



# The Financial Uncertainties of Patent Rules Changes

*Preliminary Analysis of Recent 35 U.S.C. § 101 Rejections*

*March 19, 2015*

***The Leahy-Smith America Invents Act, Public Law 112-29, provides a series of new post-grant challenges to patent validity and enforcement. A series of material rulings from the United States Supreme Court over the past five years that narrow the scope of patentable subject matter and expand the grounds of patent claims rejections for obviousness have directly impacted the patent approval process. Inter Partes Review, Covered Business Method patent review, and new methods of Post-Grant Review, which comprise new jurisdiction for the Patent Trial and Appeal Board (PTAB), are dramatically altering the allowance of patentable inventions in the United States.***

Investors seem to believe the industry most impacted by these changes is life sciences/pharmaceuticals. However, the following summary demonstrates a much broader set of impacts. Most final decisions regarding rejections on patentable subject matter are in fact patents on data processing, databases, and computers. The examples below highlight how new PTAB decisions are affecting entire industries such as automation, communications, and information technology. M·CAM measures precisely which companies are being hit with patentability rejections and subsequently have adverse cashflow effects. These measurements demonstrate an unconsidered effect on markets which may be used to advantageously predict the reduction or loss of proprietary cashflows and erosion of competitive positions.

## Analysis

The below table summarizes the U.S. Patent Classification codes for 136 patent applications which were issued final decisions regarding rejections under 35 U.S.C. § 101 since January 1, 2014.

| U.S. Patent Classification  | Count |
|---|-------|
| Data Processing Financial, Business Practice, Management, or Cost/Price Determination   | 22    |
| Electrical Computers and Digital Processing Systems Multicomputer Data Transferring   | 21    |
| Data Processing Database and File Management or Data Structures   | 13    |
| Electrical Computers and Digital Processing Systems Support   | 7     |
| Multiplex Communications  | 7     |
| Amusement Devices Games   | 6     |
| Computer Graphics Processing and Selective Visual Display Systems   | 6     |
| Data Processing Presentation Processing of Document, Operator Interface Processing, and Screen Saver Display Processing         | 6     |
| Data Processing Software Development, Installation and Management   | 6     |
| Education and Demonstration   | 5     |
| Information Security  | 5     |
| Interactive Video Distribution Systems  | 4     |
| Cryptography  | 3     |
| Data Processing - Artificial Intelligence   | 3     |
| Surgery   | 3     |
| Data Processing Speech Signal Processing, Linguistics, Language Translation, and Audio Compression/Decompression                | 2     |
| Electrical Computers and Digital Processing Systems Interprogram Communication or Interprocess Communication (IPC)              | 2     |
| Electrical Computers and Digital Processing Systems Memory  | 2     |
| Electrical Computers and Digital Processing Systems Virtual Machine Task or Process Management or Task Management/Control       | 2     |
| Image Analysis  | 2     |
| Telecommunications  | 2     |
| Data Processing Design and Analysis of Circuit or Semiconductor Mask  | 1     |
| Data Processing Measuring, Calibrating, or Testing  | 1     |
| Electrical Computers and Digital Data Processing Systems Processing Architectures and Instruction Processing (e.g., processors) | 1     |
| Exercise Devices  | 1     |
| Facsimile and Static Presentation Processing  | 1     |
| Pulse or Digital Communications   | 1     |
| Television  | 1     |

| Patent/Pub. No. | Title  | Applicant | Filing Date |
|-----------------|--|-----------|-------------|
| US20070214028   | System and Method for Automatically Installing Verifying and Configuring Functionalities in the System Components of a Distributed Network | ABB Ltd.  | 4/28/2004   |

### Patent Abstract

The invention relates to a system for the automatic installation, verification and configuration of functionality that is stored in installation, verification and/or configuration files for system components that are located in a distributed network. Said system comprises a system design tool for generating, checking and configuring the installation, verification and/or configuration files for the respective system components. According to the invention, the system design tool transmits the installation, verification and/or configuration files to the system components for installation, the installation, verification and/or configuration files required in the respective system components are checked and configured in a predetermined sequence and manner and a complete system is formed once the system components have been configured.

