation, and that misconduct had seriously prejudiced Realtek. Because

[1] DivX initially had sought agreement from Realtek that it would not use the withdrawal of the complaint as a basis for seeking sanctions, but Realtek declined that request. Appx2030; Appx2368. DivX chose to withdraw the complaint against Realtek, which Realtek did not oppose because of its obligation to mitigate the harms suffered from DivX's pursuit of meritless claims against Realtek.

[2] The other respondents had previously reached an agreement with DivX through which their claims were resolved.

Realtek had been dismissed from the case prior to the misconduct coming fully to light, the Commission's rules regarding sanctions—including the requirement to serve the motion and wait 7 days before filing it to determine if DivX would withdraw its claims—did not clearly apply. Accordingly, Realtek not only moved for sanctions under Commission Rule 210.4(d)(1)(i), but also asked the ALJ to issue an order to show cause under Commission Rule 210.4(d)(1)(ii).

Realtek filed its motion for sanctions on October 4, 2021. Realtek filed its motion about 2.5 months after the hearing because Realtek's "'[lead counsel's] mother had a stroke during the hearing,' which prevented him from 'provid[ing] the information needed to finalize and file the motion earlier.'" Appx2350. Realtek's motion was nonetheless submitted 6.5 months before the deadline the ALJ set for the Initial Determination. *See* Appx2228 (setting April 19 as "[t]he date for the issuance of the ID"). There has been no suggestion, and the Commission did not rule, that any part of the Investigation would have proceeded differently had Realtek filed its motion for sanctions immediately after learning, at the hearing, of the false representations or if Realtek had provided advance notice before filing its motion, given that the complaint had already been withdrawn.

Realtek's motion for sanctions explicitly invoked the ALJ's authority to issue an order to show cause, and to impose sanctions, pursuant to Commission Rule 210.4(d)(1)(ii). Appx2043. Realtek argued that the safe harbor provision in

Commission Rule 210.4(d)(1)(i) did not apply and did not prevent the ALJ from having jurisdiction to award sanctions on Realtek's motion because tribunals always have authority to address misconduct that occurred before them even if the complaint already has been withdrawn. Appx2351-2352; Appx2043.[3] Realtek also explained to the Commission that, in prior cases, ALJs routinely considered and granted parties' requests to invoke Commission Rule 210.4(d)(1)(ii) to address sanctionable misconduct when Commission Rule 210.4(d)(1)(i) did not apply. *See* Appx2359. In Realtek's reply in support of its motion for sanctions, Realtek again identified Commission Rule 210.4(d)(1)(ii) as a primary basis for its motion and reiterated that tribunals have authority to address misconduct that occurred before them under Commission Rule 210.4(d)(1)(i)-(ii), even though a case already has been dismissed. *See* Appx2212-2213. As Realtek explained, "Commission Rules provide the ALJ with full authority to police misconduct before her." Appx2212 (quoting 19 C.F.R. § 210.4(d)(1)(ii), which provides "[t]he administrative law judge or the Commission

[3] Realtek cited, among other authority, *Walker v. Health Int'l Corp.*, 845 F.3d 1148, 1155 (Fed. Cir. 2017) ("[A]fter the merits of a case are dismissed, a district court retains jurisdiction over whether to grant sanctions."); *ED Cap., LLC v. Bloomfield Inv. Res. Corp.*, 316 F.R.D. 77, 80-81 (S.D.N.Y. 2016) (stating that the court retains jurisdiction to determine appropriateness of sanctions after underlying action is dismissed). Appx2351.

may enter an order *sua sponte* describing the content that appears to violate paragraph (c) of this section").[4]

The ALJ deferred consideration of Realtek's motion until she issued the Initial Determination. On that day, April 22, 2022, the ALJ denied Realtek's motion purely on procedural grounds. The order denied Realtek's request for relief because Realtek did not comply with the safe harbor provision of Commission Rule 210.4(d)(1)(i). Appx2231-2235. The ALJ did not address Realtek's request for an order to show cause, pursuant to Commission Rule 210.4(d)(1)(ii). *Id.* Nor did the ALJ address whether the safe harbor rule in Commission Rule 210.4(d)(1)(i) allowed Realtek's request for sanctions based on conduct that was only revealed *after* DivX already had withdrawn its complaint against Realtek. Appx2234-2236.

On June 1, 2022, Realtek filed a Petition for Review of Order No. 75. On June 8, 2022, DivX filed its opposition to Realtek's petition. On August 24, 2023, the Commission issued an opinion in which it "determined not to review, and thus adopt[ed], Order No. 75 denying Realtek's motion for sanctions, without further amendment or comment." Appx00017. Realtek timely sought this Court's review.

II. Realtek's Discovery of DivX's Sanctionable Misconduct

A. DivX's February 8 Contentions, its New Infringement Theory Disclosed on April 8, and the ALJ's Order Excluding the New Theory

[4] The ALJ did not rule on Realtek's request for leave to submit a reply in support of its motion for sanctions (Appx2216-2220.

On February 8, 2021, DivX provided its infringement contentions. Those contentions made no reference to "Technical CBI" as satisfying the important "deciphering" limitation of the only patent asserted against Realtek through the end of the Investigation: U.S. Patent No. 10,212,486 (Appx0027-0052). To the contrary, as the ALJ would later recount when precluding testimony related to the Technical CBI theory, DivX had pursued a different, "Technical CBI theory" of deciphering throughout fact discovery[5]. That Technical CBI theory focused on just one part of the encryption and decryption process. (Appx1338)

For reference, the "Technical CBI" is highlighted in lime green on the DivX demonstrative slide from the evidentiary hearing, Appx1499.

As the ALJ would later agree, the "Technical CBI" theory was a "material change" from the prior "Technical CBI" theory. *See* Appx2031. As the ALJ explained, on April 8, 2021, DivX contended, for the first time, that "just 1 step in the . . . decryption procedure" would satisfy the deciphering step. *Id.* Thus, as the ALJ further recounted, DivX "materially changed its focus and theory." *Id.*

DivX's separate "Technical CBI" theory is also illustrated in the area of the blue rectangle of Appx1499. In particular, the blue rectangle labeled Technical CBI

[5] See Appx1338 – Appx1339

Technical CBI [redacted] in the diagram identifies the newly identified infringing functionality, which is entirely separate from the formerly accused Technical CBI [redacted] portion of AES decryption. DivX abandoned its old Technical CBI [redacted] theory in favor of the new Technical CBI [redacted] Technical CBI [redacted] theory because of the ALJ's *Markman* order. The ALJ issued her *Markman* order on March 12, 2021. That ruling confirmed that DivX had no claim against Realtek. Specifically, the ALJ construed "deciphering" as "performing a procedure to unscramble data to make it readable to the intended audience, where the procedure does not require an outside source, such as a key." Appx0144. The ALJ also adopted the parties' agreed construction of "decrypting" as a "procedure that requires the use of an external input for at least one step in the procedure, such as a key, in order to access secure data[.]" Appx0116. Those rulings precluded DivX's Technical CBI [redacted] and decryption theories from satisfying the "deciphering" limitation.

Rather than dropping its case, DivX moved to its new theory and contended that it had always been pursuing the Technical CBI [redacted] theory. The timing of this misstatement is not an accident. As noted, DivX disclosed the new Technical CBI [redacted] theory on April 8, 2021. Appx1038-1042; Appx1044-1045. That was just two days after DivX received Respondents' April 6, 2021 notice that they would be pursuing sanctions against DivX if it pursued its Technical CBI [redacted] theory, and it was DivX's "defense" to the Respondents' showing that DivX's contentions for the deciphering

limitation were frivolous under the Technical CBI theory. Appx2433-2434; Appx2440-2441.

Because the new, Technical CBI theory was untimely, Realtek moved *in limine* to preclude it on June 7, 2021, and the ALJ granted that motion on July 1. Appx1338-1339.[6] The ALJ sent the parties an email explaining her ruling that "DivX is precluded from introducing testimony, arguments or opinion with respect to the '486 patent that its 'Technical CBI' theory satisfies the limitation of 'deciphering a frame key for each partially encrypted frame.'" Appx1338. The ALJ likewise stated that Technical CBI was a new theory first disclosed "on April 8, 2021, long after the February 8, 2021 contention deadline, and after the close of the extended fact discovery of March 26, 2021." Appx1338. The ALJ also explained, in detail, why the Technical CBI theory was "not what DivX argued before the March 12, 2021 *Markman* construction Order issued or in its February 8, 2021 infringement contentions." Appx1338. Moreover, she explained why she rejected DivX's argument that its "old Technical CBI theory" is "tied into [] its and Dr. Reinman's April 8, 2021 disclosure" of the "Technical CBI" theory. Appx1338.

DivX moved for reconsideration, and the ALJ denied that motion on July 1, 2021. Appx1369 (Tr. 29:7-12) (ALJ). The ALJ explained that she had advised

[6] The ALJ's ruling was in email form but reproduced in TCL's Motion To Strike Objectionable Demonstratives of Dr. Glenn Reinman and Preclude Related Testimony. Appx1602-1603; *see also* Appx1102-1337.

counsel for several years, and had amended her ground rules, because there were "too many infringement contentions . . . that aren't explicit enough." Appx1367 (Tr. 27:16-18) (ALJ). She also reiterated her ruling (summarized in her prior email communication), explaining that DivX had not disclosed a Technical CBI theory and would therefore be limited to "its first infringement theory." Appx1368 (Tr. 8:5) (ALJ). DivX would be allowed only to explain "what constitutes the Technical CBI theory, which was what was initially argued." Appx1369 (Tr. 29:1-6) (ALJ). The ALJ went on to hold that the relief Respondents had sought in precluding the Technical CBI theory was "narrowly framed and focused." Appx1368 (Tr. 28:18-19) (ALJ). Accordingly, the ALJ denied the motion for reconsideration and clarified that DivX would only be allowed to put in the Technical CBI theory disclosed in its contentions. Appx1369 (Tr. 29:23–25) (ALJ). Because DivX said that it had been pursuing, and had disclosed, its new Technical CBI theory, and the ALJ believed she needed a fuller record to determine what DivX had actually disclosed, she allowed DivX to try to demonstrate at the evidentiary hearing that it had disclosed its Technical CBI theory as part of its Technical CBI theory.

Thus, the ALJ allowed DivX to present evidence that its February 8 disclosures actually identified its Technical CBI theory of infringement. But DivX had no such evidence. Rather than conceding the issue and saving the parties substantial fees and costs, or relying only on what was supportable, DivX chose to provide false

and misleading representations and testimony at the evidentiary hearing. In particular, the evidence showed that DivX had made a slew of false representations, both before and during the hearing, when it asserted that: (1) it had been pursuing Technical CBI [redacted] as a theory of deciphering since at least February 4, 2021, and (2) it had disclosed everything it could regarding Technical CBI [redacted] theory, and it could not disclose specifics because it had not received the discovery necessary. It was not until the hearing that Realtek obtained evidence showing that these representations were false, seemingly deliberately so, and apparently were designed to deceive the ALJ.

B. The Evidence, Revealed at the Hearing, that DivX Made False Representations When it Said it Was Pursuing [redacted] Technical CBI as its Theory of Infringement

The hearing evidence showed that DivX concocted its Technical CBI theory in mid-March 2021, and it was not pursuing that theory as of February 2021, as DivX had falsely represented to the ALJ. DivX's expert, Dr. Reinman, admitted on the stand that the precise implementation details of Technical CBI were *critical* to his infringement analysis. But he was forced to admit on cross-examination that he did not investigate MediaTek's Technical CBI implementation prior to the *Markman* order in March 2021. In particular, he admitted, on cross-examination, that he "wouldn't know how Technical CBI worked" without the Technical CBI code. See Appx1855 (at Tr. 878:13-21) (Reinman).

If Technical CBI had been part of DivX's infringement case, it undeniably would have needed to request the Technical CBI code. But Dr. Reinman admitted that he did not even try to obtain the MediaTek Technical CBI code until after the ALJ's claim construction order. Dr. Reinman conceded he knew MediaTek had [redacted] Technical CBI [redacted] code before February 4. Appx1858 (Tr. 881:1-5) (Reinman). He also testified that he had open lines of communication with DivX's counsel, he "could have *absolutely* suggested things" to include in the contentions, and he explicitly and personally worked on the infringement contentions. Appx1860 (Tr. at 882:17-883:8 (emphasis added) (Reinman); Appx1867 (Tr. 890:20-22) (Reinman) (Dr. Reinman agreeing that he "help[ed] DivX prepare infringement contentions for this case[.]"). Yet DivX did not name the MediaTek Technical CBI code in its contentions[7], and DivX did not even *request* the Technical CBI source code from MediaTek until March 22, 2021, well after the ALJ's claim construction ruling on March 12 and well after the contentions supplementation on March 15. Appx1857 (Tr. 880:3-25) (Reinman).

[7] Dr. Reinman said he had no recollection of whether MediaTek's Technical CBI code was cited in the contentions. Appx1855 (Tr. 878:8-12) (Reinman). In fact, DivX's contentions show that it did not identify the MediaTek Technical CBI code by name or say anything about MediaTek Technical CBI. *See, e.g.*, Appx0751-0783.

C. The Testimony Revealed that DivX's Reliance on Discovery Problems as the Basis for its Non-Disclosure Was Baseless

DivX represented to the ALJ that discovery problems prevented it from disclosing its Technical CBI theory for TVs that contain Realtek SoCs. DivX's arguments rest on three representations by DivX's counsel and its expert Dr. Reinman: (1) DivX did not have the Assembly Code forTechnical CBI until March 1; (2) regardless of when DivX had the Assembly Code, DivX had no reason to look at that code prior to March 1; and (3) DivX needed the Assembly Code to be able to disclose Technical CBIas its theory of deciphering. The hearing confirmed that each of those representations was false.

DivX represented, at the hearing, that it did not have the relevant Assembly Code Technical CBI) until March 1, and it was only then that Dr. Reinman could "find"Technical CBI in that code. DivX's deceptive question, and the first part of Dr. Reinman's answer, are at: Appx1762-1763 (Tr. 785:23-786:6) (Reinman). In reality, the Assembly Code was made available far earlier, as Dr. Reinman was forced to admit. In particular, Dr. Reinman conceded on cross-examination, that he had reviewed that same assembly code no later than February 4. Appx1840-1845 (Tr. 863:11-868:13) (Reinman); Appx1847 (Tr. 870:3-11) (Reinman); Appx1704-1710 (showing that DivX requested and reviewed the Assembly Code (Technical CBI) no later than February 4 and it was hand delivered in hard copy no later than February 8.).

