Software Patent Eligibility - Interim Eligibility Guidance and July Update

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35 U.S.C. § 101

§ 101 - Inventions Patentable:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
Subject Matter Eligibility

- The four statutory categories of invention:
  - Process, Machine, Manufacture, or Composition of Matter

- The courts have interpreted the statutory categories to exclude:
  - “Laws of nature, natural phenomena, and abstract ideas”
    These three terms are typically used by the courts to cover the basic tools of scientific and technological work, such as scientific principles, naturally occurring phenomena, mental processes, and mathematical algorithms.
  - Called “Judicial Exceptions”
    At times, other terms are used to describe the judicial exceptions.
35 USC §101: The Four Categories of Statutory Subject Matter

- **Process**
- **Machine**
- **Manufacture**
- **Composition of Matter**
35 USC §101: Statutory Categories

The Four Categories of Statutory Subject Matter

• **Process**
  – “an act, or series of acts or steps”

• **Machine**
  – “a concrete thing, consisting of parts, or of certain devices and combination of devices”

• **Manufacture**
  – “an article produced from raw or prepared materials by giving these materials new forms, qualities, properties, or combinations, whether by hand labor or by machinery”

• **Composition of Matter**
  – “all compositions of two or more substances and all composite articles, whether they be the results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids, for example”
Statutory Categories - Software \textit{Per Se}

Example 1

A \textbf{speech-recognition interface} that enables operative coupling of a speech recognition engine to a computer-related application, said interface comprising:

- code for receiving speech-recognition data including recognized words;
- code for outputting the recognized words into a computer-related application as input text, including changing positions of the recognized words; and
- code, independent of the computer-related application, for determining positions of the recognized words in the computer-related application.

- The “interface” is software \textit{per se}, \textbf{not} a:
  - Process: series of steps; 35 U.S.C. § 100
  - Machine: a concrete thing consisting of parts or devices
  - Manufacture: an article produced from raw or prepared materials
  - Composition of matter: a composition of substances or composite article
A *device profile* for describing properties of a device in a digital image reproduction system to capture, transform or render an image, said device profile comprising:

first data for describing a device dependent transformation of color information content of the image to a device independent color space; and

second data for describing a device dependent transformation of spatial information content of the image in said device independent color space.

• The “device profile” is an intangible collection of information *per se, not a*:  
  Process: series of steps; 35 U.S.C. § 100  
  Machine: a concrete thing consisting of parts or devices  
  Manufacture: an article produced from raw or prepared materials  
  Composition of matter: a composition of substances or composite article
35 USC §101: The Judicial Exceptions

Law of Nature

Natural Phenomena

Abstract Ideas

\[ E = mc^2 \]
Recent Supreme Court Activity Regarding Judicial Exceptions

Bilski (2010)  
Abstract Idea (process claims)

Mayo (2012)  
Law of Nature (process claims)

Myriad (2013)  
Natural Phenomena (product claims)

Alice Corp. (2014)  
Abstract Idea (process & product claims)
Subject Matter Eligibility – Abstract Ideas –

Examiners are to:

- Use the broadest reasonable interpretation (BRI) of the claim
- Analyze the claim as a whole
- Practice compact prosecution by fully examining under 35 U.S.C. 102, 103, 112, and 101 (utility, inventorship, and double patenting) and non-statutory double patenting
Step 2A. Is the claim “directed to” an abstract idea?

A claim is directed to an abstract idea when it is **recited** in the claim.

- “Recited” = set forth or described.
- To determine the presence of an abstract idea in a claim, examiners are to determine if the recited concept is similar to at least one concept that the courts have identified as an abstract idea.
- If no abstract idea, conclude SME analysis.
3. Identifying Abstract Ideas

Courts’ identification of abstract ideas reveals clusters of similar types:

- Mitigating settlement risk
- Hedging
- Creating a contractual relationship
- Using advertising as an exchange or currency
- Processing information through a clearinghouse
- Managing a game of Bingo
- Mitigating settlement risk

- Comparing a patient’s gene with the wild-type gene, and identifying any differences that arise
- Comparing new and stored information and using rules to identify options
- Using categories to organize, store, and transmit information
- Organizing information through mathematical correlations
- The Arrhenius equation for calculating the cure time of rubber
- A formula for updating alarm limits
- A mathematical formula relating to standing wave phenomena
- A mathematical procedure for converting one form of numerical representation to another
Describing these clusters:

Concepts relating to the economy and commerce, such as agreements between people in the form of contracts, legal obligations, and business relations.

