

# 35 USC 101

Being in Two Places at the Same Time

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## Some Context: or, How we got here.

- Jefferson (France) and Madison (Virginia) were pen pals
- Jefferson - dead set against patents – “natural rights” theory
- Madison heavily in favor – US has few skilled artisans
- Jefferson – patents are monopolistic crony capitalism (business undertakings)
- Madison – if given for a limited time and scope; could create middle class
- Incentivize those with skills to “come to America”
- Madison wins – Jefferson writes statute (101) and is 1<sup>st</sup> Patent Examiner
- But – both agreed – No patents for business Methods (ever!)

## Digital Age: State Street (CAFC 1998)

- Opinion by Judge Rich – “produce a useful, concrete and tangible result.” Bingo!
- Opened Pandora’s Box for software implemented methods
- Filings Zoom: 25,000 - 125,000 per year (1991-2011).
- Justice Kennedy Critique (in eBay) - a "burgeoning number" of business-method patents were of "potential vagueness and suspect validity." (Perhaps a foretelling of what was to come.....)

## Bilski (S.Ct. 2008)

- CAFC Opinion had a “committee feel” – everyone had their own view
- Which precedent to follow?
- State Street test turned down as “exclusive test”
- Machine or transformation survives – patent does not: “abstract idea”
- Result = Mess
- S.Ct. to rescue! (never good for patent system)
- Did not solely endorse machine-or-transformation, but it did provide a "useful clue".
- But – 4/5 Justices would’ve held (computer implemented) business methods, ineligible!
- Scalia (RIP) saved business methods

## But it was not just Business Methods! It was a 101 conflagration.

- Mayo tossed out “natural principles” (preemption)
- Myriad tossed out Gene segments “product of nature”
- Alice tossed out (again) an abstract idea carried out on a computer
- Since Alice: 90% of Business Method patents at Fed. Cir. Invalidated thru 6/2015
- To survive the Mayo-Myriad-Alice inquiry you need “significantly more”
- Ugly-ugly-ugly
- Sequenom.....sad

## Two Places at Same Time: USPTO and Courtroom

- Deciding how to proceed thru the PTO is easy, if not predictable
- What do the guidelines say; and, how similar are you to what has been blessed
- Varies Art Unit to Art Unit, but you can get a “feel”
- In the Courthouse – deciding whether and when to enforce is tricky
- What is current state of CAFC/S.Ct. interpretation?
- Rule 12
- IPR, CBM, etc.
- Patent Values have receded (understatement....)

## Enfish LLC v. Microsoft Corp. (May 12, 2016)

- logical model for a computer database
- model includes all data entities in a single table
- patents describe this as “self-referential”
- multiple benefits flow from this design – speed/simplicity
- Software can make “non-abstract” improvements to computer technology just as hardware improvements can, and sometimes the improvements can be accomplished through either route. (Wow – shows keen understanding!)
- “the claims at issue in this appeal are not directed to an abstract idea within the meaning of Alice. Rather, they are directed to a specific improvement to the way computers operate, embodied in the self-referential table.”

## TLI Communications, LLC v. AV Automotive, LLC (May 17, 2016)

- Method and system for taking, transmitting, and organizing digital images
- Abstract idea: defined as “classifying and storing digital images in an organized manner.” No big deal.
- The claims were not directed to any specific improvement to computer functionality, but rather were directed to the use of “conventional technology in a well-known environment.” (Re-doing closet shelves....)
- The specification “predominately describes the system and methods in purely functional terms.”
- Generic computer components that operate in well-understood, routine, conventional ways, are insufficient to add inventive concept to an otherwise abstract idea.

## BASCOM v. AT&T (June 27, 2016)

- A system for filtering Internet content – with a “twist” (significantly more)
- Filtering system is located on a remote ISP server that associates each network account with (1) one or more filtering schemes; and, (2) at least one set of filtering elements from a plurality of sets of filtering elements, thereby allowing individual network accounts to “customize” the filtering of Internet traffic associated with the account.
- Filtering system avoids being “modified or thwarted by a computer literate end-user,” and avoids being installed on and dependent on “individual end-user hardware and operating systems” or “tied to a single local area network or a local server platform” by installing the filter at the ISP server
- 12b motion – so reversed and sent back (could be, in part, procedural result)

## Rapid Litigation Management v. CellzDirect (July 5, 2016)

- “Discovered” that some fraction of hepatocytes (i.e., liver cells) are capable of surviving multiple freeze-thaw cycles.
- Inventors developed an **improved process** of preserving hepatocytes
- Claims were not directed to a judicial exception (Step 2A) and, therefore, the 101 inquiry ended with a finding that the claims were patent eligible
- In my view, more-or-less over-rules Sequenom. (Good!)