When confronted with that information, Dr. Reinman provided a second piece of deceptive testimony on this issue. He falsely testified that he had no reason to examine the Assembly Code prior to March 1 because "there was no way to know that [its Technical CBI] functions were used." Appx1841 (Tr. 864:20-22) (Reinman). But again, as Dr. Reinman was forced to concede on cross-examination, he knew by February 4 that the *same* Assembly Code at issue was used to perform Technical CBI in Customer Info televisions with Realtek chips. Appx1847-1848 (Tr. 870:18-871:8) (Reinman). (Recall that "Technical CBI" is the new theory of infringement DivX raised in April of 2021 in place of the previously pursued Technical CBI theory.) Confronted with this contradiction, he pretended not to remember the Customer Info televisions and suggested that he and DivX had actually disclosed Technical CBI for the relevant Customer Info televisions. Appx1848 (Tr. 871:3-8) (Reinman). That, too, was false. The Customer Info contentions *do not even mention* the Assembly Code when discussing deciphering. Appx0307-0330.

In an effort to overcome these falsehoods, Dr. Reinman pretended that the issue regarding the Assembly Code was whether he should have assumed that Customer Info Android televisions used the same code that Customer Info televisions used to perform Technical CBI Appx1848 (Tr. 871:13-20) (Reinman). That was a further attempt at falsity and misdirection. DivX and Dr. Reinman knew that the Assembly Code at issue was used to perform Technical CBI in certain Customer Info televisions with Realtek

chips, and he knew that no later than February 4. Yet DivX did not identify that code in its infringement contentions for Customer Info [redacted] televisions. If DivX had been pursuing its Technical CBI [redacted] theory, it would have identified that file in its contentions for the Customer Info [redacted] televisions. Thus, contrary to Dr. Reinman's testimony, nothing changed regarding his ability to identify the Assembly Code as allegedly infringing when Dr. Reinman learned that the same code was *also* used in another set of televisions, *i.e.* the Customer Info [redacted] televisions.

Dr. Reinman's suggestion, at the hearing, that the use of the Assembly Code in the Customer Info [redacted] televisions was irrelevant is especially misleading and untruthful because Dr. Reinman *explicitly relied on* Customer Info [redacted] use of the same Assembly Code as support for his opinions regarding the Customer Info [redacted] televisions. In particular, Dr. Reinman admitted on cross examination that he relied on the Assembly Code as used in the Customer Info [redacted] televisions as "exemplary" and as proof that Customer Info [redacted] televisions allegedly practiced the '486 patent. Appx1878 (Tr. at 901:5-24) (Reinman).

Finally, there was a third deception, which is arguably the worst. DivX represented that it needed the Assembly Code to disclose Technical CBI [redacted] as a theory of deciphering. Indeed, as shown above, DivX tried to blame the delay in production of certain code (which *did not* include the Assembly Code itself because it had been produced earlier) as a justification for the failure to disclose Technical CBI [redacted]. *See supra* pp. 17-19. But Dr. Reinman testified that he had Realtek's RTL code in

January 2021, and Realtek's technical witness was examined on that code at his January 22 deposition. Appx1755-1756 (Tr. 778:25-779:19) (Reinman). That RTL code likewise implements a certain algorithm, including the Technical CBI step. Dr. Reinman was forced to admit at the hearing that the RTL code—which he had for months—also implemented the allegedly infringing Technical CBI. Appx1880-1881 (Tr. 903:13-904:10) (Reinman) (identifying the RTL code as one of "multiple implementations that all would infringe *were they used*") (emphasis added). Thus, Dr. Reinman had everything he needed to disclose Technical CBI by January 2021 but failed to do so. His testimony to the contrary was demonstrably false.

Moreover, Dr. Reinman conceded on cross-examination that he also built his infringement arguments related to the Technical CBI theory on *publicly available* pseudocode from 2003. In particular, Dr. Reinman testified that his report relies upon and reproduces portions of 2003 "pseudocode that would be used for AES Technical CBI Technical CBI Appx1860 (Tr. 883:21-24) (Reinman); Appx1862-1863 (Tr. 885:22-886:20) (Reinman); Appx1719. He testified that he was aware of that 2003 document, and the pseudocode he cited, well before this Investigation started. Appx1867 (Tr. 890:11-19) (Reinman). He easily could have disclosed that Technical CBI Technical CBI if implemented as he expected, was infringing, but he chose not to do so. In short, the trial testimony revealed that DivX's position that it needed particular discovery from Realtek, which was delayed, in order to be able to disclose its Technical CBI

Technical CBI [redacted] theory was demonstrably false. In every way possible, the hearing revealed that DivX had made a wide-ranging series of false representations to the ALJ.

SUMMARY OF THE ARGUMENT

The Commission erred in two ways. First, the Commission acted arbitrarily and capriciously by failing to address Realtek's request for relief under 19 C.F.R. § 210.4(d)(1)(ii). That provision allows the Commission, and its ALJs, to address sanctionable conduct by issuing an order describing the specific conduct that appears sanctionable and directing an attorney, law firm, party, or proposed party to show cause why it has not violated the Commission Rules. The Commission and its ALJs regularly use 19 C.F.R. § 210.4(d)(1)(ii) to address sanctionable conduct raised by a party that has not, or cannot, comply with 19 C.F.R. § 210.4(d)(1)(i). But here, the ALJ did not address Realtek's request. She abused her discretion by failing to exercise it. She held that the merits of Realtek's request "need not be reached" because she determined that Realtek's separate request—under a different provision, 19 C.F.R. § 210.4(d)(1)(i)—was procedurally barred. Appx2232-2233. In doing so, she candidly acknowledged that she did not consider the merits of Realtek's request, the merits of its arguments in favor of sanctions, or the need for considering Realtek's request pursuant to 19 C.F.R. § 210.4(d)(1)(ii). The Commission adopted her ruling without comment.

In doing so, the Commission violated the well-established rule that ignoring a party's arguments and requests for relief violates the APA. By refusing to address the issues Realtek presented in its underlying motion for sanctions, the Commission failed to engage in reasoned decision-making, and deprived this Court of a decision to review. The Commission therefore acted arbitrarily and capriciously.

Second, the Commission acted arbitrarily and capriciously by treating like cases differently. As detailed below, the Commission repeatedly has entertained requests, under 19 C.F.R. § 210.4(d)(1)(ii), to address sanctionable misconduct when a motion for sanctions under 19 C.F.R. § 210.4(d)(1)(i) is unavailable. The Commission may not depart from its prior rulings without adequately explaining the basis for that departure. As courts have held, it is a bedrock principle of administrative law that agencies must treat like cases alike. Here, the Commission did not justify, or even attempt to explain, its decision to depart from the many prior rulings in which the Commission and its ALJs have considered requests for an order to show cause under § 210.4(d)(1)(ii). Such unexplained inconsistency between like cases violates the APA.

STANDARD OF REVIEW

This Court reviews the Commission's determinations on matters related to sanctions under the standards of the APA. 19 U.S.C. § 1337(c); 5 U.S.C. § 706(2). The decision to impose or refrain from imposing sanctions is reviewed for abuse of

discretion. *Arunachalam v. Int'l Bus. Mach. Corp.*, 989 F.3d 988, 996 (Fed. Cir. 2021). Refusal to exercise discretion, however, is an abuse of discretion. *See Craig v. Merit Sys.Prot. Bd.*, 44 F. App'x 465, 467, 2002 WL 1822271, at *2 (Fed. Cir. 2002) ("When the Board decides not to exercise its discretion . . . we review the Board's decision for abuse of discretion.").[8] Whether an agency followed its own, prior rulings is reviewed for a reasoned explanation; the absence of such a reasoned explanation requires remand. *Sw. Airlines Co. v. FERC*, 926 F.3d 851, 856 (D.C. Cir. 2019) ("[H]owever the agency justifies its new position, what it may not do is 'gloss[] over or swerve[] from prior precedents without discussion.'") (quoting *Greater Bos. Television Corp. v. FCC*, 444 F.2d 841, 852 (D.C. Cir. 1970)); *see also Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 57 (1983) (holding that "an agency changing its course must supply a reasoned analysis" and finding "that the agency has failed to supply the requisite reasoned analysis") (internal citations omitted).

[8] *See also ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 776 (Fed. Cir. 2019) (noting that it "is an abuse of discretion (because it is a failure to exercise discretion at all)," when an order is issued without "accompanying rationale"); *Brooking v. Branham*, 727 F. App'x 884, 885-86 (7th Cir. 2018) ("A judge's failure to exercise discretion is an abuse of discretion."); *Fuller v. Whitaker*, 914 F.3d 514, 521 (7th Cir. 2019) (holding that an agency abuses its discretion when it refuses to consider the evidence submitted in support of a request for the agency "to exercise its *sua sponte* authority").

ARGUMENT

I. The Commission Acted Arbitrarily and Capriciously By Failing to Address Realtek's Request for Relief Under 19 C.F.R. § 210.4(d)(1)(ii).

Commission Rules provide two avenues for allowing an ALJ to address sanctionable misconduct. The first, set forth in 19 C.F.R. § 210.4(d)(1)(i), is initiated by a party's motion, and it has certain procedural requirements, including serving the motion at least seven days before filing to allow the offending party to withdraw or correct "the challenged paper, claim, defense, contention, allegation, or denial." *Id.* In some circumstances, section 210.4(d)(1)(i) is inapposite. Here, for example, DivX presented false and misleading testimony and representations that significantly harmed Realtek and the integrity of the Commission's proceedings but came to light only *after* DivX had withdrawn its complaint against Realtek. *See supra* pp. 7-9. Thus, there were no papers, claims, defenses, contentions, allegations, or denials against Realtek that it could demand DivX withdraw. Accordingly, and at a minimum, Commission Rules provide a second mechanism for addressing sanctionable misconduct. That second mechanism, 19 C.F.R. § 210.4(d)(1)(ii), allows the ALJ or Commission to take the initiative. Under that second mechanism, the ALJ or Commission issues an order "describing the specific conduct that" appears sanctionable "and directing an attorney, law firm, party, or proposed party to show cause why it has not violated" the Commission Rules. *Id.*

The Commission and its ALJs regularly use 19 C.F.R.§ 210.4(d)(1)(ii) to address sanctionable conduct raised by a party that has not, or cannot, comply with 19 C.F.R. § 210.4(d)(1)(i). For example, in *Certain Point of Sale Terminals and Components Thereof*, Inv. No. 337-TA-524, Order No. 40 (Apr. 11, 2005), the ALJ decided that "the motions for sanctions must be denied because Respondents are procedurally barred from moving for sanctions . . . because of their failure to comply with the safe harbor provisions of Commission Rule 210.4(d)," but the ALJ likewise held that "a show cause order is warranted, given the serious allegations." *Id.* at 1. Likewise, in *Certain Blood Separation and Cell Preparation Devices*, Inv. No. 337-TA-1147, Order No. 16 (Dec. 20, 2019), the ALJ entertained a respondent's motion for an order to show cause.

The same occurred in *Certain Blowers and Components Thereof*, Inv. No. 337-TA-1217, Order No. 31 (Oct. 20, 2021), where Respondents filed a motion before ALJ McNamara (the same ALJ who signed Order No. 75 at issue in the instant matter) requesting sanctions under 19 C.F.R. § 210.4(d), and Judge McNamara determined that the motion under 19 C.F.R. § 210.4(d)(1)(i) was untimely but nonetheless granted the request under 19 C.F.R. § 210.4(d)(1)(ii) and ordered the Complainant to "show cause why sanctions should not be imposed on Regal as a Party, or on its Counsel, pursuant to 19 C.F.R. § 210.4(c)[.]" *Id.* at 1. On

review, the Commission reversed and remanded Order No. 36, instructing the ALJ to:

> [S]pecify and explain whether she intends that the directives issued . . .—a warning and a direction to redact all misrepresentations in the Enforcement Complaint—constitute nonmonetary sanctions under 19 C.F.R. § 210.4(c) and (d); and, if so, to (1) specify whether the directives in Order 36 were issued pursuant to 19 C.F.R. § 210.4(d)(1)(i) or (ii); and (2) identify the attorneys, law firms, or parties that have violated 19 C.F.R. 210.4(c) or are responsible for the violation, and to whom the sanctions apply[.]

Id. Thus, the Commission confirmed that parties may obtain relief by asking the ALJ or Commission to address sanctionable misconduct pursuant to the authority they have under subsection (ii), even when relief under subsection (i) is not permitted.

Finally, there are other cases in which the Commission's ALJs have noted and resolved a request for an order to show cause. For example, in *Certain Coaxial Cable Connectors and Components Thereof and Products Containing Same*, Inv. No. 337-TA-938, Order No. 10 (Sept. 25. 2015), the ALJ noted that Respondent Corning Optical Communications RF LLC had requested "an order to show cause pursuant to Commission Rule 210.4(d)(1)(ii)." *Id.* at 1. The ALJ denied that order because Corning, unlike Realtek here, had not identified "any specific conduct" alleged to be sanctionable. *Id.* But the ALJ considered the request on its merits.

In short, it is well established that the Commission and its ALJs allow parties to move for an order to show cause and rule on such requests on their merits. Such

requests are directed to the discretion of the ALJ or Commission, but they must be addressed.

Likewise, the ALJ did not consider whether a motion for sanctions was permissible, under 19 C.F.R. § 210.4(d)(1)(i), because the safe harbor provision could not apply. As mentioned, DivX withdrew its complaint against Realtek prior to the misconduct at issue coming to light. *See supra* pp. 7-9. In such circumstances, a party must be able to bring sanctionable misconduct to the attention of the tribunal and to seek appropriate relief.

It is well established that a judge abuses her discretion when she fails to exercise it. *See, e.g.*, *James v. Jacobson*, 6 F.3d 233, 239 (4th Cir. 1993) (explaining that a judge abuses her discretion "in a failure or refusal, either express or implicit, actually to exercise discretion"); *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 776 (Fed. Cir. 2019) (noting that it "is an abuse of discretion (because it is a failure to exercise discretion at all)," when an order is issued without "accompanying rationale"); *Brooking v. Branham*, 727 F. App'x 884, 885-86 (7th Cir. 2018) ("A judge's failure to exercise discretion is an abuse of discretion."); *see also Fuller v. Whitaker*, 914 F.3d 514, 521 (7th Cir. 2019) (holding that an agency abuses its discretion when it refuses to consider the evidence submitted in support of a request for the agency "to exercise its *sua sponte* authority").

Here, the ALJ abused her discretion by failing to exercise it. She held that the "merits" of any of Realtek's sanctions arguments "need not be reached." Appx2232-2233. In doing so, she candidly acknowledged that she did not consider Realtek's request, the merits of its arguments in favor of sanctions, or the need for considering Realtek's request pursuant to 19 C.F.R. § 210.4(d)(1)(ii) given the unusual procedural posture of the case. The Commission adopted her ruling without comment.

