

How Classification Works at the USPTO and the Implications on Prosecution Outcomes



Presenters



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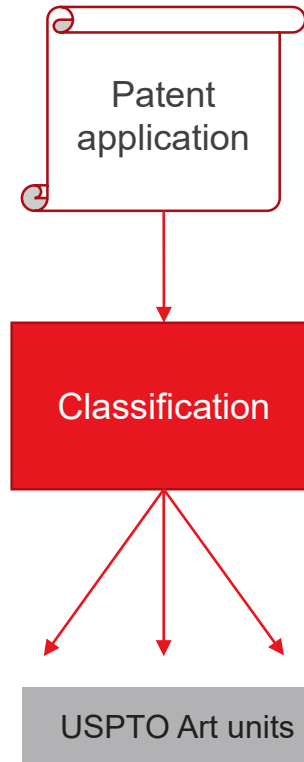
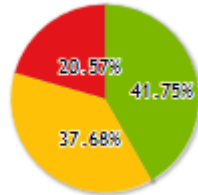
Classification determines which examiner “lottery” you play

2811 - SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS



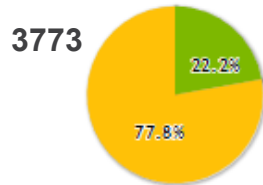
LOTTERY MAP

This shows the probability of being assigned a particular color examiner if your application lands in this group.



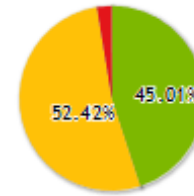
Similar technology art units can have very different “lotteries”

3770: Medical & surgical instruments, treatment devices, surgery & surgical supplies



An expandable implant comprising:
a first endplate, . . .
a second endplate, . . .
an actuator positioned between the first endplate and the second endplate; and
an actuator screw for actuating the actuator, wherein rotation of the actuator screw causes movement of the actuator, thereby **causing expansion or contraction of the implant**, . . .

3775



An orthopedic implant moveable between an unconstrained shape and a constrained insertion shape, comprising:
a body . . .
wherein deformation of the body between its unconstrained form and its constrained insertion form moves **the first and second legs between an unconstrained position and a constrained insertion position**.

Classification Overview

How does the USPTO use classification?

Two distinct functions:

- Prior art searches by Examiners
- Administrative functions such as art unit routing

Classification Overview

What's involved in classifying a patent document?

Cooperative Patent Classification (CPC) system

- 250,000 possible codes
- Full classification picture

United States Patent Classification (USPC) system

- 150,000 possible codes
- Single Primary classification

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Classification Resources

Classification Revision & Reclassification General Training Additional Resources Contacts

Class **7105** DATA PROCESSING: FINANCIAL, BUSINESS PRACTICE, MANAGEMENT, OR COSTING

DETERMINATION

Select Largest Indent Level to be Displayed [Select Expansion Level: Submit]

Turn Outline [OFF]

- 50 BUSINESS PROCESSING USING CRYPTOGRAPHY
 - 51 Usage protection of distributed data files
 - 52 Usage or charge determination
 - 53 Including third party for collecting or distributing payment (e.g., clearinghouse)
 - 54 Adding plural layers of rights or limitations by other than the original producer
 - 55 Requiring a supplemental attachment or input (e.g., dongle) to open
 - 56 Specific computer ID (e.g., serial number, configuration, etc.)
 - 57 Copy protection or prevention
 - 58 Having origin or program ID
 - 59 Licensing
 - 60 Postage metering system
 - 61 Reloading/recharging
 - 62 Having printing detail (e.g., verification of mark)
 - 63 Utility metering system
 - 64 Secure transaction (e.g., EFTPOS)
 - 65 Including intelligent token (e.g., electronic purse)
 - 66 Intelligent token initializing or reloading
 - 67 Including authentication
 - 68 Balancing account
 - 69 Electronic cash detail (e.g., blinded, divisible, or detecting double spending)
 - 70 Home banking
 - 71 Including key management
 - 72 Verifying PIN
 - 73 Terminal detail (e.g., initializing)
 - 74 Anonymous user system
 - 75 Transaction verification
 - 76 Electronic credential
 - 77 Including remote charge determination or related payment system
 - 78 Including third party
 - 79 Including a payment switch or gateway
 - 80

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Classification Resources

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Lookup Symbol **A01C** CPC Sections CPC Section A CPC Class A01 CPC Subclass A01C

Printable version [PDF] Version: 2020.05

Search CPC

Outline [ON] Display [Level] Color [ON] Curly Brackets [ON] References [ON] Date Revised [OFF] Path title [OFF]

QUICK LINKS: PDF Scheme CPC to IPC Definition Compilation of Changes

COOPERATIVE PATENT CLASSIFICATION

PLANTING; SOWING; FERTILISING (combined with general working of soil A01B 49/04; parts, details or accessories of agricultural machines or implements, in general A01B 51/00 - A01B 75/00; apparatus for spreading sand or salt E01C; sowing and fertilising with aircraft B64D 1/16 - B64D 1/20)