## McRo v. Bandai (September 13, 2016)

- Automating a part of a 3D animation method (cartoon lip synching)
- District Court had determined that the claim was drawn to the abstract idea of automated rules-based lip synchronization of a 3D animation.
- Federal Circuit disagreed with this articulation of the abstract idea, reminding of previous admonitions about oversimplifying the claims by looking at them generally and failing to take into account the specific limitations in the claim itself.
- The claim uses the limited rules in a process specifically designed to achieve an **improved technological result** in conventional industry practice.

## FairWarning IP v. Latric Systems (October 11, 2016)

- Method of detecting improper access of a patient's protected health information (PHI) in a computer environment
- Analyzing records of human activity to detect suspicious behavior
- Collects information regarding accesses of a patient's personal health information, analyzes the information according to one of several rules to determine if the activity indicates improper access, and then provides notification if it determines that improper access has occurred.
- "The claims here are more like those in **Alice** than **McRo**...."
- The claims here, in contrast, are not directed to an **improvement in the way computers operate....**

## Amdocs (Israel) Limited v. Openet Telecom, Inc. (November 1, 2016)

- District Court: Abstract idea of correlating two network accounting records to enhance the first record. Not a sufficient “inventive concept”. (?; 102/103)
- Federal Circuit recognized that the claim of the ‘065 patent was patent eligible because it entails an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases).
- Limitations necessarily require that these generic components operate in an unconventional manner to achieve an **improvement in computer functionality**.

## What can we “learn” from 2016

- Improve the way a computer works.
- Explain that improvement – fully
- Claim that improvement – fully
- Generic computer elements are acceptable if used in “unconventional” ways
- There are “hardware” and “software” solutions to problems.

## Trading Technologies Int'l v. CQG – Non-Precedential (Fed. Cir. Jan. 18, 2017)

- Federal Circuit found claims to a graphical user interface (GUI) patent to be patent eligible. (PTAB Review – CBM – found claims ineligible – no surprise.)
- Method and system for the electronic trading of stocks, bonds, futures, options and similar products. (State Street – anyone?)
- The patents explain problems that arise when a trader attempts to enter an order at a particular price, but misses the price because the market moved before the order was entered and executed.
- Note: Legislative History of the AIA specifically includes mention from Senator Chuck Schumer (D-NY), the champion for CBM, that GUI patents were not intended to be susceptible to CBM review at the PTAB. (Go figure...)

## Intellectual Ventures v. Capital One, 850 F.3d 1332 (Fed. Cir. 2017)

- Directed to a system and method for editing XML documents. (For those w/o “programming” skills.)
- Abstract Idea: concept embodied by the limitations merely encompass the abstract idea itself of organizing, displaying, and manipulating data of particular documents.
- No more than routine steps of data collection and organization using generic computer components and conventional computer data processing activities.
- Mere fact that the inventor applied his own “coined” labels to conventional structures did not make the underlying concept inventive.

## Thales Visionix Inc. v. U.S., 850 F.3d 1343 (Fed. Cir. 2017)

- U.S. Court of Federal Claims judgment on the pleadings holding that claims of U.S. Patent No. 6,474,159 are directed to patent-ineligible subject matter.
- Inertial tracking system for tracking the motion of an object relative to a moving reference frame.
- Fed. Cir. Reversed: Claims provide a method that eliminates many “complications” inherent previous solutions for determining position and orientation of an object on a moving platform, with multiple advantages disclosed over the prior art in the specification. (a-la Enfish)
- Systems and methods that use inertial sensors in a **non-conventional manner** to reduce errors in measuring the relative position and orientation of a moving object on a moving reference frame. (Determined gravity within frame.)

## RecogniCorp, LLC v. Nintendo Co., 855 F.3d 1322 (Fed. Cir. 2017)

- Encode images in a way that required less memory and bandwidth.
- “[t]he inquiry often is whether the claims are directed to “a specific means or method” for improving technology or whether they are simply directed to an abstract end-result.”
- Fed. Cir.: “an abstract concept long utilized to transmit information.”
- What about the mathematical algorithm in the claims!?! (Diamond v. Diehr?)
- Adding one abstract idea (i.e., math) to another abstract idea (encoding and decoding) does not render a claim non-abstract. (Bam!)
- Bottom line – claim more, with more detail.