Courts have long held that ignoring arguments and requests for relief violates the APA. *See Frizelle v. Slater*, 111 F.3d 172, 177 (D.C. Cir. 1997) (agency's failure to respond to "arguments, which do not appear frivolous on their face and could affect the . . . ultimate disposition," is arbitrary); *see also Butte Cnty., Cal. v. Hogen*, 613 F.3d 190, 194 (D.C. Cir. 2010) ("[A]n agency's refusal to consider evidence bearing on the issue before it constitutes arbitrary agency action[.]"); *Kakar v. USCIS*, 29 F.4th 129, 133-35 (2d Cir. 2022) (reversing the agency's conclusion because there was not sufficient evidence that the "agency has considered all the important aspects of the issue and articulated a satisfactory explanation for its action"); *Pub. Citizen, Inc. v. F.A.A.*, 988 F.2d 186, 197 (D.C. Cir. 1993) ("The requirement that agency action not be arbitrary or capricious includes a requirement that the agency adequately *explain* its result.") (emphasis added); *Tex Tin Corp. v. U.S. E.P.A.*, 935 F.2d 1321, 1324 (D.C. Cir. 1991) ("Where the agency has failed to

exercise its expertise or to explain the path that it has taken, we have *no choice but to remand for a reasoned explanation*.") (emphasis added). *See generally Motor Vehicles Manuf. Ass'n*, 463 U.S. at 43 (holding that agencies act contrary to the APA when they "entirely fail[] to consider an important aspect of the problem").

Here, the Commission, in adopting the ALJ's order without comment or amendment, did not address Realtek's request pursuant to 19 C.F.R. § 210.4(d)(1)(ii), the facts raised, or the necessity of using subsection (ii) to address sanctionable misconduct in light of the procedural posture of the case. Nor did it consider whether 19 C.F.R. § 210.4(d)(1)(i) must, or should, be interpreted to allow Realtek's motion in light of the revelations *after* DivX withdrew its complaint. By refusing to address any of those issues, the Commission acted arbitrarily and capriciously and denied this Court an appropriate record for review. Accordingly, the Court should grant Realtek's petition and remand this proceeding to the Commission to address all of Realtek's arguments.

II. The Commission Acted Arbitrarily and Capriciously By Treating Like Cases Differently.

As discussed, the Commission repeatedly has relied on 19 C.F.R. § 210.4(d)(1)(ii) to address allegedly sanctionable misconduct when it determines that the requesting party failed to satisfy the procedural requirements of 19 C.F.R. § 210.4(d)(1)(i). *See, e.g.*, *Certain Point of Sale Terminals and Components Thereof*, Inv. No. 337-TA-524, Order No. 40 (Apr. 11, 2005); *Certain Blowers and*

Components Thereof, Inv. No. 337-TA-1217, Order No. 31 (Oct. 20, 2021); *Certain Blood Separation and Cell Preparation Devices*, Inv. No. 337-TA-1147, Order No. 16 (Dec. 20, 2019). *See generally supra* pp. 26-28.

The Commission may not depart from its prior rulings without adequately explaining the basis for that departure. As courts have held, "[a] fundamental norm of administrative procedure requires an agency to treat like cases alike." *Westar Energy, Inc. v. F.E.R.C.*, 473 F.3d 1239, 1241 (D.C. Cir. 2007). Indeed, courts have referred to this as a "bedrock principle" of administrative law. *Univ. of Tex. M.D. Anderson Cancer Ctr. v. U.S. Dep't of HHS*, 985 F.3d 472, 479 (5th Cir. 2021) (quoting 32 Charles Alan Wright & Charles H. Koch, *Federal Practice and Procedure* § 8248, at 431 (2006)); *see also Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 981 (2005) ("Unexplained inconsistency is . . . a reason for holding [agency action] to be . . . arbitrary and capricious."); *Burlington N. & Santa Fe Ry. Co. v. Surface Transp. Bd.*, 403 F.3d 771, 776 (D.C. Cir. 2005) ("An agency must provide an adequate explanation to justify treating similarly situated parties differently."). The obligation to explain departures from precedent arises from the fundamental obligation to engage in reasoned decision-making. *See Michigan v. EPA*, 576 U.S. 743, 750 (2015) ("Federal administrative agencies are required to engage in reasoned decisionmaking. Not only must an agency's decreed result be within the scope of its lawful authority, but the process by which it reaches

that result must be logical and rational. It follows that agency action is lawful only if it rests on a consideration of the relevant factors.") (quoting *Allentown Mack Sales & Serv., Inc. v. NLRB*, 522 U.S. 359, 374 (1998) and *Motor Vehicle Mfrs. Ass'n.*, 463 U.S. at 43) (internal citations omitted); *see also Christ the King Manor, Inc. v. Sec'y U.S. Dept. of Health and Hum. Servs.*, 730 F.3d 291, 314 (3d Cir. 2013) (holding that the agency's action was arbitrary and capricious because it did not supply a "reasoned basis" for its decision).

Here, the Commission did not justify, or even attempt to explain, the decision to depart from the many prior rulings in which the Commission and its ALJs have considered requests for an order to show cause under § 210.4(d)(1)(ii) when they determine that a motion for sanctions pursuant to § 210.4(d)(1)(i) is unavailable. Such unexplained inconsistency between like cases violates the APA. Accordingly, the Court should grant Realtek's petition and remand this proceeding to the Commission to address Realtek's arguments.

CONCLUSION

For the foregoing reasons, Realtek respectfully requests that the Court grant its petition and remand to the Commission with instructions to consider the arguments Realtek made to the Commission on their merits.

Dated: May 23, 2023

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CERTIFICATE OF SERVICE

I hereby certify that on May 23, 2023, I electronically filed the foregoing Corrected Confidential Brief of Appellants with the United States Court of Appeals for the Federal Circuit through the Court's CM/ECF system. Pursuant to agreement, the confidential version of the foregoing was served on counsel for all parties by electronic mail. All parties are represented by registered CM/ECF users and the Non-Confidential Brief will be served by the CM/ECF system.

/s/ Theodore J. Angelis
Theodore J. Angelis

CERTIFICATE OF COMPLIANCE

Pursuant to Federal Circuit Rule 32(b)(3) and Federal Rule of Appellate Procedure 32(g)(1), I hereby certify that the foregoing brief complies with the typevolume limitations in Federal Circuit Rule 32(b)(1) and Federal Rule of Appellate Procedure 32(a)(7)(B) , because it contains 7,079 words, excluding the exempted parts under Federal Rule of Appellate Procedure 32(f) and Federal Circuit Rule 32(b)(2).

I further certify that this brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5)-(6) because this brief was prepared using 14-point Times New Roman font.

/s/ Theodore J. Angelis
Theodore J. Angelis

CERTIFICATE OF CONFIDENTIALITY

Pursuant to Federal Circuit Rule 25.1(e)(2), I certify that the foregoing brief contains 6 unique words to be marked confidential pursuant to the October 15, 2020 Protective Order entered in the underlying International Trade Commission Investigation and which remains in force pursuant to Federal Circuit Rule 25.1(c)(1)

/s/ Theodore J. Angelis
Theodore J. Angelis

ADDENDUM

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ADDENDUM

PUBLIC VERSION

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of **CERTAIN VIDEO PROCESSING DEVICES, COMPONENTS THEREOF, AND DIGITAL SMART TELEVISIONS CONTAINING THE SAME**	**Investigation No. 337-TA-1222** **(Sanctions Proceedings I and II)**

COMMISSION OPINION

I. INTRODUCTION

Before the Commission are two matters alleging sanctionable conduct by opposing parties in the now-terminated investigation in *Certain Video Processing Devices, Components Thereof, and Digital Smart Televisions Containing the Same*, Inv. No. 337-TA-1222. First, former respondent RealTek Semiconductor Corporation ("RealTek") filed a petition for review of the presiding administrative law judge's ("ALJ") Order No. 75 (April 22, 2022), denying RealTek's earlier motion for sanctions against the complainant, DivX, LLC ("DivX"). Second, DivX has filed a motion for sanctions alleging RealTek engaged in sanctionable conduct in pursuing sanctions against DivX.

The Commission has determined not to review, and thus adopts, Order No. 75 denying RealTek's motion for sanctions, without further amendment or comment. The Commission has further determined to deny DivX's motion for sanctions, for the reasons stated below.

II. BACKGROUND

A. Procedural History

The Commission instituted the underlying investigation on October 19, 2020, based on a complaint, as supplemented, filed by DivX of San Diego, California. 85 Fed. Reg. 66355 (Oct.

19, 2020). The complaint alleges a violation of section 337 of the Tariff Act, as amended, 19 U.S.C. 1337 ("Section 337"), from the importation, sale for importation, or sale in the United States after importation of certain video processing devices, components thereof, and digital smart televisions containing the same by reason of infringement of one or more of the asserted claims of DivX's U.S. Patent Nos. 10,212,486 ("the '486 patent"); 8,832,297; 10,412,141; and 10,484,749. *Id.* The complaint further alleges the existence of a domestic industry. *Id.*

The Commission's notice of investigation names over a dozen respondents, which fall into two categories. The first category comprises semiconductor companies, including RealTek of Hsinchu, Taiwan and MediaTek, Inc. of Hsinchu City, Taiwan; MediaTek USA Inc. of San Jose, California; and MStar Semiconductor, Inc. of Hsinchu Hsien, Taiwan (collectively, "MediaTek"), that produce the systems-on-a-chip that are used in the accused smart televisions. 85 Fed. Reg. at 66356. The second category comprises companies that sell the accused smart televisions, including: TCL Corporation of Huizhou, Guangdong, China; TCL Technology Corporation of Huizhoug, Guangdong, China; TCL Electronics Holdings Ltd. of Shenzhen, Guangdong, China; TTE Technology, Inc. of Corona, California; Shenzhen TCL New Technologies Co. of Shenzhen, Guangdong, China; TCL King Electrical Appliances (Huizhou) Co. Ltd. of Huizhou, Guangdong, China; TCL MOKA International Ltd. of Sha Tin, New Territories, Hong Kong; and TCL Smart Device (Vietnam) Co., Ltd. of Bac Tan Uyen District, Binh Duong Province, Vietnam (collectively, "TCL"); Samsung Electronics Co., Ltd. of Gyeonggi-do, Korea; Samsung Electronics America, Inc. of Ridgefield Park, New Jersey; Samsung Electronics HCMC CE Complex Co., Ltd. of Ho Chi Minh City, Vietnam (collectively, "Samsung"); LG Electronics Inc. of Seoul, Korea; LG Electronics U.S.A., Inc. of Englewood

Cliffs, New Jersey (collectively "LG"). *Id*. at 66356. The Office of Unfair Import Investigations was not a party to this investigation. 85 FR at 66356.

The Commission partially terminated the investigation with respect to certain respondents due to settlement. Order No. 37 (terminating MediaTek), *unreviewed by* Comm'n Notice (March 12, 2021); Order No. 69 (Aug. 12, 2021) (terminating LG, Samsung), *unreviewed by* Comm'n Notice (Sept. 15, 2021). RealTek and TCL were among the final remaining respondents.

On February 8, 2021, DivX served its initial infringement contentions, which included allegations that RealTek infringed the asserted '486 patent. The '486 patent, titled "Elementary Bitstream Cryptographic Material Transport Systems and Methods," is directed to systems and methods for receiving and processing cryptographic information. '486 patent, Abstract.

On March 12, 2021, the presiding ALJ issued a *Markman* order construing the disputed claim terms of the asserted patents. Order No. 40 (March 12, 2021). The ALJ also instructed the parties to identify any claims, defenses, or other issues that may have become moot or that have been dropped for any reason. *Id.* at 26-27.

On April 8, 2021, DivX supplemented its infringement contentions.

On May 7, 2021, RealTek and the other remaining respondents moved for summary determination of non-infringement of the '486 patent, arguing in part that DivX had allegedly introduced a new and untimely infringement theory ([xxxxxxxxxxxxxxx]) in its supplemental infringement contentions and allegedly abandoned the infringement theory ([xxxxxxxxx]) it had disclosed in its original infringement contentions. Memorandum In Support of Respondents' Motion for Summary Determination at 8-9, 15-16 (May 7, 2021). On May 19, 2021, DivX replied in opposition to Respondents' motion, arguing that its [xxxxxxxxxxxxxx] theory was always part of its infringement contentions, and thus was not untimely or without merit.

Complainant DivX, LLC's Response to Respondents' Motion for Summary Determination of Non-Infringement at 7-11 (May 19, 2021).

On June 7, 2021, RealTek moved *in limine* (no. 2) to preclude DivX from introducing evidence or testimony relating to its allegedly new [xxxxxxxxxxxxx] theory. On June 16, 2021, DivX filed its opposition to RealTek's motion.

On July 1, 2021, the ALJ held a case management conference, during which the ALJ granted RealTek's motion *in limine* (no. 2) but denied RealTek's motion for summary determination of non-infringement due to genuine disputes of material fact as to whether DivX had included its [xxxxxxxxxxxxx] theory in its original infringement contentions. Case Management Conference, Tr. at 26-32 (July 1, 2021). The ALJ allowed DivX to pursue only the infringement theories it disclosed in its original February 2021 contentions. *Id.* at 35-36. The ALJ denied DivX's oral motion for reconsideration of the ALJ's grant of motion *in limine* (no. 2). *Id.* at 6-7, 10, 28-29.

On July 6, 2021, DivX filed an unopposed motion to terminate the investigation with respect to RealTek due to withdrawal of the complaint. The ALJ orally granted the motion and instructed RealTek not to participate in the hearing, which was held from July 8-15, 2021.

On July 16, 2021, the ALJ issued an initial determination ("ID") terminating RealTek from the investigation due to withdrawal of the complaint. Order No. 67 (July 16, 2021), *unreviewed by* Comm'n Notice (Aug. 4, 2021).

On October 4, 2021, RealTek filed a motion to sanction DivX, pursuant to Commission Rules 210.4 and 210.25(b) (19 C.F.R. §§ 210.4, 210.25(b)), for making allegedly false and misleading representations regarding infringement and for using Section 337 proceedings for harassment and other improper purposes. *See* Order No. 75 at 1-2. On October 14, 2021, DivX

filed its opposition, arguing that its actions were proper and not sanctionable, as evidenced by the ALJ's denial of RealTek's motion for summary determination of non-infringement. *Id.* at 2. DivX further argued that RealTek had failed to properly "meet-and-confer" with DivX or to comply with the "safe harbor" provision of Commission Rule 210.4(d)(1) (19 C.F.R. § 210.4(d)(1)). *Id.* DivX also requested compensation for the attorneys' fees and costs it incurred in opposing RealTek's petition, pursuant to 19 C.F.R § 210.4(d)(1)(i).