- Mitigating settlement risk
- Hedging
- Creating a contractual relationship

- Comparing a patient’s gene with the wild-type gene, and identifying any differences that arise
- Comparing new and stored information and using rules to identify options
- Using categories to organize, store, and transmit information
- Organizing information through mathematical correlations

- Using advertising as an exchange of currency
- Processing information through a clearinghouse
- Managing a game of Bingo
- Mitigating settlement risk

- The Arrhenius equation for calculating the cure time of rubber
- A formula for updating alarm limits
- A mathematical formula relating to standing wave phenomena
- A mathematical procedure for converting one form of numerical representation to another

An idea standing alone such as an uninstantiated concept, plan or scheme; as well as a mental process (thinking) that “can be performed in the human mind, or by a human using a pen and paper”

Concepts relating to interpersonal and intrapersonal activities, such as managing relationships or transactions between people, social activities, and human behavior, satisfying or avoiding a legal obligation; advertising, marketing, and sales activities or behaviors, and managing human mental activity.

Mathematical concepts such as mathematical algorithms, mathematical relationships, mathematical formulas, and calculations.

Concepts outside these clusters have not been identified as abstract ideas.
Step 2B: Does the claim recite additional elements that amount to significantly more than the judicial exception?

The additional claim elements should be considered both individually and as an ordered combination.

- Identify the additional recited elements.
- Analyze the elements
  - Individually, and
  - As an ordered combination.
- Refer to the Guidance.
“Significantly More” Analysis

Prior court findings assist in determining whether limitations provide significantly more than an abstract idea in a claim.

### May provide “significantly more”
- Improvements to another technology or technical field
- Improvements to the functioning of the computer itself
- Applying the judicial exception with, or by use of, a particular machine
- Effecting a transformation or reduction of a particular article to a different state or thing
- Adding a specific limitation other than what is well-understood, routine and conventional in the field
- Adding unconventional steps that confine the claim to a particular useful application
- Other meaningful limitations beyond generally linking the use of the judicial exception to a particular technological environment

### May not provide
- Generic computer performing generic computer function
- Words equivalent to “apply the abstract idea”
- Mere instructions to implement an abstract idea on a computer
- Insignificant extrasolution activity, such as mere data gathering
- Generally linking the use of the abstract idea to a particular technological environment or field of use
- Merely appending well understood, routine, conventional activities previously known to the industry, specified at a high level of generality
Step 2B: Conclusions

• If the claim as a whole recites additional elements that amount to significantly more than the judicial exception, **it qualifies as eligible subject matter.**

• If the claim as a whole does not recite additional elements that amount to significantly more than the judicial exception, **the claim is not eligible.** Examiners are to reject the claim under 35 U.S.C. 101.

• In either case, examiners should continue to examine under other statutory provisions: 35 U.S.C. 101 (utility, inventorship and double patenting), 102, 103, 112.
Example 21 – Transmission of Stock Quote Data

The invention is directed to a stock quote alert subscription service where subscribers receive customizable stock quotes on their local computers from a remote data source.
Example 21 – Transmission of Stock Quote Data

Background

- The invention addresses two issues:
  - Many previous subscription services simply transmitted all available stock quote information to the user at a given time, which required the subscriber to sort through large amounts of data to identify relevant stock quotes, and often sent information at an inconvenient time (e.g., after the stock exchanges are closed).
  - Existing services experienced challenges when attempting to notify a subscriber whose computer was offline (not connected to the Internet) at the time of the alert, since many stock quotes are time sensitive.
The Disclosed Invention

A transmission server receives data from one or more stock subscription services.

The transmission server builds stock quote alerts by filtering the data, assembling the stock information with a URL to the data source and formatting the information into data blocks based on user preferences.