Credit Acceptance Corp. v. Westlake Services, 859  
F.3d 1044 (Fed. Cir. 2017)

- CBM review from PTAB (need I say more.....)
- “provid[ing] financing for allowing a customer to purchase a product selected from an inventory of products maintained by a dealer.”
- “..mere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology.”
- “The claims here focus **not** on such an **improvement** in computers as tools, as was the case in Enfish, but on certain independently abstract ideas that use computers as tools.” (Maybe this becomes the new “axiom”.)
- Too much like “Alice”.

Visual Memory LLC v. NVIDIA Corp., 867 F.3d 1253  
(Fed. Cir. 2017)

- Problem: computer systems at the time of filing frequently used a three tiers of memory to enhance performance – low speed, medium speed and high-speed memory, which were described as problematic for various reasons.
- Solution: create a memory system having **programmable characteristics**, which would allow it to be used with multiple different processors without any reduction in performance. (Included 263 frames of code!)
- “Our review of the ’740 patent claims demonstrates that they are directed to an improved computer memory system, not to the abstract idea of categorical data storage,” Judge Stoll wrote. “The specification explains that multiple benefits flow from the ’740 patent’s improved memory system.”

## Return Mail, Inc. v. U.S. Postal Service, 868 F.3d 1350 (Fed. Cir. 2017)

- CBM Review..... method for processing a plurality of undeliverable mail items.
- It teaches encoding useful information, such as the name and address of intended recipients, on mail items in the form of a two-dimensional barcode. Undeliverable mail items are returned to a processing location, where the barcodes are scanned. (and then forever lost.....(just kidding))
- The invention allows returned mail to be processed “virtually entirely automatically through the exchange of data files between computers.”
- So what – you used to computers to do what was done by hand.
- Abstract Idea w/o “significantly more”.

## Smart Systems Innovations v. Chicago Transit Authority (Oct. 18, 2017)

- Various methods of using a bankcard to fund mass transit rides through the use of an open-payment fare system. I.e., use “credit” card not “fare” card.
- The Federal Circuit panel was unconvinced by Smart Systems’ argument the claimed invention solved time of transaction issues at turnstiles.
- Claims recite the abstract idea of collecting financial data using generic computer components and, therefore, offer no inventive concept that transforms them into patent-eligible subject matter.
- Our take: “Payment gateways” will be perceived to be both abstract and non-inventive regardless of whether they address existing problems in an innovative way and incorporate tangible elements into the claim.

## Two-Way Media LTD. V. Comcast Cable Communications, LLC (Nov. 1, 2017)

- Real time info delivery system and metrics for assessing just how “real time”.
- The claims requires the functional **results** of “converting,” “routing,” “controlling,” “monitoring,” and “accumulating records,” but does not sufficiently describe how to achieve these results in a non-abstract way.
- No “there” there in the claims.
- Federal Circuit agreed with the district court conclusion that while the specification describes a system architecture as a technological innovation, the claim did not recite this architecture....
- The specification had the “goods”, the claims did not.

## Finjan, Inc. v. Blue Coat Sys. (Fed. Cir. Jan. 10, 2018)

- Identifying and protecting against malware.
- Alice Step 1: are claims “directed to” a patent-ineligible concept.
- A method of providing computer security by scanning a “downloadable” and attaching the results of that scan to the item itself in the form of a “security profile.”
- The profile “identifies suspicious code” allows the system to accumulate and utilize newly available, behavior-based information about potential threats.
- Because the subject matter is non-abstract, the Court did not need to analyze step two of Alice. Actual steps are recited: not just results!

## Finjan Claim

- A method comprising:
- receiving by an inspector a Downloadable;
- generating by the inspector a first Downloadable security profile that identifies suspicious code in the received Downloadable; and
- linking by the inspector the first Downloadable security profile to the Downloadable before a web server makes the Downloadable available to web clients.

## Take Away

- Make sure you claim a there – there. I.e., not just results, but also how you get there and/or what makes it happen.
- Make sure the specification is real, i.e., not just speculation. Explain what is going on and explain what makes it happen.
- Code is probably not a bad thing, if you have it. Make “it” more tangible.
- Solve a problem or riddle from the prior art.
- Apply discoveries to make something happen, i.e., make a new or refined treatment of therapy.