On April 22, 2022, the presiding ALJ issued Order No. 75, denying RealTek's sanctions motion on largely procedural grounds. *See generally* Order No. 75. Specifically, Order No. 75 states that "[w]hile much might be said about the discovery difficulties and delays in this case as well as the merits of each party's arguments, the merits need not be reached." *Id.* at 2. Order No. 75 finds, instead, that the "problems with the dilatory timing of RealTek['s] Motion as well as its failure to comply with the 'safe harbor' provisions" resulted in denial of its motion. *Id.* at 3. Even though RealTek purportedly informed DivX that its claims were frivolous and should have been dismissed by at least by March 2021, if not October 2020, Order No. 75 finds that RealTek waited until October 2021—some 7-12 months, respectively, after the allegedly sanctionable conduct was discovered—before moving for sanctions, and thus failed to act "promptly," as required by Commission Rule 210.25(a)(1) (19 C.F.R § 210.25(a)(1)). *Id.*

Order No. 75 further finds that RealTek failed to serve on DivX a draft sanctions motion at least seven (7) days before it filed its sanctions motion, as required by the "safe harbor" provisions of Commission Rule 210.4(d)(1) (19 C.F.R. § 210.4(d)(1)). *Id.* Order No. 75 finds that RealTek merely exchanged a series of e-mails "over a number of months" setting forth a "litany of concerns and admonitions" about DivX's alleged abuse of process." *Id.* Order No. 75 finds that these "[i]nformal notices of concern" failed to satisfy the Commission's notice and

safe harbor provisions. *Id.* Order No. 75 denies RealTek's motion for sanctions and further denies DivX's request for its attorneys' fees and costs. *Id*.

On April 19, 2022—three days before the ALJ issued Order No. 75 denying RealTek's motion for sanctions against DivX—DivX and TCL, the last remaining respondent, jointly moved to terminate the investigation based on a settlement agreement. The ALJ issued an initial determination (Order No. 76) terminating the investigation, which the Commission determined to adopt. Order No. 76 (April 22, 2022), *unreviewed by* Comm'n Notice (May 24, 2022).

On June 1, 2022, RealTek filed a petition for review of Order No. 75, pursuant to the briefing schedule set forth by the Commission in its May 24, 2022, notice.[1] On June 8, 2022, DivX filed its opposition to RealTek's petition.[2] DivX stated in its opposition that it had served a draft sanctions motion on RealTek and intended to file such motion if RealTek did not withdraw its petition for review by June 15, 2022. DivX's Opp at 1 n.1. RealTek did not withdraw its petition for review by June 15, 2022, or thereafter.

On June 16, 2022, DivX filed its present sanctions motion, arguing that RealTek's petition for review was baseless and RealTek continued to pursue sanctions for purposes of harassment.[3] On June 27, 2022, RealTek filed its opposition to DivX's motion for sanctions.[4]

[1] Respondent RealTek Semiconductor Corp.'s Petition for Review of Order No. 75 (June 1, 2022).

[2] Complainant DivX, LLC's Opposition to RealTek's Petition for Review of Order No. 75 (June 8, 2022) ("DivX's Opp.").

[3] Complainant DivX, LLC's Motion for Sanctions Against Realtek (June 16, 2022) ("DivX's Mot.").

[4] RealTek Semiconductor Corp.'s Opposition to DivX LLC's Motion for Sanctions Against RealTek (June 27, 2022) ("RealTek's Opp.").

III. LEGAL PRINCIPLES AND STANDARD OF REVIEW

A party may file a motion for sanctions for abuse of process, abuse of discovery, failure to make or cooperate in discovery, or violation of a protective order. 19 C.F.R. §§ 210.4, 210.25. A motion for sanctions should be addressed to the presiding ALJ if the allegedly sanctionable conduct was discovered while the ALJ was presiding over the investigation. 19 C.F.R. § 210.25(b). A motion for sanctions should be addressed to the Commission if the allegedly sanctionable conduct occurred while the Commission is presiding or if the motion is filed after the subject investigation or proceeding was terminated. 19 C.F.R. § 210.25(c). The Commission may assign such a motion to an ALJ for issuance of a recommended determination ("RD"). *Id*.

A party should file a sanctions motion alleging abuse of process (*e.g.*, filing a pleading, motion, or paper for an improper purpose, or that is not warranted by existing law or a reasonable extension or modification thereof, that lacks evidentiary support) "promptly" after the requirements of section 210.4(d)(1)(i) have been satisfied. 19 C.F.R. § 210.25(a). The requirements of section 210.4(d)(1)(i) include that a party intending to file a sanctions motion for abuse of process must first serve a draft motion on the allegedly offending party and wait seven (7) days for the offending party to withdraw the challenged paper, claim, defense, allegation, or denial. 19 C.F.R. § 210.4(d)(1)(i). The moving party may proceed to file the sanctions motion only if the allegedly offending party fails to correct or withdraw the challenged contention within the seven-day "safe harbor." *Id*.

IV. ANALYSIS

As noted above, the Commission has determined not to review, and thereby adopts, Order No. 75, denying RealTek's motion for sanctions.

PUBLIC VERSION

The Commission has further determined to deny DivX's motion for sanctions. With respect to Realtek's petition for review, DivX argues the filing of the petition itself was sanctionable for two reasons: (1) Realtek lacked standing to petition for review of Order No. 75; and (2) the petition contains "baseless" and "inflammatory remarks." DivX's Mot. at 34. In this context, the Commission finds the question of Realtek's standing and the allegations regarding litigation conduct are subject to reasonable dispute and thus are not frivolous, unsupported by existing law or a reasonable extension thereof, made for an improper purpose, or otherwise sanctionable under Commission Rules 210.4(c), 210.25, 19 C.F.R. §§ 210.4(c), 210.25. *See Certain Display Controllers and Products Containing Same*, Inv. No. 337-TA-491, Initial Determination at 44-45, 2004 WL 1184745 at *30-31 (April 14, 2004) (denying motion for sanctions where contested allegations were not false, frivolous, misleading, objectively unreasonable, or made for an improper purpose), *aff'd in part, rev'd in part on other grounds*, Comm'n Op. , 2005 WL 996252 (Feb. 4, 2005), *aff'd*, *MStar Semiconductor, Inc. v. ITC*, 183 Fed. Appx. 957, 2006 WL 1476137 (Fed. Cir. May 25, 2005) (unpublished).

Although DivX's motion is formally predicated on RealTek's filing a petition for review of Order No. 75, its factual allegations long predate RealTek's petition, going back to the alleged contentions, conduct, and representations that were raised in RealTek's original sanctions motion of October 2021 and DivX's opposition thereto. For example, DivX argues in its present motion that RealTek's allegedly obstructionist tactics prejudiced DivX in preparing and supplementing its infringement contentions. *See* DivX's Mot. at 3-5, 6-10. DivX further contends that RealTek "repeatedly" brought baseless sanctions in this investigation against DivX, and not merely in its petition for review. *Id.* at 14-15, 34-39. DivX also argues that RealTek's petition is meritless because it contends no sanctionable conduct arose either out of DivX's change of infringement

theories or any false testimony at hearing. *Id.* at 20-29. Thus, DivX had sufficient knowledge to file a motion for sanctions against RealTek when RealTek filed its sanctions motion in October 2021 or soon thereafter. DivX did not have to wait until June 2022, when RealTek filed its petition for review of Order No. 75 denying its sanctions motion, to file its own motion for sanctions.

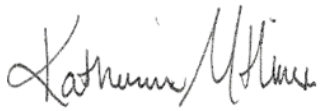
Thus, with respect to the request for sanctions based on RealTek's conduct pre-dating the filing of the petition for review, DivX failed to file its sanctions motion "promptly" after learning of RealTek's alleged misconduct, in contravention of Commission Rule 210.25(a)(1) (19 C.F.R. § 210.25(a)(1)). Order No. 75 chastises RealTek for failing to act "promptly" under Commission Rule 210.25(a)(1) because it waited for 7-12 months after learning of DivX's allegedly sanctionable conduct before it filed its sanctions motion. Order No. 75 at 3. DivX agrees that RealTek failed to "promptly" file its sanctions motion under Commission Rule 210.25(a)(1) or to exercise "diligence" under Ground Rule 3 (which cites Commission Rule 210.2, 19 C.F.R. 210.2). *See* DivX's Mot. at 36-37. By comparison, DivX waited about 8-9 months (from October 2021 to June 2022) before filing its present motion for sanctions, which rests largely on contentions arising from RealTek's sanctions motion and the events leading up to it. Accordingly, DivX's motion for sanctions premised on pre-petition conduct, like RealTek's motion, is denied as untimely.

V. CONCLUSION

For the reasons stated above, the Commission has determined to deny DivX's motion for sanctions. The Commission also determined not to review Order No. 75. Both sanctions proceedings are hereby terminated.

PUBLIC VERSION

By order of the Commission.



Katherine M. Hiner
Acting Secretary to the Commission

Issued: September 13, 2022

(12) **United States Patent**
Chan et al.

(10) **Patent No.: US 10,212,486 B2**
(45) **Date of Patent: Feb. 19, 2019**

(54) **ELEMENTARY BITSTREAM CRYPTOGRAPHIC MATERIAL TRANSPORT SYSTEMS AND METHODS**

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(73) Assignee: **DIVX, LLC**, San Diego, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **15/615,626**

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(Continued)

(52) **U.S. Cl.**
CPC ... ***H04N 21/63345*** (2013.01); ***H04L 63/0428*** (2013.01); ***H04L 65/607*** (2013.01);
(Continued)

(58) **Field of Classification Search**
CPC H04L 63/0428
See application file for complete search history.

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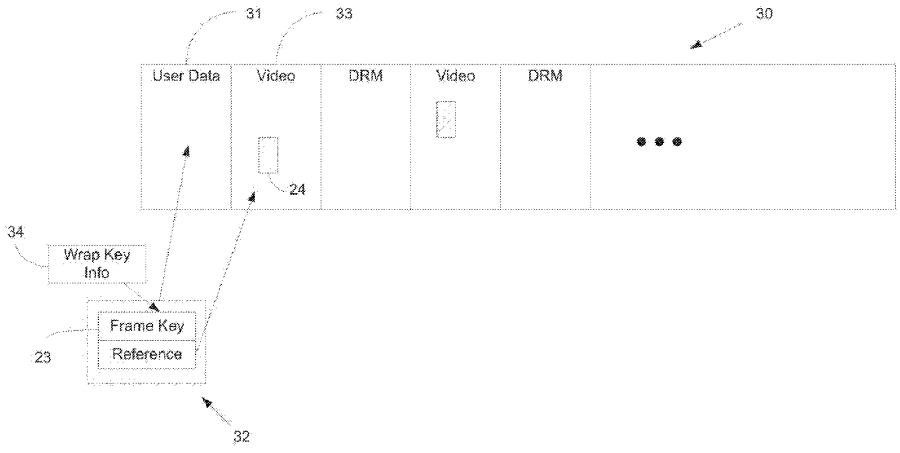
(57) **ABSTRACT**

Systems and methods for providing multimedia content from one process or component to another process or component over an unsecured connection are provided. One embodiment includes obtaining the cryptographic information, extracting the at least partially encrypted video data from the container file to create an elementary bitstream, enciphering the cryptographic information, inserting the cryptographic information in the elementary bitstream, providing the elementary bitstream to a video decoder, extracting the cryptographic information from the elementary bitstream at the video decoder, deciphering the cryptographic information, decrypting the elementary bitstream with the cryptographic information and decoding the elementary bitstream for rendering on a display device using the video decoder.

25 Claims, 8 Drawing Sheets



Related U.S. Application Data

continuation of application No. 14/306,146, filed on Jun. 16, 2014, now Pat. No. 9,124,773, which is a continuation of application No. 12/946,631, filed on Nov. 15, 2010, now Pat. No. 8,781,122.

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H04N 7/167	(2011.01)
H04N 21/43	(2011.01)

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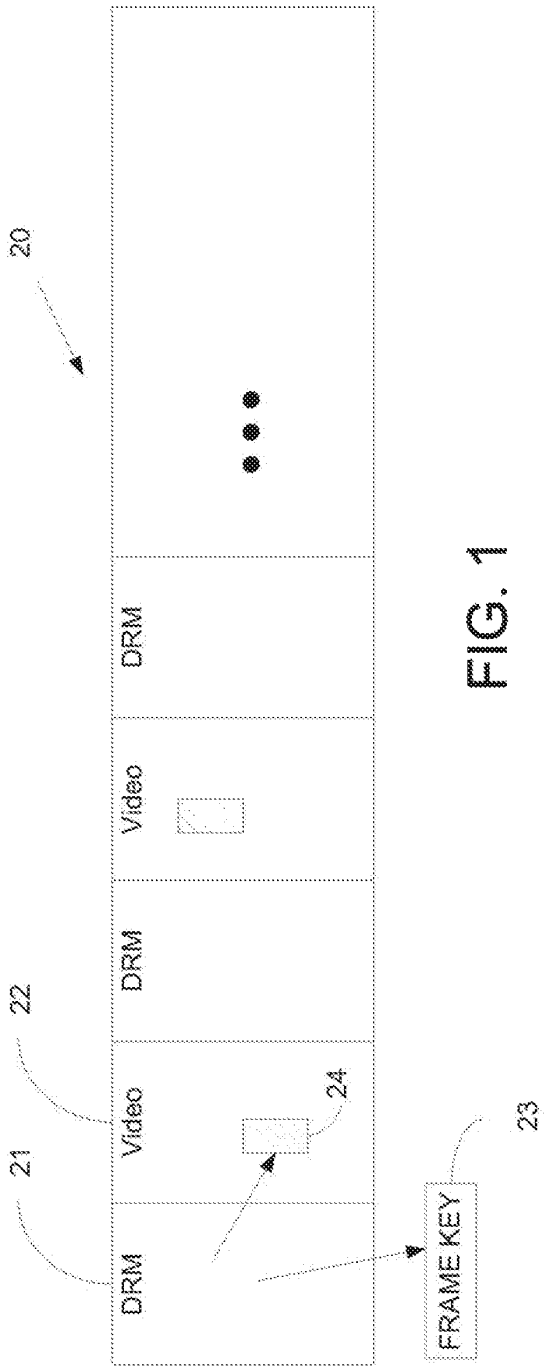