If the subscriber’s computer is offline, the data blocks are transmitted to the subscriber’s wireless device which, when connected to the computer, causes the computer to auto-launch a stock viewer application to display the alert.
Claim 1 (Original)

A method of distributing stock quotes over a network to a remote subscriber computer, the method comprising:

receiving stock quotes at a transmission server sent from a data source over the Internet, the transmission server comprising a microprocessor and a memory that stores the remote subscriber’s preferences for information format, destination address, specified stock price values, and transmission schedule, wherein the microprocessor

- filters the received stock quotes by comparing the received stock quotes to the specified stock price values;
- generates a stock quote alert from the filtered stock quotes that contains a stock name, stock price and a universal resource locator (URL), which specifies the location of the data source;
- formats the stock quote alert into data blocks according to said information format; and
- transmits the formatted stock quote alert to a computer of the remote subscriber based upon the destination address and transmission schedule.
The claim recites a series of acts for distributing stock quotes to selected remote devices. Thus, the claim is directed to a process, which is one of the statutory categories of invention.

Step 1: YES
Step 2A: Is the claim directed to an abstract idea?

An idea standing alone such as a mental process (thinking) that can be performed in the human mind or by a human using pen and paper.

Court Identified Abstract Ideas

- Using categories to organize, store and transmit information (Cyberfone)
- Comparing new and stored information and using rules to identify options (SmartGene)
- Collecting and comparing known information (Classen)
- Obtaining and comparing intangible data (Cybersource)

Claim 1 (Original)

A method of distributing stock quotes over a network to a remote subscriber computer, the method comprising:

receiving stock quotes at a transmission server sent from a data source over the Internet, the transmission server comprising a microprocessor and a memory that stores the remote subscriber’s preferences for information format, destination address, specified stock price values, and transmission schedule, wherein the microprocessor

  filters the received stock quotes by comparing the received stock quotes to the specified stock price values;

  generates a stock quote alert from the filtered stock quotes that contains a stock name, stock price and a universal resource locator (URL), which specifies the location of the data source;

  formats the stock quote alert into data blocks according to said information format; and

  transmits the formatted stock quote alert to a computer of the remote subscriber based upon the destination address and transmission schedule.
Step 2A: Is the claim directed to an abstract idea?

Yes, the claim recites comparing and formatting stock quote information (red text) which is similar to the concepts found abstract previously by the courts (e.g. organizing information for transmission in Cyberfone).

Step 2A: Yes
Step 2B: Significantly more than the abstract idea?

Additional Elements

The claim recites the additional limitations of a transmission server with
- A memory that stores subscriber preferences,
- A transmitter that receives and sends information over the Internet, and
- A microprocessor that performs the generic functions of comparing and formatting information.
Step 2B: Significantly more than the abstract idea?

The transmission server is recited at a high level of generality and only performs generic computer functions, which alone, do not amount to significantly more than the abstract idea.

The Internet limitation is simply a field of use and, so does not add significantly more.

Viewing the limitations as an ordered combination does not add anything further than looking at the limitations individually.

Step 2B: No. The claim is not patent eligible.

Claim 1 (Original)

A method of distributing stock quotes over a network to a remote subscriber computer, the method comprising:

receiving stock quotes at a transmission server sent from a data source over the Internet, the transmission server comprising a microprocessor and a memory that stores the remote subscriber’s preferences for information format, destination address, specified stock price values, and transmission schedule, wherein the microprocessor

- filters the received stock quotes by comparing the received stock quotes to the specified stock price values;
- generates a stock quote alert from the filtered stock quotes that contains a stock name, stock price and a universal resource locator (URL), which specifies the location of the data source;
- formats the stock quote alert into data blocks according to said information format; and
- transmits the formatted stock quote alert to a computer of the remote subscriber based upon the destination address and transmission schedule.
Claim 1 (amended)

A method of distributing stock quotes over a network to a remote subscriber computer, the method comprising:

providing a stock viewer application to a subscriber for installation on the remote subscriber computer;

receiving stock quotes at a transmission server sent from a data source over the Internet, the transmission server comprising a microprocessor and a memory that stores the remote subscriber’s preferences for information format, destination address, specified stock price values, and transmission schedule, wherein the microprocessor

filters the received stock quotes by comparing the received stock quotes to the specified stock price values;

generates a stock quote alert from the filtered stock quotes that contains a stock name, stock price and a universal resource locator (URL), which specifies the location of the data source;

formats the stock quote alert into data blocks according to said information format; and

transmits the formatted stock quote alert over a wireless communication channel to a wireless device associated with a subscriber to a computer of the remote subscriber based upon the destination address and transmission schedule,

wherein the alert activates the stock viewer application to cause the stock quote alert to display on the remote subscriber computer and to enable connection via the URL to the data source over the Internet when the wireless device is locally connected to the remote subscriber computer and the remote subscriber computer comes online.
**Step 1- Statutory Category?**

