Recent Cases on Subject Matter Eligibility

35 USC § 101

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Topics

• Backdrop
• Alice refresh
• Recent Cases
• Panel Observations / Q & A
Patent Issuances of Software Patents
Outside of Business Method Patents, Minor Impact

Total Decline: 4074
Class 705 Decline: 2715
Other Software: 4%

Source: [https://www.uspto.gov/web/offices/ac/ido/oeip/taf/cbcby.htm](https://www.uspto.gov/web/offices/ac/ido/oeip/taf/cbcby.htm)
US Classes: 703-707, 709, 715-719, 726
Overall PTO Allowance Rates are Largely Unchanged
Only Business Methods Dramatically Impacted


Life is no longer Grim for Patentees

<table>
<thead>
<tr>
<th>Percentage of All 101 Decisions Resulting in Invalidity</th>
<th>~Q3 ‘14-~Q2 ‘16</th>
<th>~Q3’16</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Courts</td>
<td>70%</td>
<td>60.5%</td>
</tr>
<tr>
<td>Federal Circuit</td>
<td>95%</td>
<td>83.3%</td>
</tr>
<tr>
<td>District Court</td>
<td>66%</td>
<td>53.4%</td>
</tr>
<tr>
<td>Patents</td>
<td>66%</td>
<td>45.4%</td>
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DDR Holdings 12/14
Enfish 5/16
Bascom 6/16
McRO 9/16
AmDocs 11/16

Alice 2-Step

1. Determine whether the claims are directed to a patent-ineligible concept (law of nature, natural phenomena, abstract idea)
2. Ask “what else is there in the claims before us?”
   - “To answer that question, we consider the elements of each claim both individually and as an ordered combination to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application. We have described step two of this analysis as a search for an ‘inventive concept’—i.e., an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’”
DDR Holdings v. Hotels.com

• Fed. Cir. December 5, 2014 (Wallach, Meyer*, Chen)
• Addressing a problem specific to the technology
• Reasoning
  – “Here, we note that the ’399 patent’s asserted claims do not recite a mathematical algorithm. Nor do they recite a fundamental economic or longstanding commercial practice. Although the claims address a business challenge (retaining website visitors), it is a challenge particular to the Internet.”
  – “these claims stand apart because they do not merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet. Instead, the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.”
• Preemption
  – Fn. (5): “On a fundamental level, the creation of new compositions and products based on combining elements from different sources has long been a basis for patentable inventions.”
  – “Unlike the claims in Ultramercial, the claims at issue here specify how interactions with the Internet are manipulated to yield a desired result
  – “It is also clear that the claims at issue do not attempt to preempt every application of the idea of increasing sales by making two web pages look the same...Rather, they recite a specific way to automate the creation of a composite web page by an “outsource provider”
2015 – Some interesting developments

• Mortgage Grader, Inc. v. First Choice Loan Services (O’Malley, Taranto, Stark)
  – January 20, 2015
  – Ok to amend invalidity contentions to include lack of patentable eligibility
  – “Ultramercial III demonstrates that a § 101 defense previously lacking in merit may be meritorious after Alice. This scenario is most likely to occur with respect to patent claims that involve implementations of economic arrangements using generic computer technology, as the claims do here.
2015 – Some interesting developments

• *OIP Technologies, Inc. v. Amazon.com, Inc.* (Taranto, Mayer, Hughes)
  – June 11, 2015
  – A method of price optimization in an e-commerce environment.
    • “Because we agree with the district court that the patent-in-suit claims no
      more than an abstract idea coupled with routine data-gathering steps and
      conventional computer activity, we affirm.”
    • “[W]ithout the ‘insignificant computer-based limitations,’ the claims merely
      ‘describe what any business owner or economist does in calculating a demand
      curve for a given product.’”
    • “And that the claims do not preempt all price optimization or may be limited
      to price optimization in the e-commerce setting do not make them any less
      abstract.”
Enfish v. Microsoft

• Fed. Cir. May 12, 2016 (Moore, Taranto, Hughes)
• An improvement of technology (Step 1)
  – “We thus see no reason to conclude that all claims directed to improvements in computer-related technology, including those directed to software, are abstract and necessarily analyzed at the second step of Alice, nor do we believe that Alice so directs. Therefore, we find it relevant to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea, even at the first step of the Alice analysis.”
  – “For that reason, the first step in the Alice inquiry in this case asks whether the focus of the claims is on the specific asserted improvement in computer capabilities (i.e., the self-referential table for a computer database) or, instead, on a process that qualifies as an “abstract idea” for which computers are invoked merely as a tool.”
"The first step in the Alice inquiry in this case asks whether the focus of the claims is on the specific asserted improvement in computer capabilities (i.e., the self-referential table for a computer database) or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool”