FIG. 1

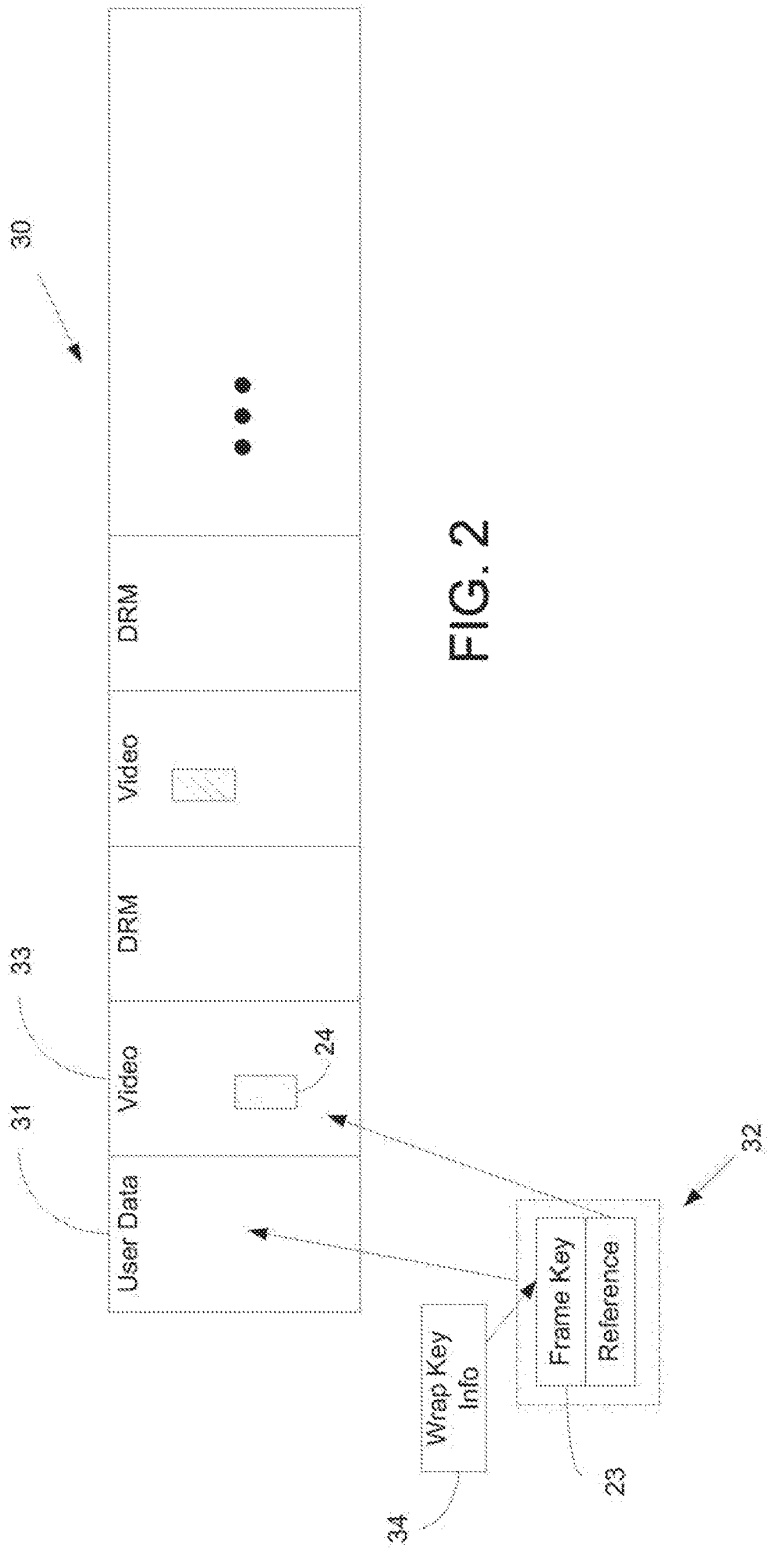
30
User Data
Video
DRM
Video
DRM
Video
DRM
31
33
24
32
Frame Key
Reference
Wrap Key Info
23
34

FIG. 2

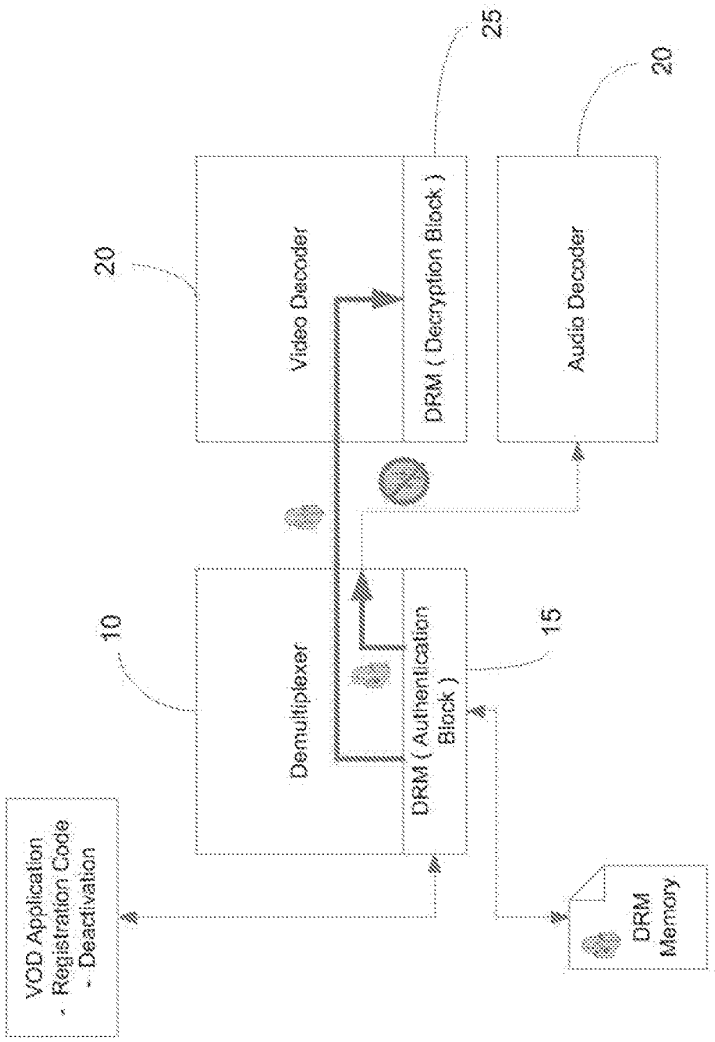
VOD Application
- Registration Code
- Deactivation
10
Demultiplexer
DRM (Authentication Block)
15
DRM Memory
20
Video Decoder
DRM (Decryption Block)
25
Audio Decoder
20

FIG. 3

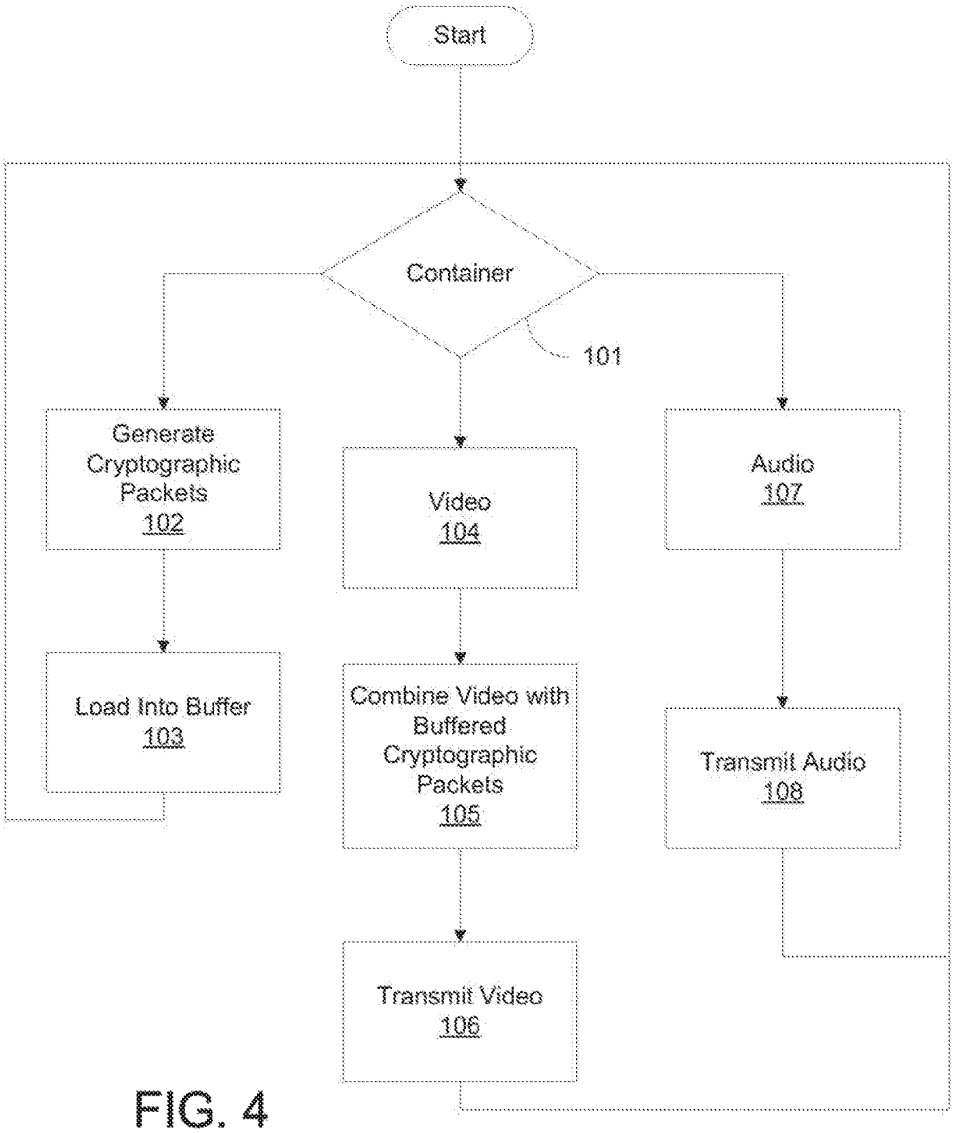
Start
Container
101
Generate Cryptographic Packets 102
Video 104
Audio 107
Load Into Buffer 103
Combine Video with Buffered Cryptographic Packets 105
Transmit Audio 108
Transmit Video 106

FIG. 4

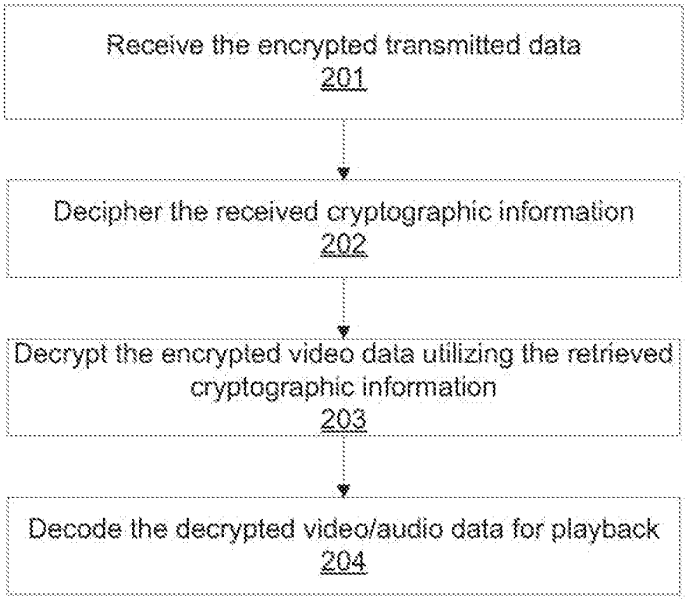
Receive the encrypted transmitted data
201
Decipher the received cryptographic information
202
Decrypt the encrypted video data utilizing the retrieved cryptographic information
203
Decode the decrypted video/audio data for playback
204

FIG. 5

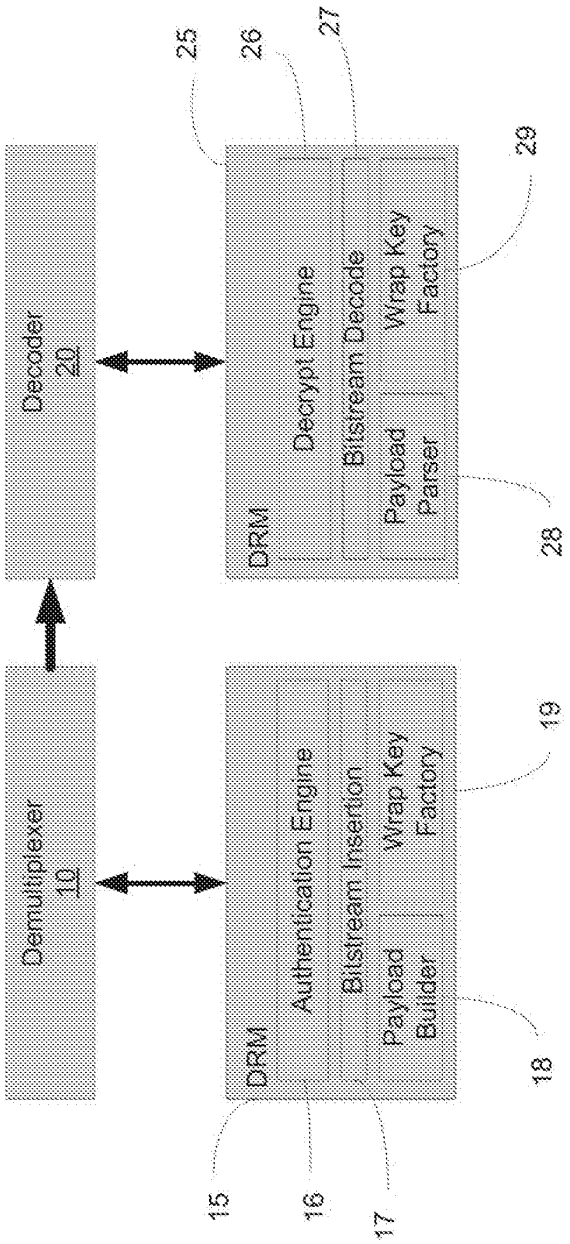
Demultiplexer
10
Decoder
20
DRM
Authentication Engine
Bitstream Insertion
Payload Builder
Wrap Key Factory
DRM
Decrypt Engine
Bitstream Decode
Payload Parser
Wrap Key Factory
15
16
17
18
19
25
26
27
28
29