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

- A01C 1/00 Apparatus, or methods of use thereof, for testing or treating seed, roots, or the like, prior to sowing or planting (chemicals therefor A01N 25/00 - A01N 63/00 [irradiation in general B01J 19/08])
- A01C 1/005 (Potato seed cutters)
- A01C 1/102 Germinating apparatus, Determining germination capacity of seeds or the like (germinating in preparation of malt C12C 1/027)
- A01C 1/1025 (Testing seeds for determining their viability or germination capacity)
- A01C 1/104 Arranging seeds on carriers, e.g. on tapes, on cords [Carrier compositions]
- A01C 1/1042 (Tapes, bands or cords)
- A01C 1/1044 (Sheets, multiple sheets or mats)
- A01C 1/1046 (Carrier compositions)
- A01C 1/1048 (Machines)
- A01C 1/106 Coating or dressing seed (encapsulated embryos or artificial seeds A01H 4/006; seed coating compositions C09D)
- A01C 1/108 Immersing seed
- A01C 3/00 Treating manure; Manuring (ploughs with additional arrangements for putting manure under the soil A01B 17/002; dung forks A01D 9/00 (, treating of waste water, sewage or sludge C02F) organic fertilisers from waste or refuse C09C)

Classification Overview

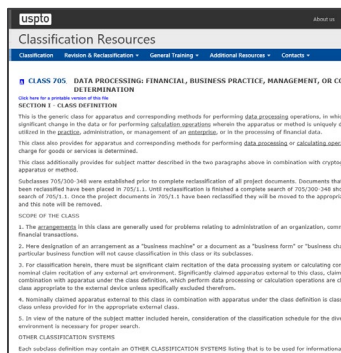
How does classification determine the Art Unit?

Mapping

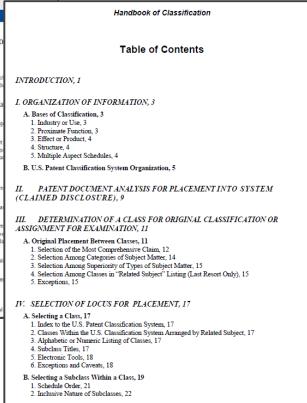
- Each US classification code is mapped to an Art Unit
- Routing is to the Art Unit associated with the US Primary classification of the application

USPTO Published Resources

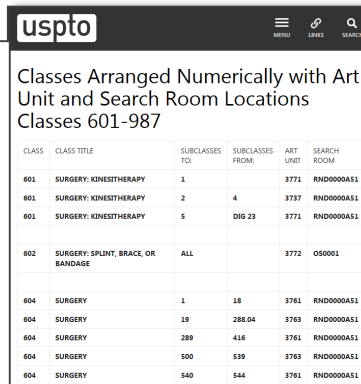
- USPTO.gov > “Patents” > “Learn about patent classification” : <https://www.uspto.gov/patents-application-process/patent-search/classification-standards-and-development>



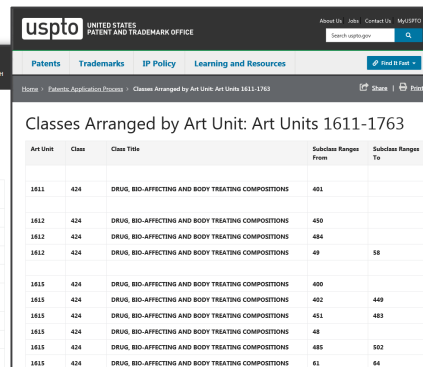
The screenshot shows the 'Classification Resources' page on the USPTO website. It features a navigation bar with 'Classification', 'Revision & Reclassification', 'General Training', 'Additional Resources', and 'Contacts'. The main content area is titled 'CLASS 705 DATA PROCESSING, FINANCIAL, BUSINESS PRACTICE, MANAGEMENT, OR ECONOMIC DETERMINATION' and includes a 'SECTION 1 - CLASS DEFINITION' and 'SCORE OF THE CLASS' section.



The screenshot shows the 'Table of Contents' from the 'Handbook of Classification'. It lists various sections including 'INTRODUCTION', 'I. ORGANIZATION OF INFORMATION', 'II. PATENT DOCUMENT ANALYSIS FOR PLACEMENT INTO SYSTEM (CLAIMED DISCLOSURE)', 'III. DETERMINATION OF A CLASS FOR ORIGINAL CLASSIFICATION OR ASSIGNMENT FOR EXAMINATION', and 'IV. SELECTION OF LOCUS FOR PLACEMENT'. Each section is followed by a list of sub-sections and their corresponding page numbers.



The screenshot shows a table titled 'Classes Arranged Numerically with Art Unit and Search Room Locations'. The table has columns for 'CLASS', 'CLASS TITLE', 'SUBCLASSES TO', 'SUBCLASSES FROM', 'ART UNIT', and 'SEARCH ROOM'. It lists various classes such as 'SURGERY: KINESITHERAPY' and 'SURGERY: SPLINT, BRACE, OR BANDAGE'.