“We do not read Alice to broadly hold that all improvements in computer-related technology are inherently abstract and, therefore, must be considered at step two. Indeed, some improvements in computer-related technology when appropriately claimed are undoubtedly not abstract, such as a chip architecture, an LED display, and the like. Nor do we think that claims directed to software, as opposed to hardware, are inherently abstract and therefore only properly analyzed at the second step of the Alice analysis. Software can make non-abstract improvements to computer technology just as hardware improvements can.”
Enfish v. Microsoft

• Preemption?
  – “Here, the claims are not simply directed to any form of storing tabular data, but instead are specifically directed to a self-referential table for a computer database.
  – “The [district] court determined that the patents’ self-referential concept could be satisfied by creating a table with a simple header row. But that is simply not the case. For example, step three of the algorithm described above explains that the table stores information related to each column in rows of that very same table, such that new columns can be added by creating new rows in the table.”
TLI Communications LLC v. AV Automotive, L.L.C.

- Fed. Cir. May 17, 2016 (Dky, Schall, Hughes)
- Ordinary use of physical components
  - “[W]e find that the claims are directed to the abstract idea of classifying and storing digital images in an organized manner and fail to add an inventive concept sufficient to confer patent eligibility.”
  - “[T]he specification makes clear that the recited physical components merely provide a generic environment in which to carry out the abstract idea of classifying and storing digital images in an organized manner.”
  - “The specification does not describe a new telephone, a new server, or a new physical combination of the two. The specification fails to provide any technical details for the tangible components, but instead predominately describes the system and methods in purely functional terms.”
  - “[The recited physical components behave exactly as expected according to their ordinary use. Although the claims recite that the abstract idea of classifying and storing digital images in an organized manner is carried out in a telephone system, the ’295 patent fails to provide the requisite details necessary to carry out that idea.”
BASCOM v. AT&T

• Fed. Cir. June 27, 2016 (Newman**, O’Malley, Chen)
• Filtering content retrieved from an Internet computer network
• New arrangement of known functionality
  – “We agree with the district court that filtering content is an abstract idea because it is a longstanding, well-known method of organizing human behavior”
  – “The inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art. As is the case here, an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.”
  – “The inventive concept described and claimed in the ’606 patent is the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user.
Reasoning

- “[F]iltering content is an abstract idea because it is a **longstanding, well-known method of organizing human behavior**, similar to concepts previously found to be abstract”
- “We agree with the district court that the **limitations of the claims, taken individually, recite generic computer, network and Internet components**, none of which is inventive by itself.”
- “However, we disagree with the district court’s analysis of the **ordered combination** of limitations.”
- “The claims do not merely recite the abstract idea of filtering content along with the requirement to perform it on the Internet, or to perform it on a set of generic computer components. ... [R]ather, they recite a **specific, discrete implementation of the abstract idea of filtering content.**”
Preemption matters?

- “Nor do the claims preempt all ways of filtering content on the Internet; rather, they recite a specific, discrete implementation of the abstract idea of filtering content. Filtering content on the Internet was already a known concept, and the patent describes how its particular arrangement of elements is a technical improvement over prior art ways of filtering such content.”
- “Intellectual Ventures I preempted all use of the claimed abstract idea on “the Internet, on a generic computer.”
- “Content Extraction preempted all use of the claimed abstract idea on well-known generic scanning devices and data processing technology.”
- “Ultramercial preempted all use of the claimed abstract idea on the Internet.”
- “Accenture preempted all use of the claimed abstract idea on generic computer components performing conventional activities.”
McRo v. Bandai Namco

• Fed. Cir. September 12, 2016 (Reyna, Taranto, Stoll)
• New methods with specific ways of obtaining results
• Animating lip synchronization and facial expression of three-dimensional characters
McRo v. Bandai Namco

• Reasoning
  – “Here, the claims are limited to rules with specific characteristics. As the district court recognized during claim construction, ‘the claims themselves set out meaningful requirements for the first set of rules: they ‘define a morph weight set stream as a function of phoneme sequence and times associated with said phoneme sequence.’”
  – “We disagree with Defendants’ arguments that the claims simply use a computer as a tool to automate conventional activity. While the rules are embodied in computer software that is processed by general-purpose computers, Defendants provided no evidence that the process previously used by animators is the same as the process required by the claims.”
Specific limitations solve preemption at Step 1