FIG. 6

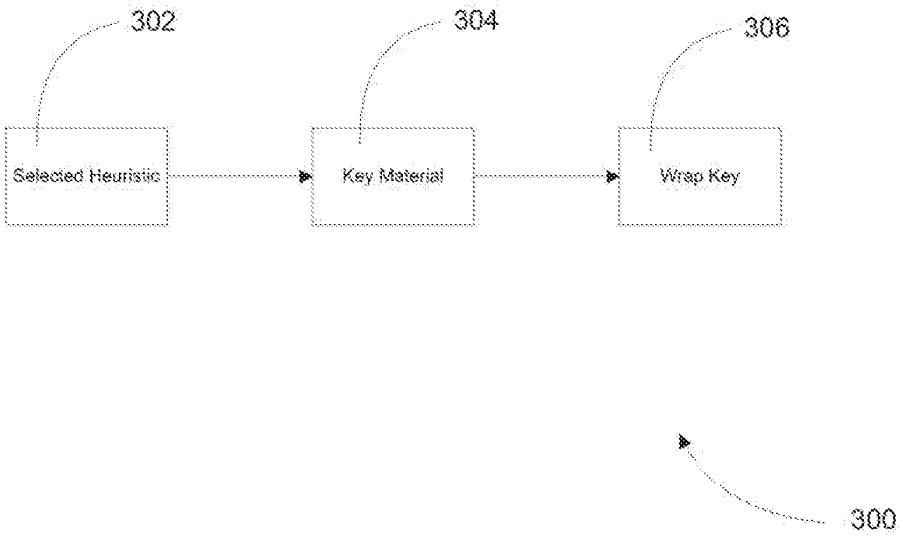

FIG. 7

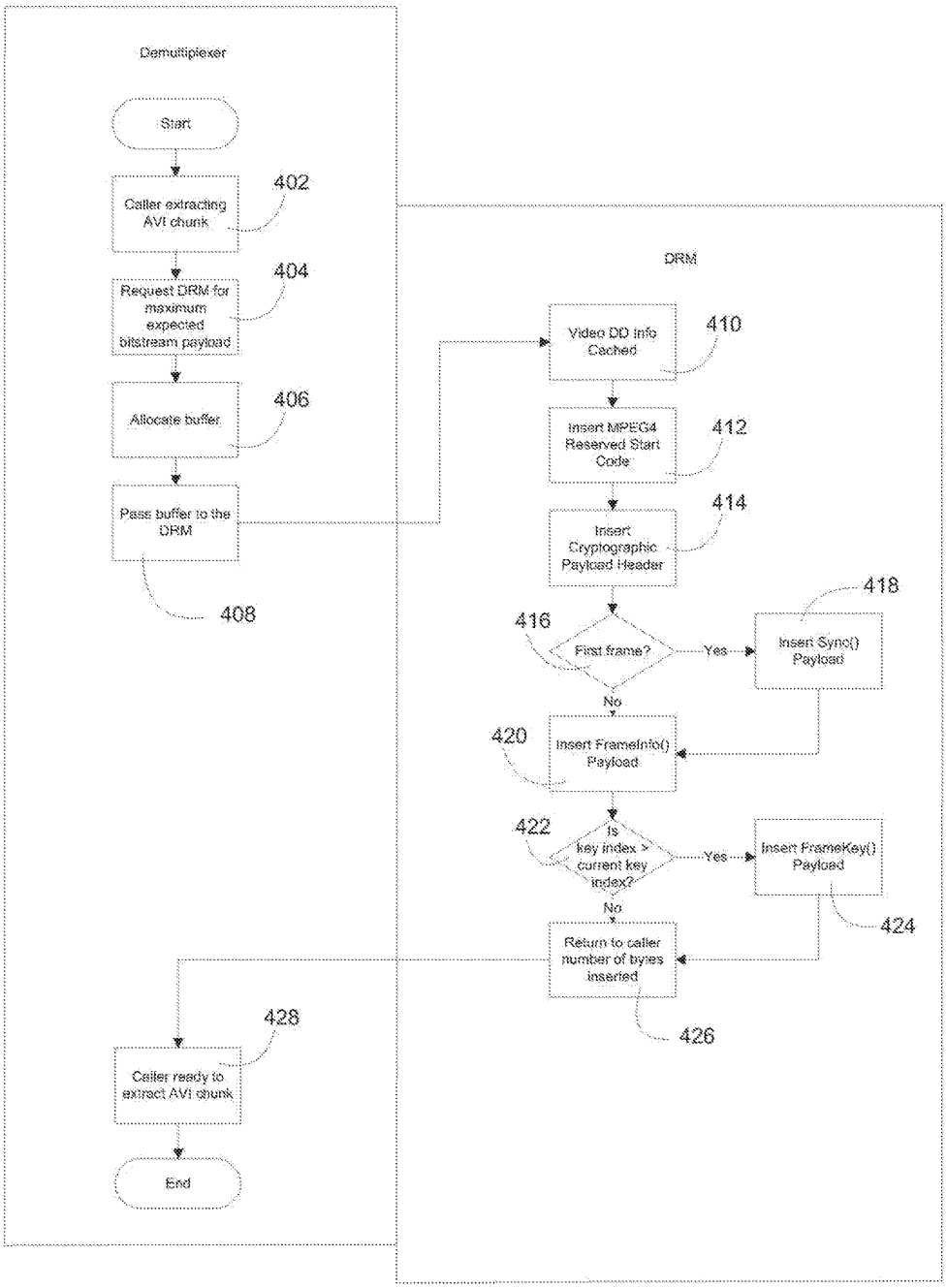
Demultiplexer
Start
Caller extracting AVI chunk
402
Request DRM for maximum expected bitstream payload
404
Allocate buffer
406
Pass buffer to the DRM
408
DRM
Video DD info Cached
410
Insert MPEG4 Reserved Start Code
412
Insert Cryptographic Payload Header
414
First frame?
416
Yes
Insert Sync() Payload
418
No
Insert FrameInfo() Payload
420
Is key index > current key index?
422
Yes
Insert FrameKey() Payload
424
No
Return to caller number of bytes inserted
426
Caller ready to extract AVI chunk
428
End
400

FIG. 8

ELEMENTARY BITSTREAM CRYPTOGRAPHIC MATERIAL TRANSPORT SYSTEMS AND METHODS

CROSS-REFERENCE TO RELATED APPLICATIONS

The current application is a continuation application of U.S. application Ser. No. 14/839,783 filed Aug. 28, 2015 entitled "Elementary Bitstream Cryptographic Material Transport Systems and Methods" which application is a continuation of U.S. application Ser. No. 14/306,146 filed Jun. 16, 2014, and issued on Sep. 1, 2015 as U.S. Pat. No. 9,124,773, entitled "Elementary Bitstream Cryptographic Material Transport Systems and Methods" which application is a continuation application of U.S. application Ser. No. 12/946,631 filed Nov. 15, 2010, and issued on Jul. 15, 2014 as U.S. Pat. No. 8,781,122, entitled "Elementary Bitstream Cryptographic Material Transport Systems and Methods" which claims priority to U.S. Provisional Patent Application No. 61/266,982, filed Dec. 4, 2009, the disclosures of which are incorporated herein by reference.

BACKGROUND

The present invention generally relates to digital multimedia distribution systems and more specifically to digital transmission of encrypted multimedia content over an unsecured connection.

Providers of multimedia content can digitize content for distribution via digital communication networks. An important issue faced by a content distribution system is enabling only those customers that have purchased the content to play the content and compartmentalize access to all the stakeholders in the content distribution chain. One approach is to encrypt portions of the content and to issue encryption keys to authorized users that enable encrypted portions of the content to be unencrypted. Layers of keys and protection policies can be used so a single encryption key alone is insufficient for the user to access the content. In a number of systems, users purchase players that possess specified decryption capabilities. Content providers can distribute content to user's owning such a player in an encryption format supported by the player. Complying with a specified protection policy typically involves using an encryption key specified by the manufacturer of the players. In many instances the manufacturer of the players will not reveal the encryption keys used in the specified encryption scheme and likewise the content provider does not want to share the content keys to the manufacturer of the players.

Communications between components or processes of players or playback systems are typically trustworthy and secured. However, when communication or the transporting of information becomes unsecured or untrustworthy, such gaps need to be accounted for and filled. This has become more evident with advent and popularity of open multimedia frameworks. Bi-directional communication requirements and/or run time challenges and authentication requests to fill such gaps have proved to be less than adequate.

There are many ways of securing communication, including ciphering and encryption.

Ciphering is a procedure used to secure data that typically involves using a series of steps to scramble and render the data readable only to the intended audience. The procedure itself does not require an outside source, such as a key, in order to encipher or decipher the data. Rather, data can be properly deciphered by the intended audience so long as deciphering exactly follows the enciphering steps to unravel the data. Encryption is a procedure used to secure data. That typically involves the use of an external input for at least one step in the procedure, such as a key, in order to secure and/or access the data. The external data is used to intentionally manipulate at least one step in the encryption or decryption process, changing the way the data processing for encryption occurs. Generally, without the external data or a corresponding decryption key in an encryption process, a step in a corresponding decryption process cannot properly be executed and the data cannot be properly decrypted.

In the context of digital media, encoding is a procedure by which digital media is represented in a digital format. The format is typically selected to obtain specific benefits during the transportation, playback and storage of the digital media format used. For example, representing the media using fewer bits may be beneficial to transfer data in order to minimize bandwidth usage or storage space. In another example, a media player may only decode or read media in a certain format and therefore the digital media may first be in that format in order to be decoded by that media player.

Decoding is a procedure by which digital media in a format is translated into a format readable by a media player for rendering on a display device. Often, decoding may also reverse processes associated with encoding such as compression. In instances where encryption and/or enciphering have been applied to encoded media, the enciphering process or encryption process typically must be reversed before the encoded media can be decoded.

SUMMARY OF THE INVENTION

Systems and methods are described for taking cryptographic material from a container file and inserting the cryptographic material in an elementary bitstream, where the cryptographic information can then be used to decrypt the elementary bitstream for playback

A number of embodiments include obtaining the cryptographic information, extracting the at least partially encrypted video data from the container file to create an elementary bitstream, enciphering the cryptographic information, inserting the cryptographic information in the elementary bitstream, providing the elementary bitstream to a video decoder, extracting the cryptographic information from the elementary bitstream at the video decoder, deciphering the cryptographic information, decrypting the elementary bitstream with the cryptographic information and decoding the elementary bitstream for rendering on a display device using the video decoder.

In a further embodiment, the cryptographic information is obtained from the container file.

In another embodiment, the cryptographic information includes key information and information concerning at least a portion of the at least partially encrypted video data that is encrypted using the key information.

In an additional embodiment, information concerning at least a portion of the at least partially encrypted video data is a reference to a block of encrypted data within an encoded frame of video that is encrypted using the key information.

In a still further embodiment, the cryptographic information inserted in the elementary bitstream is delimited by an identifier and the cryptographic information is inserted before the at least partially encrypted video data encrypted using the key information.

In a still other embodiment, the cryptographic information is extracted using the identifier.

In a still additional embodiment, the decrypting process is performed by using the key information to identify the encrypted portion of video data and decrypting the encrypted video data using the key information.

In a yet further embodiment, cryptographic information inserted in different locations within the elementary bitstream includes different key information.

In a yet other embodiment, the at least partially encrypted video data includes frames of encoded video. In addition, the at least partially encrypted video data includes at least a portion of a plurality of the encoded frames that is encrypted.

In a yet further additional embodiment, the enciphering process and the deciphering process are synchronized such that a delay in excess of a predetermined time between enciphering and deciphering results in the cryptographic information being unrecoverable.

In a still further embodiment again, the enciphering process enciphers data by using a sequence of scrambling processes to scramble data.

In a still other embodiment again, the deciphering process deciphers data by performing the inverse sequence of scrambling processes to the sequence used to scramble the data.

Many embodiments include a demultiplexer configured to extract the at least partially encrypted video data from the container file to create an elementary bitstream, a video decoder configured to decrypt the elementary bitstream using the cryptographic information and decode the elementary bitstream for rendering on a display device. Additionally, the demultiplexer is configured to encipher the cryptographic information and insert the enciphered cryptographic information in the elementary bitstream and the decoder is configured to extract enciphered cryptographic information from an elementary bitstream and to decipher the cryptographic information.

In a further embodiment, the cryptographic information is obtained from the container file.

In another embodiment, the cryptographic information includes key information and information concerning at least a portion of the at least partially encrypted video data that is encrypted using the key information.

In an additional embodiment, the information concerning at least a portion of the at least partially encrypted video data is a reference to a block of encrypted data within an encoded frame of video that is encrypted using the key information.

In a further embodiment again, the demultiplexer is configured to insert the cryptographic information delimited by an identifier in the elementary bitstream and insert the cryptographic information before the at least partially encrypted video data encrypted using the key information.

In another embodiment again, the decoder is configured to extract the cryptographic information using the identifier.

In an additional embodiment again, the decoder is configured to decrypt the portion of the video data encrypted using the key information by identifying the encrypted portion of video data and decrypting the encrypted video data using the key information.

In a still further embodiment again, cryptographic information inserted in different locations within the elementary bitstream includes different key information.

In still another embodiment again, the at least partially encrypted video data includes frames of encoded video. Additionally, at least a portion of a plurality of the encoded frames is encrypted.

In a still additional embodiment, both the demultiplexer and the decoder are configured to be synchronized such that a delay in excess of a predetermined time between enciphering and deciphering results in the cryptographic information being unrecoverable.

In a yet further embodiment, the demultiplexer is configured to encipher data by using a sequence of scrambling processes to scramble data.

In a yet other embodiment, the decoder is configured to decipher data by performing the inverse sequence of scrambling processes to the sequence used to scramble the data.

Numerous embodiments include obtaining the cryptographic information. In addition, the cryptographic information is obtained from the container file. Also, the at least partially encrypted video data includes frames of encoded video and at least a portion of a plurality of the encoded frames is encrypted. Additionally, the cryptographic information includes key information and information concerning at least a portion of the least partially encrypted video data that is encrypted using the key information. Furthermore, the information concerning at least a portion of the at least partially encrypted video data is a reference to a block of encrypted data within an encoded frame of video that is encrypted using the key information and the cryptographic information inserted in different locations within the elementary bitstream includes different key information.

Several embodiments include extracting the at least partially encrypted video data from the container file to create an elementary bitstream. In addition, the cryptographic information inserted in the elementary bitstream is delimited by an identifier and the cryptographic information is inserted before the at least partially encrypted video data encrypted using the key information.

Many embodiments include enciphering the cryptographic information and inserting the cryptographic information in the elementary bitstream. In addition, the cryptographic information is extracted using the identifier.

A number of embodiments include providing the elementary bitstream to a video decoder, extracting the cryptographic information from the elementary bitstream at the video decoder and deciphering the cryptographic information. In addition, the enciphering process and the deciphering process are synchronized such that a delay in excess of a predetermined time between enciphering and deciphering results in the cryptographic information being unrecoverable. Also, the enciphering process enciphers data by using a sequence of scrambling processes to scramble data. Furthermore, the deciphering process deciphers data by performing the inverse sequence of scrambling processes in the sequence used to unscramble data.