### Holders of Related Patents

| Company                                     | Symbol | Related Patent Count |
|---|--------|----------------------|
| International Business Machines Corporation | IBM    | 21                   |
| Microsoft Corporation                       | MSFT   | 8                    |
| Cisco System, Inc.                          | CSCO   | 4                    |
| Ericsson                                    | ERIC   | 2                    |
| Hewlett-Packard Company                     | HPQ    | 2                    |
| Oracle Corporation                          | ORCL   | 2                    |
| BlackBerry Ltd.                             | BBRY   | 1                    |
| Fujitsu Ltd.                                | FJTSY  | 1                    |
| RealNetworks, Inc.                          | RNWK   | 1                    |
| Toshiba Corporation                         | 6502   | 1                    |

| Patent/Pub. No. | Title  | Assignee      | Filing Date |
|-----------------|--|---------------|-------------|
| US7693151       | Method and Devices for Providing Protection in Packet Switched Communications Networks | Dialogic Inc. | 11/1/2005   |

### Patent Abstract

A method and devices using that method are provided for reconstructing an encoded signal conveyed along a communication path in a packet switched network. The method comprises the steps of providing a communication signal that has been encoded into a plurality of frames; determining which of the plurality of frames is an essential frame, which loss would cause a relatively substantial deterioration in the quality of at least one proceeding frame upon decoding that at least one proceeding frame; packaging the plurality of frames into a plurality of packets, and identifying which of the packets comprise at least one essential frame; adding protecting information to at least one packet which proceeds a packet identified as a packet carrying at least one essential frame.

### Holders of Related Patents

| Company                                     | Symbol | Related Patent Count |
|---|--------|----------------------|
| 3Com Corporation                            | COMS   | 39                   |
| Alcatel-Lucent S.A.                         | ALU    | 21                   |
| Cisco Technology, Inc.                      | CSCO   | 19                   |
| Intel Corporation                           | INTC   | 14                   |
| International Business Machines Corporation | IBM    | 12                   |
| Qualcomm Inc.                               | QCOM   | 10                   |
| Nokia Corporation                           | NOK    | 8                    |
| AT&T Inc.                                   | T      | 7                    |
| Broadcom Corporation                        | BRCM   | 7                    |
| Hitachi, Ltd.                               | HTHIY  | 7                    |

| Patent/Pub. No. | Title   | Applicant               | Filing Date |
|-----------------|---|-------------------------|-------------|
| US20080104407   | Audit-Log Integrity Using Redactable Signatures | Hewlett-Packard Company | 10/31/2006  |

### Patent Abstract

A method of establishing the integrity of an audit record set is described. The method comprises receiving a set of audit records and generating a first set of random values wherein each audit record in the set corresponds to at least one value of the first set. The method further comprises generating a second set of values based on an audit record and a corresponding value of the first set for each audit record in the set and generating a summary value based on the second set of values. The method further comprises certifying the summary value to generate an integrity certificate enabling verification of the integrity of the audit record set and storing the audit record set and at least one of the first set of values and the generated digital signature.

### Holders of Related Patents

| Company                                     | Symbol | Related Patent Count |
|---|--------|----------------------|
| International Business Machines Corporation | IBM    | 30                   |
| Microsoft Corporation                       | MSFT   | 17                   |
| Ricoh Co., Ltd.                             | 7752   | 11                   |
| Google Inc.                                 | GOOG   | 10                   |
| Oracle Corporation                          | ORCL   | 8                    |
| Iron Mountain Inc.                          | IRM    | 6                    |
| Xerox Corporation                           | XRX    | 5                    |
| Hitachi, Ltd.                               | 6501   | 4                    |
| Intel Corporation                           | INTC   | 4                    |
| Sony Corporation                            | SNE    | 4                    |

| Patent/Pub. No. | Title   | Applicant             | Filing Date |
|-----------------|---|-----------------------|-------------|
| US20070139375   | Providing Force Feedback to a User of an Interface Device Based on Interactions of a User-Controlled Cursor in a Graphical User Interface | Immersion Corporation | 2/6/2007    |

### Patent Abstract

A method and apparatus for providing force feedback to a user operating a human/computer interface device in conjunction with a graphical user interface (GUI) displayed by a host computer system. A physical object, such as a joystick or a mouse, controls a graphical object, such as a cursor, within the GUI. The GUI allows the user to interface with operating system functions implemented by the computer system. A signal is output from the host computer to the interface device to apply a force sensation to the physical object using one or more actuators. This desired force sensation is associated with at least one of the graphical objects and operating system functions of the graphical user interface and is determined by a location of the cursor in the GUI with respect to targets that are associated with the graphical objects. The graphical objects include icons, windows, pull-down menus and menu items, scroll bars ("sliders"), and buttons. The force sensation assists the user to select a desired operating system function or physically informs the user of the graphical objects encountered by the cursor within the GUI. A microprocessor local to the interface apparatus and separate from the host computer can be used to control forces on the physical object.