The screenshot shows a table titled 'Classes Arranged by Art Unit: Art Units 1611-1763'. The table has columns for 'Art Unit', 'Class', 'Class Title', 'Subclass Ranges From', and 'Subclass Ranges To'. It lists various classes such as 'DRUG: BIO-AFFECTING AND BODY TREATING COMPOSITIONS'.



Classification Overview

What features of the application affect the routing classification?

It depends...

- Entire application is potentially impactful
- Criteria is defined by rulesets, but complex and technology-specific

Classification Overview

Example

Example 1: Semiconductor aerosol coating

- Claims 1-19,35. A method for applying a semiconductor coating to a substrate, the method comprising: contacting an aerosol fluid to the substrate to deposit a least a portion of the fluid on the substrate; and curing the fluid with heat
- Claims 20-34,36. An apparatus for applying a semiconductor coating to a substrate comprising: a holder to hold the substrate; and an aerolizer to produce a suspension of a fluid comprising at least one reactive component wherein the aerosolizer conveys the suspension to the holder; and a heater to cure the semiconductor coating

Classification Analysis

- 1 Review application; interpret claims in light of disclosure
- 2 Classify each claim into a USPC Class
- 3 Determine a Primary Class using a sequential set of tests:
 - Comprehensiveness
 - Category of Subject Matter
 - Type of Subject Matter
 - Genus-Species
 - List of *Classes Arranged by Related Subject Matter*
- 4 Within the Primary Class, select the highest and furthest indented subclass as the Primary classification

Classification Overview

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Example 1: Semiconductor aerosol coating

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USPC 438/509

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USPC 118/724

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USPC 438/509

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USPC 118/724

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USPC 438/509

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USPC 118/724

3

Determine a Primary Class using a sequential set of tests:

- a) Comprehensiveness
- b) Category of Subject Matter
 - Process of Using
 - Product
 - Process of Making
 - Apparatus
 - Material
- c) Type of Subject Matt
- d) Genus-Species
- e) List of *Classes Arranged by Related Subject Matter*

Classification Overview

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USPC 438/509

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USPC 118/724

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USPC 438/509

GAU 2812

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USPC 118/724

GAU 1716

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Classification Overview

Example

Example 2: Neural network for categorizing and forecasting

- Claim group A. A neural network, comprising a **classification engine** that is used for evaluating user product reviews and providing categorization for the reviews

- Claim group B. The neural network of claim 1, **further comprising a forecasting engine** that uses the provided categorized reviews to predict changes in the market

Classification Analysis

- | | |
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Classification Overview

Example

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- Claim group A. A neural network, comprising a **classification engine** that is used for evaluating user product reviews and providing categorization for the reviews
- Claim group B. The neural network of claim 1, **further comprising a forecasting engine** that uses the provided categorized reviews to predict changes in the market

Classification Analysis

USPC 705/347

USPC 705/7.31

USPC 706

Class 705 – Business Methods

Note 3: “For classification herein, there must be significant claim recitation of the data processing system or calculating computer and only nominal claim recitation of any external art environment. **Significantly claimed apparatus external to this class, claimed in combination with apparatus under the class definition**, which perform data processing or calculation operations **are classified in the class appropriate to the external device** unless specifically excluded therefrom.”

Class 706 – Artificial Intelligence

Note 4: “**This class can accept combinations** of data processing arts with artificial intelligence techniques **not elsewhere provided for** in USPC”

Classification Overview

Example

Example 2: Neural network for categorizing and forecasting

- Claim group A. A neural network, comprising a **classification engine** that is used for evaluating user product reviews and providing categorization for the reviews
- Claim group B. The neural network of claim 1, **further comprising a forecasting engine** that uses the provided categorized reviews to predict changes in the market

Classification Analysis

USPC 705/347

GAU 3689

Allowance rate: 8.7%

LOTTERY MAP

This shows the probability of being assigned a particular color examiner if your application lands in this group.



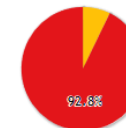
USPC 705/7.31

GAU 3623

Allowance rate: 27.9%

LOTTERY MAP

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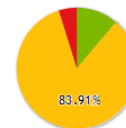
USPC 706

GAU 2129

Allowance rate: 80.4%

LOTTERY MAP

This shows the probability of being assigned a particular color examiner if your application lands in this group.



Classification Overview

Example

Example 2: Neural network for categorizing and forecasting

- **Original Claims.** A neural network, comprising a **classification engine** that is used for evaluating user product reviews and providing categorization for the reviews
- **Re-Drafted Claims.** A neural network, comprising **nodes that mimic the operation of the human brain, a training mechanism that analyzes supplied information, a classification engine that can categorize input information**, and is used for evaluating user product reviews and providing categorization for the reviews

Classification Analysis

USPC 705/347

GAU 3689

USPC 706/20

GAU 2129

Class 705 – Business Methods

Note 3: “For classification herein, there must be significant claim recitation of the data processing system or calculating computer and only nominal claim recitation of any external art environment. **Significantly claimed apparatus external to this class, claimed in combination with apparatus under the class definition**, which perform data processing or calculation operations **are classified in the class appropriate to the external device** unless specifically excluded therefrom.”

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www.LexisNexisIP.com/ClassificationReports

For more information, contact:

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