Several embodiments include decrypting the elementary bitstream with the cryptographic information. In addition, the decrypting process is performed by using the key information to identify the encrypted portion of video data and decrypting the encrypted video data using the key information.

Many embodiments include decoding the elementary bitstream for rendering on a display device using the video decoder.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates a graphical representation of a multimedia container file in accordance with various embodiments of the present invention.

FIG. **2** illustrates a graphical representation of a bitstream with cryptographic material in accordance with various embodiments of the present invention.

FIG. **3** is a block diagram of a multimedia cryptographic bitstream transport system in accordance with various embodiments of the present invention.

FIG. **4** is a flow diagram of a demultiplex and authentication process in accordance with various embodiments of the present invention.

FIG. **5** is a flow diagram of a decoder and decipher process in accordance with various embodiments of the present invention.

FIG. **6** is a block diagram of a multimedia cryptographic bitstream transport system in accordance with various embodiments of the present invention.

FIG. **7** is a flow diagram of a wrap key generation process in accordance with various embodiments of the present invention.

FIG. **8** is a flow diagram of a bitstream insertion process in accordance with various embodiments of the present invention.

DETAILED DESCRIPTION

Systems and methods for providing multimedia content from one process or component to another process or component over an unsecured connection are provided. In several embodiments, the transmission occurs between a demultiplexer and a decoder over an unsecured connection where traditionally such connections are secured. In many embodiments, the transmission occurs on a bi-directional communication path. Embodiments of the present invention do not secure the transmission but rather secure the data being transmitted via the unsecured connection. The transmitted data in a number of embodiments includes an encrypted multimedia bitstream and associated cryptographic material in the bitstream for transmission to a decoder for decryption. In various embodiments, a bi-directional communication path between a demultiplexer and the decoder is not used. Additionally, by allowing the decryption to occur on the decoder the bitstream is protected even if the connection is compromised and an unauthorized component or process intercepts the bitstream.

In various embodiments, frame keys are used to decrypt the bitstream. For example, in the manner described in U.S. Pat. No. 7,295,673 to Grab et al. the disclosure of which is incorporated by reference herein in its entirety. In several embodiments, the frame keys are protected by a cryptographic wrap algorithm that uses a separate series of newly generated keys. The wrapped frame keys are inserted into the encrypted bit stream for deciphering and decoding by the decoder. The cryptographic information in various embodiments includes information to decrypt a video frame or a portion of the video frame. In various embodiments, a time indicator in the form of a frame sequence is also utilized to ensure connection between the demultiplexer and decoder is not being intercepted or spied upon.

The cryptographic information inserted into the elementary bitstream can take any of a variety of forms. In many embodiments, the cryptographic information includes a frame key and/or a reference to a block of encrypted video data. In several embodiments, the cryptographic information contains an index to a frame key or a separate reference to both a frame key and an encrypted block. A number of embodiments provide for first inserting a table of possible keys and still further embodiments provide for sending multiple keys where different keys are used to encrypt different portions of the video.

Turning now to the drawings, FIG. **1** represents a multimedia container file **20** including encrypted content, e.g., video. The multimedia container file includes a digital rights management portion **21** preceding associated video portions or chunks **22**. The digital rights management portion includes at least one frame key **23** or an index to a frame key in a separately provided table of frame keys, which in many embodiments is encrypted in a way that only enables playback by a particular device and/or user. The digital rights management portion also points to or identifies a specified portion of or an entire video frame within the video chunk **24** that is encrypted. Without first decrypting this encrypted portion of the video chunk, the video content cannot be decoded or displayed. The multimedia container file is supplied to a demultiplexer.

The demultiplexer parses the multimedia container file and transmits portions or chunks of data, e.g., video or audio, to a decoder. However, prior to transmitting the video data, the demultiplexer incorporates or attaches cryptographic material to the video data.

FIG. **2** graphically illustrates the generated multimedia bitstream sent to the decoder. The bitstream **30** includes a header or user data **31** that includes cryptographic material **32**. In accordance with many embodiments of the invention, the material includes the frame key **23** from the multimedia container file, which is encrypted using a wrap key, and wrap key information **34** to provide synchronization of the demultiplexer to the decoder in order to decipher the cryptographic material. As is discussed below, the wrap key information can take any of a variety of different forms depending upon the specific application including but not limited to information enabling synchronization of wrap key factories and/or the direct transfer of the wrap keys themselves. The associated video data **33** follows.

Referring now to FIG. **3**, a demultiplexer **10** that receives a multimedia container file that includes video and audio data, portions of which are encrypted, is shown. In one embodiment, the multimedia file conforms to a specific format such as audio video interleave (AVI) or Matroska (MKV). The multimedia file is provided via a disc, flash memory device or another tangible storage medium or streamed or otherwise transmitted to the demultiplexer. The demultiplexer separates portions of the received multimedia data including but not limited to video, audio and encryption data that is supplied to an upstream digital rights management component **15**. In various embodiments, the connection between the demultiplexer **10** and the digital rights management component **15** can be secure although need not be depending upon the requirements of the application. The digital rights management component **15** generates cryptographic material and the multimedia bitstream transport that is supplied to a decoder **20**. In particular, the demultiplexer **10** transmits video data with cryptographic material to the decoder **20**.

The connection between the demultiplexer and the decoder is typically secured. However, in the illustrated embodiment, the connection is not secured. Typically, the multimedia file is authorized and decrypted in a demultiplexer and then transmitted downstream unencrypted to the decoder via an inter-communication data channel. This however can present a security problem due to the high value of the unencrypted but still encoded bitstream that can be captured during transmission. This bitstream is considered high-value since the encoded data can be easily multiplexed back into a container for unprotected and unauthorized views and/or distribution with no loss in the quality of the data. In the illustrated embodiment, the video provided to the decoder **20** by the demultiplexer **10** is at least partially encrypted and the decoder **20** communicates with a down-

stream digital rights management component **25** that deciphers the cryptographic material. Utilizing the deciphered cryptographic material, the digital rights management component is able to access the encryption data and thereby decrypt and decode the video data for playback.

The general processes of the demultiplexer and the decoder are now described. In FIG. **4**, the demultiplexer and authentication process is illustrated in which a multimedia container file is received and portions of which are identified or separated (**101**). If encryption data is identified, cryptographic packets or material are generated (**102**) and stored in a temporary buffer (**103**). However, if video data is identified (**104**), the cryptographic material stored in the temporary buffer is combined with the video data (**105**) and then transmitted to a video decoder (**106**). If audio data is identified (**107**), the audio data is transmitted (**108**) to the audio decoder. It should be appreciated that audio or other types of data may also include encryption data and thus associated cryptographic material is generated and combined with the associated data and transmitted to the respective decoder. Also, other types of data may be included in the container file without encryption data and thus is transmitted directly to the associated decoder.

In FIG. **5**, a decoder and decipher process is illustrated in which the decoder receives video and/or audio data sent from the demultiplexer (**201**). The decoder deciphers the cryptographic material supplied with the associated data (**202**). Utilizing the deciphered material, the encrypted data is decrypted (**203**) and decoded (**204**) by the decoder for playback.

To further elaborate on the demultiplexer and decoder processes and the bitstream transport system, a more detailed representation of the demultiplexer's and decoder's associated digital rights manager along with the associated processes are illustrated in the remaining figures.

Referring to FIG. **6**, the upstream digital rights manager **15** of the demultiplexer **10** includes an authentication engine **16**, a bit stream inserter **17**, a payload builder **18** and a wrap key factory **19**. The downstream digital rights manager **25** of the decoder includes a decrypt engine **26**, a bit stream decoder **27**, a payload parser **28** and a wrap key factory **29**. The authentication engine prepares cryptographic material utilizing the encryption data from the container file and the video data in conjunction with the payload builder **18** and the wrap key factory **19**.

The payload builder **18** provides discrete units of cryptographic material in the bitstream delimited by an identifier. On the decoder, the payload parser **28** utilizes the identifiers to extract the discrete units, which are then processed by the decrypt engine **26**. In many embodiments, the cryptographic material in one embodiment includes a bitstream frame header along with a cryptographic payload. The cryptographic payload, however, is not dependent on the format of the header of the elementary bitstream, e.g., MPEG-4 or H.264.

In one embodiment, the payload builder **18** inserts a reserved start code identifier along with a cryptographic payload at the front of each video chunk that is demultiplexed. By utilizing a reserved start code, the decrypt engine **26** can pass the entire video data including the inserted cryptographic material to the decoder **20** that simply discards or ignores the cryptographic material. For example, a MPEG-4 compliant decoder discards frames that contain a reserved start code identifier that is included in the bitstream. Accordingly, removal of any of the cryptographic material from the bitstream is not needed to decode the associated data.

The cryptographic payload in one embodiment includes three different packet types: a wrap key, a synchronization payload and a frame payload. The frame payload indicates that the current frame is encrypted and includes key information and a reference to at least a portion of the encoded frame that is encrypted. The frame payload can be used to decrypt the video frame. The synchronization payload is the first packet sent to synchronize the authentication engine of the demultiplexer to the decrypt engine of the decoder. This synchronization ensures that data transmitted from the demultiplexer to the decoder is not being intercepted. The wrap key includes information to unwrap or decipher the transmitted data from the demultiplexer.

The bit stream inserter **17** packages the cryptographic material for transport with the video data. Conversely, the bit stream decoder **27** of the decoder unpacks the cryptographic material from the bitstream. In one embodiment, frame keys are transported in the bitstream and are sent when a key index change is detected by the authentication engine of the demultiplexer. In many embodiments, the decrypt engine of the decoder stores only one frame key and thus frame encryption information sent by the demultiplexer applies to the current frame. If the decrypt engine receives a new frame key from the demultiplexer, the decrypt engine stores the new frame key and uses it to decrypt the next frame. In a number of embodiments, a key table is transmitted and stored in the decrypt engine for reference by subsequent encryption information. In several embodiments, the decoder does not enforce key rotation. In many embodiments, however, the decoder expects a new frame key after a predetermined number of frames in the sequence of frames. In this way, the decrypt engine can identify when supplied frame information is unreliable and terminate the decoding of the multimedia bitstream.

The wrap key factory **19** encrypts or wraps the cryptographic material for transport on the bitstream to the decoder. In one embodiment, the wrap key factory uses a key wrap process based on the Advanced Encryption Standard (AES) and uses the ECB Cipher Mode to provide cryptographic security for wrapping small blocks of data using chaining and cipher feedback loop. The key wrap process is stateless. A corresponding wrap key factory is included with the decoder to unwrap the cryptographic material. Synchronization with the corresponding wrap key factory **29** is used to allow unwrapping of the material without communication back to the demultiplexer (i.e., bi-directional communication) and to prevent unauthorized decoding of the content by, for example, a rogue process intercepting or copying the transmitted content.

Wrap Key Factory

In one embodiment, each of the authentication and decryption blocks (digital rights managers **15**, **25**) construct a series of predictable transform number sequences using a common heuristic. Subsequently, those numbers are combined with a random value for additional entropy used to contribute toward key material for wrapping keys.

A flow diagram of a wrap key generation process **300** in accordance with an embodiment of the invention is illustrated in FIG. **7**. A selected heuristic (**302**) is combined with key material (**304**) to create a wrap key (**306**).

In accordance with various embodiments, one such heuristic (**302**) may combine the use of a predictable number sequence generator such that identical transform sequences can be generated by different heuristics even though no information is exchanged. If both authentication and decrypt blocks are created such that the output of the common heuristic are identical, the key material (**304**) generated from

such heuristic will be identical. This may apply in situations where a wrapped key (**306**) and a selected heuristic (**302**) are provided. Any process for generating identical encryption keys without exchange of key material can be used as an appropriate heuristic to generate wrapping keys (**306**) in accordance with embodiments of the invention. Although, some information exchange to enable synchronization between the two wrap key factories can be utilized in accordance with embodiments of the invention.

The two wrap key factories use the same transform sequence. To synchronize the wrap key factories, the sender's wrap key factory selects one heuristic (**302**) from a predetermined set of heuristics to generate the key material for the next wrap key. The decoder factory will receive a known payload that has been encrypted with the sender's wrap key (**306**) generated using selected heuristic (**302**) from the known set of heuristics. The receiver then attempts to decrypt and verify the contents of the payload using each of the predetermined heuristics. If the material matches what is expected, then the receiver has identified the correct heuristic (**302**). If all the heuristics are exhausted, then this is considered a fatal error and decryption cannot continue.

Initially, the synchronization payload is used to assist the decrypt block in identifying the appropriate transform sequence quickly. Once the decrypt block locates the proper heuristic (**302**), the decrypt block wrap key factory utilizes that transform sequence for all subsequent transforms. In several embodiments, once a heuristic has exhausted all values, that heuristic will deterministically choose the next heuristic to use.

Run time synchronization is maintained through monotonically incrementing a wrap number that is incremented for each wrap key generated. If an error occurs using a particular wrap key (i.e. unallowable data present in the cryptographic payload), the wrap key factory will regenerate a new wrap key and subsequently increment the wrap number. In one embodiment, the frame payload received by the decrypt block contains a wrap number element. On the decrypt block, this wrap number element is compared with the internal wrap number of the decrypt block to determine if the current wrap key needs to be skipped. In one embodiment, the wrap key includes data fed into a cryptographic digest. The resulting bytes from the digest are then used to create an AES key. A new wrap key will be generated for each payload that is wrapped.

Bitstream Data Insertion

A flow diagram of a bitstream insertion process **400** utilized with respect to video data extracted from an AVI container in accordance with an embodiment of the invention is illustrated in FIG. **8**. In the demultiplexer, a caller begins extraction (**402**) of a relevant AVI chunk and requests (**404**) the DRM for the maximum expected bitstream payload. The demultiplexer then uses the information from the DRM to allocate (**406**) space in a buffer and passes (**408**) the buffer to the DRM. Next on the DRM, the video DD info is cached (**410**). The video DD info may be a data segment in a file container describing the data contained in a single block of container data, such as all of the video frame data in a single AVI chunk. Encrypted frames may have a DD info which contains information relating to the security features of the frame. The MPEG4 reserved start code is inserted (**412**) into the buffer and then the cryptographic payload header is inserted (**414**) into the buffer. A decision (**416**) is then made as to whether the chunk is the first frame. If the chunk is the first frame, then a Sync( ) payload is inserted (**418**) and a FrameInfo( ) payload is inserted (**420**). The Sync( ) payload may include the wrap key synchronization payload to synchronize the wrap keys. The FrameInfo( ) payload may include the cryptographic offset and length of information relating to data security in the video data, possibly as part of the DD Info data. If the chunk is not the first frame, then only the FrameInfo( ) payload is inserted (**420**). Then, a decision (**422**) is made as to whether the key index is greater than the current key index. If the key index is greater than the current key index, a FrameKey( ) payload is inserted (**424**) in the buffer and then the number of bytes inserted into the buffer is returned (**426**) to the caller by the DRM. The FrameKey( ) payload may include the payload containing the next frame key. If the key index is not lower than the current key index, then the DRM returns (**426**) the number of bytes inserted in the buffer to the caller. Next, the demultiplexer, is ready to extract (**428**) the AVI chunk. Through this process, DD info awareness occurs before the demultiplexer extracts the video chunk into the buffer for transmission to the decoder.