### Holders of Related Patents

| Company                       | Symbol | Related Patent Count |
|-------------------------------|--------|----------------------|
| Immersion Corporation         | IMMR   | 50                   |
| Microsoft Corporation         | MSFT   | 9                    |
| BlackBerry Ltd.               | BBRY   | 5                    |
| Alps Electric Co., Ltd.       | 6770   | 2                    |
| Honeywell International Inc.  | HON    | 2                    |
| Siemens AG                    | SIE    | 2                    |
| The Boeing Company            | BA     | 2                    |
| BAE Systems plc               | BA/    | 1                    |
| Digi International Inc.       | DGII   | 1                    |
| International Game Technology | IGT    | 1                    |

| Patent/Pub. No. | Title  | Applicant                                   | Filing Date |
|-----------------|--|---|-------------|
| US20080086530   | System and Method for Restricting Replies to an Original Electronic Mail Message | International Business Machines Corporation | 10/9/2006   |

### Patent Abstract

A system and method for restricting replies to an original electronic mail message are provided. The system and method may provide a mechanism for allowing a composer of an electronic mail message to specify whether or not responses or replies from particular recipients, e.g., secondary recipients, of an electronic mail message are permitted. The illustrative embodiments provide an interface through which a user may specify, for example, that an electronic mail message that is being composed can only be replied to from electronic mail addresses that are associated with primary recipients of the electronic mail message, e.g., recipients whose electronic mail addresses are in a "TO" field of the electronic mail message. In other illustrative embodiments, the interface provides control mechanisms through which a user may individually specify which recipients of an electronic mail message may or may not reply to the electronic mail message.

### Holders of Related Patents

| Company                                     | Symbol | Related Patent Count |
|---|--------|----------------------|
| International Business Machines Corporation | IBM    | 56                   |
| Microsoft Corporation                       | MSFT   | 33                   |
| Cisco Technology, Inc.                      | CSCO   | 10                   |
| AT&T Corporation                            | T      | 4                    |
| Google Inc.                                 | GOOG   | 3                    |
| Hewlett-Packard Development Company, L.P.   | HPQ    | 3                    |
| Medtronic, Inc.                             | MDT    | 3                    |
| NEC Corporation                             | NIPNF  | 3                    |
| Yahoo! Inc.                                 | YHOO   | 3                    |
| SAP SE                                      | SAP    | 2                    |

| Patent/Pub. No. | Title                                       | Applicant | Filing Date |
|-----------------|---|-----------|-------------|
| US20060112188   | Data Communication with Remote Network Node | Nokia Oyj | 9/2/2005    |

### Patent Abstract

Data transfer between remote and base locations over a network is effected. According to an example embodiment of the present invention, a data router controls the routing of data between base and remote network appliances as a function of metadata describing the data and capabilities of the remote network appliance.

### Holders of Related Patents

| Company                                     | Symbol | Related Patent Count |
|---|--------|----------------------|
| Apple Inc.                                  | APPL   | 53                   |
| International Business Machines Corporation | IBM    | 33                   |
| Microsoft Corporation                       | MSFT   | 30                   |
| Universal Electronics Inc.                  | UEIC   | 22                   |
| Sony Corporation                            | SNE    | 18                   |
| Cisco Technology, Inc.                      | CSCO   | 14                   |
| Philips                                     | PHG    | 10                   |
| Alpine Electronics, Inc.                    | AELEF  | 7                    |
| Dana Holding Company                        | DAN    | 4                    |
| Voxx International                          | VOXX   | 4                    |



| Patent/Pub. No. | Title                           | Applicant             | Filing Date |
|-----------------|---------------------------------|-----------------------|-------------|
| US20040235417   | Repeater Oscillation Prevention | Qualcomm Incorporated | 2/24/2004   |

### Patent Abstract

A method and apparatus for detecting oscillation in a repeater system is disclosed. More particularly, in one embodiment, a wireless communication device is embedded in a repeater system and is configured to detect if the repeater system is in oscillation. A processor coupled to the WCD is configured to reduce the gain of the repeater system if the repeater system is in oscillation.