- “Whether at step one or step two of the Alice test, in determining the patentability of a method, a court must look to the claims as an ordered combination, without ignoring the requirements of the individual steps.”
- “The claimed rules here, however, are limited to rules with certain common characteristics, i.e., a genus.”
- “It is self-evident that genus claims create a greater risk of preemption, thus implicating the primary concern driving § 101 jurisprudence”
- “We therefore look to whether the claims in these patents focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.”
- The conventional approach “even if automated by rules, would not be within the scope of the claims because it does not evaluate sub-sequences, generate transition parameters or apply transition parameters to create a final morph weight set.”
- “The limitations in claim 1 prevent preemption of all processes for achieving automated lip-synchronization of 3-D characters.”
McRo v. Bandai Namco

• Observations
  – “The concern underlying the exceptions to §101 is not tangibility, but preemption.”
  – Mathematical rules do not render ineligible
    • “Defendants concede an animator’s process was driven by subjective determinations rather than specific, limited mathematical rules.
    • It is the incorporation of the claimed rules, not the use of the computer, that “improved [the] existing technological process” by allowing the automation of further tasks.
• The specification can help
  – “The patents criticize the preexisting keyframe approach as “very tedious and time consuming, as well as inaccurate due to the large number of keyframes necessary to depict speech.”
• September 30, 2016 (Dyk, Mayer**, Stoll*)
• What is the technological improvement
  – “There is no indication that the virus screening software installed on a conventional telephone network processor is any different than the virus screening software ‘[m]any computer users have . . . installed on their computers.’”
  – “[T]here is no claim here describing a particular method of incorporating virus screening into the Internet.”
  – Dissent: Case is like BASCOM – “‘the limitations of the claims, taken individually, recite generic computer, network and Internet components,’” the patent’s “‘particular arrangement of elements is a technical improvement over prior art ways of filtering such content.’”
Limiting preemption

- “[W]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.”
Synopsys, Inc. v. Mentor Graphics Corp.

- October 17, 2016 (Lourie, Moore, Chen)
- Logic circuit design process
- Technical details in claims
  - “[T]he claims do not call for the involvement of a computer.”
  - “[T]he method can be performed mentally or with pencil and paper.”
  - The “Patents were intended to be used in conjunction with computer-based design tools, the Asserted Claims are not confined to that conception.”
  - “[T]he claims do not call for any form of computer implementation of the claimed methods.”
Amdocs Ltd. v. Openet Telecom, Inc.

- November 1, 2016 (Newman, Plager, Reyna*)
- Merging data in a network-based filtering and aggregating platform / Reporting on the collection of network usage information records / Reporting on the collection of network usage information from a plurality of network devices / Generating a single record reflecting multiple services for accounting purposes.
Amdocs Ltd. v. Openet Telecom, Inc.

• “Abstract idea” is not defined
  – “Our cases generally follow the step one/step two Supreme Court format, reserving step two for the more comprehensive analysis in search of the ‘inventive concept.’ Recent cases, however, suggest that there is considerable overlap between step one and step two, and in some situations this analysis could be accomplished without going beyond step one.”
  – “Whether the more detailed analysis is undertaken at step one or at step two, the analysis presumably would be based on a generally-accepted and understood definition of, or test for, what an ‘abstract idea’ encompasses.”
  – “The problem with articulating a single, universal definition of ‘abstract idea’ is that it is difficult to fashion a workable definition to be applied to as-yet-unknown cases with as-yet-unknown inventions.”
Amdocs Ltd. v. Openet Telecom, Inc.

• Look at similar or parallel cases
  – “Instead of a definition, then, the decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided.”
  – “That is the classic common law methodology for creating law when a single governing definitional context is not available.”
1. A computer program product embodied on a computer readable storage medium for processing network accounting information comprising:
   computer code for receiving from a first source a first network accounting record;
   computer code for correlating the first network accounting record with accounting information available from a second source; and
   computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.
Amdocs Ltd. v. Openet Telecom, Inc.