In various embodiments, bitstream data insertion occurs in the authentication block of the demultiplexer. The digital rights manager in one embodiment first receives the container's encryption data and temporarily stores or caches the information. The cached encryption data contains the information for the next video chunk. From this information, the digital rights manager can determine the proper bitstream payload to insert, if any. To reduce memory copies, the digital rights manager inserts the bitstream payload before extracting the chunk from the container.

Based on the cached encryption data chunk, the digital rights manager can detect frame key changes. If the frame key index has not changed since the last cached encryption data, no key material is sent. In one embodiment, the encryption data is always transported if there is cached encryption data in the digital rights manager. On the first payload, there will be a synchronization payload to allow the decrypt block to synchronize the wrap sequence. The frame information payloads in one embodiment follow the synchronization payload. It should be appreciated that not all payloads are required to appear in each decrypt block. Furthermore, the processes similar to those described above with reference to FIG. **8** can also be used with respect to other container formats including but not limited to MKV container files.

Although the present invention has been described in certain specific aspects, many additional modifications and variations would be apparent to those skilled in the art. It is therefore to be understood that the present invention may be practiced otherwise than specifically described, including various changes in the size, shape and materials, without departing from the scope and spirit of the present invention. Thus, embodiments of the present invention should be considered in all respects as illustrative and not restrictive.

What is claimed is:

1. A playback device for playing back encrypted video, the playback device comprising:

a set of one or more processors; and

a non-volatile storage containing a playback application for causing the set of one or more processors to perform the steps of:

receiving a container file with video data at a parser;

extracting portions of the container file using the parser, wherein the container file comprises:

video data with a plurality of partially encrypted frames, wherein each partially encrypted frame contains encrypted portions and unencrypted portions of data; and

a set of cryptographic information describing the encrypted portion of each partially encrypted frame, where cryptographic information for a partially encrypted frame comprises:

cryptographic material for the encrypted portion of the partially encrypted frame, and

a block reference that identifies the encrypted portion of the partially encrypted frame,

providing each partially encrypted frame, the cryptographic material for each partially encrypted frame, and the block reference for each partially encrypted frame from the parser to a video decoder;

identifying the encrypted portion of each partially encrypted frame using the block reference for each partially encrypted frame;

deciphering a frame key for each partially encrypted frame using the cryptographic material for each partially encrypted frame to produce a frame key for each partially encrypted frame;

decrypting the encrypted portion of each partially encrypted frame based upon the frame key for each partially encrypted frame using the video decoder; and

decoding each decrypted frame for rendering on a display device using the video decoder.

2. The playback device of claim **1**, wherein each partially encrypted frame is provided by the parser to a video decoder over an unsecured channel.

3. The playback device of claim **1**, wherein each block reference comprises offset and length information.

4. The playback device of claim **1**, wherein the playback application is further for causing the set of processors to communicate with a digital rights management component to decipher a frame key for each partially encrypted frame from the cryptographic material for each partially encrypted frame.

5. The playback device of claim **1**, wherein the frame key is encrypted to restrict playback to a particular user.

6. The playback device of claim **1**, wherein the frame key is encrypted to restrict playback to a particular user.

7. The playback device of claim **1**, wherein the playback application is further for causing the set of one or more processors to stream the container file.

8. The playback device of claim **1**, wherein:

the playback application is further for causing the set of one or more processors to perform the step of providing each partially encrypted frame, the cryptographic material for each partially encrypted frame, and the block reference for each partially encrypted frame from the parser to a video decoder by building a cryptographic payload comprising:

cryptographic material for a partially encrypted frame, and

a block reference for the partially encrypted frame.

9. The playback device of claim **8**, wherein the cryptographic payload is delimited by an identifier.

10. The playback device of claim **9**, wherein the decoder uses the identifier to extract cryptographic material for the partially encrypted frame and the block reference for the partially encrypted frame from the cryptographic payload.

11. The playback device of claim **1**, wherein the playback application is further for causing the set of one or more processors to perform the step of inserting the cryptographic payload at the front of each partially encrypted frame of video that is demultiplexed by the parser.

12. The playback device of claim **1**, further comprising inserting the cryptographic payload at the front of each partially encrypted frame of video using the parser.

13. The playback device of claim **1**, an encrypted portion of a partially encrypted frame comprises a frame header.

14. The playback device of claim **1**, wherein an unencrypted portion of a partially encrypted frame comprises a frame header.

15. A method for playing back encrypted video, the method comprising:

receiving a container file with video data at a parser;

extracting portions of the container file using the parser, wherein the container file comprises:

video data with a plurality of partially encrypted frames, wherein each partially encrypted frame contains encrypted portions and unencrypted portions of data; and

a set of cryptographic information describing the encrypted portion of each partially encrypted frame, where cryptographic information for a partially encrypted frame comprises:

cryptographic material for the encrypted portion of the partially encrypted frame, and

a block reference that identifies the encrypted portion of the partially encrypted frame,

providing each partially encrypted frame, the cryptographic material for each partially encrypted frame, and the block reference for each partially encrypted frame from the parser to a video decoder;

identifying the encrypted portion of each partially encrypted frame using the block reference for each partially encrypted frame;

deciphering a frame key for each partially encrypted frame using the cryptographic material for each partially encrypted frame to produce a frame key for each partially encrypted frame;

decrypting the encrypted portion of each partially encrypted frame based upon the frame key for each partially encrypted frame using the video decoder; and

decoding each decrypted frame for rendering on a display device using the video decoder.

16. The method of claim **15**, wherein each partially encrypted frame is provided by the parser to a video decoder over an unsecured channel.

17. The method of claim **15**, wherein each block reference comprises offset and length information.

18. The method of claim **15** further comprising communicating with a digital rights management component to decipher a frame key for each partially encrypted frame from the cryptographic material for each partially encrypted frame.

19. The method of claim **15**, wherein the frame key is encrypted to restrict playback to a particular user.

20. The method of claim **15**, wherein the frame key is encrypted to restrict playback to a particular user.

21. The method of claim **15**, wherein providing each partially encrypted frame, the cryptographic material for each partially encrypted frame, and the block reference for each partially encrypted frame from the parser to a video decoder further comprises building a cryptographic payload comprising:

cryptographic material for a partially encrypted frame, and

a block reference for the partially encrypted frame.

22. The method of claim **21**, wherein the cryptographic payload is delimited by an identifier.

23. The method of claim **22**, further comprising extracting cryptographic material for the partially encrypted frame and the block reference for the partially encrypted frame from the cryptographic payload based upon the identifier using the video decoder.

24. The method of claim **15**, wherein an encrypted portion of a partially encrypted frame comprises a frame header.

25. The method of claim **15**, wherein an unencrypted portion of a partially encrypted frame comprises a frame header.

* * * * *

MAY CONTAIN CONFIDENTIAL BUSINESS INFORMATION
SUBJECT TO PROTECTIVE ORDER

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of **CERTAIN VIDEO PROCESSING DEVICES, COMPONENTS THEREOF, AND DIGITAL SMART TELEVISIONS CONTAINING THE SAME**	**Inv. No. 337-TA-1222**

ORDER NO. 75: **DENYING RESPONDENT REALTEK SEMICONDUCTOR CORPORATION'S MOTION FOR SANCTIONS [MOTION DOCKET NO. 1222-075]**

(April 22, 2022)

[redacted]

[redacted]

MAY CONTAIN CONFIDENTIAL BUSINESS INFORMATION
SUBJECT TO PROTECTIVE ORDER

[redacted]

MAY CONTAIN CONFIDENTIAL BUSINESS INFORMATION
SUBJECT TO PROTECTIVE ORDER

[redacted]

SO ORDERED.

MaryJoan McNamara
Administrative Law Judge

CERTAIN VIDEO PROCESSING DEVICES, COMPONENTS THEREOF, AND DIGITAL SMART TELEVISIONS CONTAINING THE SAME **Inv. No. 337-TA-1222**

CONFIDENTIAL CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served upon the following parties as indicated, on **April 22, 2022.**

Lisa R. Barton, Secretary
U.S. International Trade Commission
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Washington, DC 20436

On Behalf of Complainant DivX, LLC:

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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of **CERTAIN VIDEO PROCESSING DEVICES, COMPONENTS THEREOF, AND DIGITAL SMART TELEVISIONS CONTAINING THE SAME**	**Investigation No. 337-TA-1222**

NOTICE OF A COMMISSION DETERMINATION NOT TO REVIEW AN INITIAL DETERMINATION TERMINATING THE INVESTIGATION DUE TO SETTLEMENT AND SETTING A SCHEDULE FOR BRIEFING AN ORDER CONCERNING SANCTIONS; TERMINATION OF INVESTIGATION

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission (the "Commission") has determined not to review an initial determination ("ID") (Order No. 76) issued by the presiding administrative law judge ("ALJ") terminating the investigation due to a settlement agreement. The Commission has also set a briefing schedule in connection with Order No. 75 denying a motion for sanctions. This investigation is hereby terminated.

FOR FURTHER INFORMATION CONTACT: Carl P. Bretscher, Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW, Washington, DC 20436, telephone (202) 205-2382. Copies of non-confidential documents filed in connection with this investigation may be viewed on the Commission's electronic docket system ("EDIS") at https://edis.usitc.gov. For help accessing EDIS, please email EDIS3Help@usitc.gov. General information concerning the Commission may also be obtained by accessing its Internet server at https://www.usitc.gov. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal, telephone (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on October 19, 2020, based on a complaint, as supplemented, filed by DivX, LLC ("DivX") of San Diego, California. 85 FR 66355 (Oct. 19, 2020). The complaint alleges a violation of section 337 of the Tariff Act, as amended, 19 U.S.C. 1337, from the importation, sale for importation, or sale in the United States after importation of certain video processing devices, components thereof, and digital smart televisions containing the same by reason of infringement of one or more asserted claims of U.S. Patent Nos. 8,832,297; 10,212,486; 10,412,141; and 10,484,749. *Id.* The complaint further alleges the existence of a domestic industry. *Id.*

The Commission's notice of investigation names the following respondents: Samsung Electronics Co., Ltd. of Gyeonggi-do, Korea; Samsung Electronics America, Inc. of Ridgefield

Park, New Jersey; Samsung Electronics HCMC CE Complex Co., Ltd. of Ho Chi Minh City, Vietnam (collectively, "Samsung"); LG Electronics Inc. of Seoul, Korea; LG Electronics U.S.A., Inc. of Englewood Cliffs, New Jersey (collectively "LG"); MediaTek, Inc. of Hsinchu City, Taiwan; MediaTek USA Inc. of San Jose, California; MStar Semiconductor, Inc. of Hsinchu Hsien, Taiwan (collectively, "MediaTek"); Realtek Semiconductor Corp. of Hsinchu, Taiwan ("Realtek"); TCL Corporation of Huizhou, Guangdong, China; TCL Technology Corporation of Huizhoug, Guangdong, China; TCL Electronics Holdings Ltd. of Shenzhen, Guangdong, China; TTE Technology, Inc. of Corona, California; Shenzhen TCL New Technologies Co. of Shenzhen, Guangdong, China; TCL King Electrical Appliances (Huizhou) Co. Ltd. of Huizhou, Guangdong, China; TCL MOKA International Ltd. of Sha Tin, New Territories, Hong Kong; and TCL Smart Device (Vietnam) Co., Ltd. of Bac Tan Uyen District, Binh Duong Province, Vietnam (collectively, "TCL"). *Id.* at 66356. The Office of Unfair Import Investigations was not named as a party to this investigation. *Id.*

The Commission has partially terminated the investigation with respect to certain patents and patent claims. Order No. 25 (Jan. 15, 2021), *unreviewed by* Comm'n Notice (Feb. 1, 2021); Order No. 34 (Feb. 19, 2021), *unreviewed by* Comm'n Notice (March 15, 2021); Order No. 49 (April 21, 2021), *unreviewed by* Comm'n Notice (May 10, 2021); Order No. 65 (June 28, 2021), *unreviewed by* Comm'n Notice (July 28, 2021).

The Commission has also partially terminated the investigation with respect to certain respondents due to settlement agreements. *See* Order No. 37 (terminating MediaTek), *unreviewed by* Comm'n Notice (March 12, 2021); Order No. 67 (July 16, 2021) (terminating RealTek), *unreviewed by* Comm'n Notice (Aug. 4, 2021); Order No. 69 (Aug. 12, 2021) (terminating LG, Samsung), *unreviewed by* Comm'n Notice (Sept. 15, 2021).

On April 19, 2022, DivX and TCL jointly moved to terminate the investigation based on a settlement agreement that resolves the dispute between the parties.

On April 22, 2022, the presiding ALJ issued the subject ID (Order No. 76) granting the joint motion to terminate the investigation based on the settlement agreement. The ID finds that, pursuant to Commission Rules 210.21(a)(1), (b)(1) (19 CFR 210.21(a)(1), (b)(1)), DivX and TCL have represented that there are no other agreements, express or implied, oral or written, between them regarding the subject matter of this investigation. The ID further finds that termination is proper because it would not be contrary to the public health and welfare, competitive conditions in the U.S. economy, the production of like or directly competitive conditions in the United States, or U.S. consumers. The ID further finds that termination is in the public interest, and it will conserve public and private resources.

No party filed a petition for review of the subject ID.

On October 4, 2021, former respondent RealTek filed a motion for sanctions against DivX, pursuant to Commission Rules 210.4 and 210.25 (19 CFR 210.4, 210.25), for alleged misrepresentations and misconduct during the investigation. DivX filed its opposition to RealTek's motion on October 14, 2021.

On April 22, 2022, the presiding ALJ issued Order No. 75, denying RealTek's motion for sanctions. Order No. 75 (April 22, 2022).

The Commission has determined not to review Order No. 76. This investigation is hereby terminated.

The Commission has set the following schedule in connection with Order No. 75. Any petition for review of Order No. 75 must be filed by June 1, 2022. Responses to a petition for review, if any, must be filed by June 8, 2022.

The Commission voted to approve this determination on May 24, 2022.

The authority for the Commission's determinations is contained in Section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and in part 210 of the Commission's Rules of Practice and Procedure (19 CFR part 210).

By order of the Commission.

Lisa R. Barton
Secretary to the Commission

Issued: May 24, 2022