### Holders of Related Patents

| Company                       | Symbol | Related Patent Count |
|-------------------------------|--------|----------------------|
| Qualcomm Inc.                 | QCOM   | 20                   |
| Cisco Technology, Inc.        | CSCO   | 13                   |
| Samsung Electronics Co., Ltd. | SSNLF  | 11                   |
| Motorola, Inc.                | MSI    | 11                   |
| Hitachi, Ltd.                 | HTHIY  | 9                    |
| Panasonic Corporation         | PCRFY  | 9                    |
| Toshiba Corporation           | TOSBF  | 9                    |
| Mitsubishi Electric           | MIELY  | 8                    |
| NEC Corporation               | NIPNF  | 8                    |
| Fujitsu Ltd.                  | FJTSY  | 6                    |

| Patent/Pub. No. | Title  | Applicant                    | Filing Date |
|-----------------|--|------------------------------|-------------|
| US20100240455   | Presenting Secondary Content for a Wagering Game | Scientific Games Corporation | 10/29/2008  |

### Patent Abstract

Described herein are processes and devices that cause secondary content to be presented during wagering games. One of the devices described is a secondary content server. The secondary content server can obtain user related information, like user preferences, about a player of a wagering game and use the user related information to determine or generate secondary content. The secondary content server can cause the secondary content to be presented on a wagering game device or terminal. The secondary content server can determine if more than one device can present the secondary content. In some embodiments, the secondary content server presents the secondary content on a wagering game device. However, if other devices are connected to the wagering game device, the secondary content server may instead cause the secondary content to be presented on one of the other devices.

### Holders of Related Patents

| Company                       | Symbol | Related Patent Count |
|-------------------------------|--------|----------------------|
| International Game Technology | IGT    | 74                   |
| Bally Technologies, Inc.      | BYI    | 15                   |
| Nokia Corporation             | NOK    | 11                   |
| WMS Gaming Inc.               | WMS    | 8                    |
| Acres Gaming Inc.             | ACRE   | 7                    |
| GameAccount Network           | GAME   | 7                    |
| Microsoft Corporation         | MSFT   | 7                    |
| Motorola, Inc.                | MSI    | 7                    |
| Cyberscan Technology, Inc.    | CYBS   | 4                    |
| Powerhouse Technologies, Inc. | PWHT   | 3                    |

| Patent/Pub. No. | Title   | Applicant         | Filing Date |
|-----------------|---|-------------------|-------------|
| US20070083498   | Distributed Search Services for Electronic Data Archive Systems | Unify Corporation | 3/28/2006   |

### Patent Abstract

A method for searching index information in a data archive system. The method comprises: receiving a request to search a range of the index information for at least one search term; distributing different portions of the search request among a plurality of search engines, each search engine being responsible searching the index information for the search term over a predetermined portion of the range and providing the results of the search; and collecting the results from the plurality of search engines.

### Holders of Related Patents

| Company                                     | Symbol | Related Patent Count |
|---|--------|----------------------|
| International Business Machines Corporation | IBM    | 17                   |
| Microsoft Corporation                       | MSFT   | 9                    |
| NEC Corporation                             | 6701   | 4                    |
| Symantec Corporation                        | SYMC   | 4                    |
| Google Inc.                                 | GOOG   | 3                    |
| Diebold, Inc.                               | DBD    | 2                    |
| Hewlett-Packard Company                     | HPQ    | 2                    |
| Juniper Networks, Inc.                      | JNPR   | 2                    |
| Xerox Corporation                           | XRX    | 2                    |
| Siemens AG                                  | SIE    | 1                    |

| Patent/Pub. No. | Title   | Applicant         | Filing Date |
|-----------------|---|-------------------|-------------|
| US20050137939   | Server-Based Keyword Advertisement Management | Xerox Corporation | 12/19/2003  |

### Patent Abstract

A server-based method of automatically generating a plurality of bids for an advertiser for placement of at least one advertisement in association with a search results list is provided. The method includes: a) receiving at least one candidate advertisement, b) creating a list of candidate keywords, c) estimating a click-through rate for each advertisement-keyword pair, d) calculating a return on advertising investment (ROAI) for each advertisement-keyword pair, and e) calculating a bid amount for each advertisement-keyword pair. In another aspect, a server-based method of generating a bid for placement of an advertisement in association with a search results list is provided. In other aspects, a method of selecting one or more keywords in conjunction with the bid is provided as well as a method of determining a return on advertising investment (ROAI) information for an advertiser in conjunction with the bid is provided.

### Holders of Related Patents

| Company                                     | Symbol | Related Patent Count |
|---|--------|----------------------|
| Microsoft Corporation                       | MSFT   | 220                  |
| International Business Machines Corporation | IBM    | 133                  |
| Yahoo! Inc.                                 | YHOO   | 125                  |
| Google Inc.                                 | GOOG   | 94                   |
| Amazon.com, Inc.                            | AMZN   | 36                   |
| Millennial Media                            | MM     | 27                   |
| eBay Inc.                                   | EBAY   | 26                   |
| Xerox Corporation                           | XRX    | 20                   |
| Nokia Corporation                           | NOK    | 16                   |
| Fujitsu Ltd.                                | FJTSY  | 15                   |