<table>
<thead>
<tr>
<th>The claim recites a series of acts for distributing stock quotes to selected remote devices. Thus, the claim is directed to a process, which is one of the statutory categories of invention.</th>
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*Step 1: YES*
Step 2A: Is the claim directed to an abstract idea?

Yes, the amended claim recites the same concept of comparing and formatting stock quote information as the original claim (red text). As discussed previously, this concept is similar to the concepts the courts have identified as abstract ideas.

Claim 1 (amended)

A method of distributing stock quotes over a network to a remote subscriber computer, the method comprising:

- providing a stock viewer application to a subscriber for installation on the remote subscriber computer;
- receiving stock quotes at a transmission server sent from a data source over the Internet, the transmission server comprising a microprocessor and a memory that stores the remote subscriber’s preferences for information format, destination address, specified stock price values, and transmission schedule, wherein the microprocessor filters the received stock quotes by comparing the received stock quotes to the specified stock price values;
- generates a stock quote alert from the filtered stock quotes that contains a stock name, stock price and a universal resource locator (URL), which specifies the location of the data source;
- formats the stock quote alert into data blocks according to said information format; and
- transmits the formatted stock quote alert over a wireless communication channel to a wireless device associated with a subscriber based upon the destination address and transmission schedule, wherein the alert activates the stock viewer application to cause the stock quote alert to display on the remote subscriber computer and to enable connection via the URL to the data source over the Internet when the wireless device is locally connected to the remote subscriber computer and the remote subscriber computer comes online.
Step 2B: Significantly more than the abstract idea?

Do these additional limitations when considered both individually and as an ordered combination amount to significantly more than the abstract idea?

Additional Elements

Transmission server with
- A memory that stores subscriber preferences,
- A transmitter that transmits information over a data channel, and
- A microprocessor that performs the generic functions of comparing and formatting information.

A wireless device to receive information over a data channel and locally transmit that information to a subscriber computer.

A stock quote viewer application that causes the stock quote alert to display on the subscriber computer and enables a connection from the subscriber computer to the data source over the Internet when the subscriber computer comes online.
Step 2B: Significantly more than the abstract idea?

- The additional limitations, as an ordered combination, address the Internet centric challenge of alerting a subscriber when their computer is offline with a claimed solution necessarily rooted in computer technology.

- These are meaningful limitations beyond simply applying the abstract idea on the Internet.

Claim 1 (amended)

A method of distributing stock quotes over a network to a remote subscriber computer, the method comprising:

- providing a stock viewer application to a subscriber for installation on the remote subscriber computer;
- receiving stock quotes at a transmission server sent from a data source over the Internet, the transmission server comprising a microprocessor and a memory that stores the remote subscriber’s preferences for information format, destination address, specified stock price values, and transmission schedule, wherein the microprocessor
  - filters the received stock quotes by comparing the received stock quotes to the specified stock price values;
  - generates a stock quote alert from the filtered stock quotes that contains a stock name, stock price and a universal resource locator (URL), which specifies the location of the data source;
  - formats the stock quote alert into data blocks according to said information format; and
  - transmits the formatted stock quote alert over a wireless communication channel to a wireless device associated with a subscriber based upon the destination address and transmission schedule,
- wherein the alert activates the stock viewer application to cause the stock quote alert to display on the remote subscriber computer and to enable connection via the URL to the data source over the Internet when the wireless device is locally connected to the remote subscriber computer and the remote subscriber computer comes online.

Step 2B: Yes – the claim is patent eligible
Next Steps: Feedback and Training

The Interim Eligibility Guidance represents a stage in an iterative process towards improved clarity in §101.

The USPTO continues to seek improvement by
- reviewing comments to the Guidance and
- closely watching Federal Circuit decisions for further developments.

The USPTO maintains a web site for its examination training materials:
Questions?