• Applying comparison
  – “In this case, the claims are much closer to those in BASCOM and DDR Holdings than those in Digitech, Content Extraction, and In re TLI Commc’ns.”
  – “[E]ven if we were to agree that claim 1 is directed to an ineligible abstract idea under step one, the claim is eligible under step two because it contains a sufficient ‘inventive concept.’”
  – “In other words, this claim entails an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases).”
  – “solution requires arguably generic components, including network devices and “gatherers” which “gather” information. However, the claim’s enhancing limitation necessarily requires that these generic components operate in an unconventional manner to achieve an improvement in computer functionality.”
USPTO Guidance

• For *McRo*, look for:
  – “a teaching in the specification about how the claimed invention improves a computer or other technology” and
  – “a particular solution to a problem or a particular way to achieve a desired outcome defined by the claimed invention, as opposed to merely claiming the idea of a solution or outcome”

• For *BASCOM*:
  – “In Step 2B of the USPTO's SME guidance, examiners should consider the additional elements in combination, as well as individually, when determining whether a claim as a whole amounts to significantly more, as this may be found in the nonconventional and non-generic arrangement of known, conventional elements.”

• Update for *Amdocs*?
Rapid Litigation Management v. CellzDirect

• Fed. Cir. July 5, 2016 (Prost, Moore, Stoll)
• The ‘929 patent claims a method for producing a desired preparation of multi-cryopreserved hepatocytes capable of being frozen and thawed at least two times.
• “The district court identified in these claims what it called a ‘natural law’ – the cells’ capability of surviving multiple freeze-thaw cycles.”
Rapid Litigation Management v. CellzDirect

• Step 1 of Alice test
  – “It is enough in this case to recognize that the claims are simply not directed to the ability of hepatocytes to survive multiple freeze-thaw cycles. Rather, the claims of the ‘929 patent are directed to a new and useful laboratory technique for preserving hepatocytes.”
  – “The inventors certainly discovered the cells’ ability to survive multiple freeze-thaw cycles, but that is not where they stopped, nor is it what they patented. ... They employed their natural discovery to create a new and improved way of preserving hepatocyte cells for later use.”
  – “In recent cases, we found claims ‘directed to’ a patent-ineligible concept when they amounted to nothing more than observing or identifying the ineligible concept itself. Although the claims in each of these cases employed method steps, the end result of the process, the essence of the whole, was a patent-ineligible concept.”
  – “The same is not true here. The end result of the ‘929 patent claims is not simply an observation or detection of the ability of hepatocytes to survive multiple freeze-thaw cycles. Rather, the claims are directed to a new and useful method of preserving hepatocyte cells.”
  – “This new and improved technique, for producing a tangible and useful result, falls squarely outside those categories of inventions that are ‘directed to’ patent-ineligible concepts.”
Rapid Litigation Management v. CellzDirect

• Step 2 of Alice test
  – “Under step two, claims that are ‘directed to’ a patent-ineligible concept, yet also ‘improve[] an existing technological process,’ are sufficient to ‘transform[] the process into an inventive application’ of the patent-ineligible concept.”
  – The claims of the ‘929 patent ... recite an improved process for preserving hepatocytes for later use. The benefits of the improved process over the prior art methods are significant. The claimed method is used to create hepatocyte preparations that no longer exhibit unacceptable loss of viability.”
  – “[A]t step two, a claim that recites only ‘well-understood, routine, conventional activity already engaged in by the scientific community’ will not be patent eligible.”
  – “Here, the claimed process involves freezing and thawing hepatocytes twice. The individual steps of freezing and thawing were well known, but a process of preserving hepatocytes by repeating those steps was itself far from routine and conventional.”
Life Sciences Method Claims

• Step 1 of *Alice* test
  – Argue that the claimed methods are not “directed to” a judicial exception.
  – Argue that the end result of the claims is not simply an observation or identification of the judicial exception itself, but instead the claims recite a number of process steps that manipulate or transform the judicial exception to achieve a desired outcome.
  – Argue that the inventors employed their discovery to create a new and improved technique for producing a tangible and useful result.

• Step 2 of *Alice* test
  – Argue that the claimed methods improve an existing technological process.
  – Highlight the benefits of the improved process over prior art methods.
  – Add elements that are not well-understood, routine and conventional in the field, or add unconventional steps that confine the claim to a particular useful application.
Observations

• Claims
  – New arrangement of known functional elements
  – New method to achieve improved version of existing result
  – New method to achieve new result, not previously obtained
Observations

• Specification
  – Disclose benefits of overall approach, and if possible of each specific step in specification
  – Strategic use of background
  – Possible §112(f) help (Williamson v. Citrix)
Observations

• Litigation
  – Claim construction and specification play a significant role in drawing line between abstract claims versus specific claims directed towards technological improvements
  – Section 101 motion may be appropriate only if claim scope is already clear, or after claim construction
  – Factual record on conventional use of prior art and preemption may become more significant
    • Go beyond simply collecting data, aggregating, high level analysis, and display of data or results
Thank you

Rajiv Patel, Joe Hao, Isabell Fu, David Simon