When I was an examiner back in the early 1980's, 35 USC 101 had only two inquiries: 1) Incredible utility (i.e., perpetual motion machines, cures for cancer, telepathy); and, 2) bare utility (i.e., making hair re-grow using mud and nettles, pet rocks, devices that did not function). End of inquiry. As you can imagine, this threshold was almost always reached and exceeded inasmuch as patent attorneys understood the threshold and would not have filed the application had it not met or exceeded this low barrier.

But, times change. Life forms become patentable (Chakrabarty, 1980) and software implemented methods became the rage (State Street, 1998). The popular press and academics began to rail against this newly generous scope of patent eligible subject matter and found sympathy in the form of various District Court Judges and, eventually, all the way to the Supreme Court. What began with *Bilski* (2010, abstract ideas are not patentable, but machine or transformation survives, barely), began to snowball, into *Myriad* (2013, genes segments are naturally occurring/products of nature), *Mayo* (2012, applying naturally occurring phenomena (metabolizing drugs) not patentable), and finally *Alice* (2014, code executing an otherwise ordinary method, doesn't make it patentable).

By now, the *Alice/Mayo* framework is the decisional approach adopted by the United States Supreme Court for determining whether a patent claim embody patent eligible subject matter. The *Alice/Mayo* framework requires the decision maker, whether a patent examiner (PTO), administrative tribunal (PTO, ITC) or reviewing court (Dist.Ct., CAFC) to ask and answer a series of questions before determining whether the patent claim in question constitutes patent eligible subject matter.

The first question (commonly referred to as Step 1) is whether the patent claim covers an invention from one of the four enumerated categories of invention defined in 35 U.S.C. §101 (i.e., is the invention a process, machine, article of manufacture, or composition of matter). If the answer to this question is no then the patent claim is patent ineligible. If the answer is yes the decision maker must move on to the next inquiry because the statutory test established by Congress is no longer the complete test for patent eligibility in the United States.

The second question (commonly referred to as Step 2A), where the *Alice/Mayo* framework truly begins, requires the decision maker to ask whether the patent claim seeks to cover one of the three specifically

identified judicial exceptions to patent eligibility. Although there is no textual support for the creation of any judicial exceptions to patent eligibility in the Patent Act, the Supreme Court has long legislated from the bench in this area and ignored the clear language of the statute. At the moment there are only three identified judicial exceptions, which are: laws of nature, physical phenomena and abstract ideas. If the claim does NOT implicate one of those judicial exception then the claim is patent eligible.

In the case where the patent claim seeks to cover a judicial exception to patent eligibility, the final question (commonly referred to as Step 2B) asks whether the inventive concept covered in the claimed invention added “significantly more” than the judicial exception, or whether the claimed invention did not add “significantly more” and, therefore, was seeking to merely cover the judicial exception.

The judicial exception at play when computer implemented inventions are claimed is the abstract idea exception. Unfortunately, the Supreme Court has intentionally refused to define the phrase “abstract idea,” pointing out in *Alice v. CLS bank* that they did not need to “labor” to define the term. Equally unfortunate, the Supreme Court has not defined the meaning of “significantly more.” Thus, the two critical terms of art in the *Alice/Mayo* framework have no accepted meaning! To say we are in the 101 “wilderness” is an understatement.

*Enfish LLC v. Microsoft Corp.* (May 12, 2016)

The patents at issue were directed to an innovative logical model for a computer database. Contrary to conventional logical models, the patented logical model includes all data entities in a single table, with column definitions provided by rows in that same table. The patents describe this as the “self-referential” property of the database. The patents explain that the claimed invention is an improvement, which the Federal Circuit would make a great deal about in their patent eligibility analysis. The patents teach that multiple benefits flow from this design. The Federal Circuit would go on to explain that the Supreme Court suggested in *Alice* that claims that improve the functioning of a computer might not succumb to the abstract idea exception.

From there the Federal Circuit said:

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, and sometimes the improvements can be accomplished through either route. 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.

The Federal Circuit explained that the claims at issue plainly focus on improvements to computer functionality. This led the panel to unanimously conclude, “the claims at issue in this appeal are not directed to an abstract idea within the meaning of Alice. Rather, they are directed to a specific improvement to the way computers operate, embodied in the self-referential table.” Thus, it was not necessary for the Federal Circuit to address Step 2B.

TLI Communications, LLC v. AV Automotive, LLC (May 17, 2016)

The patent at issue related to a method and system for taking, transmitting, and organizing digital images. With respect to the Alice/Mayo framework – Step 2A, the abstract idea was defined as “classifying and storing digital images in an organized manner.” The court pointed out that the claims were not directed to any specific improvement to computer functionality, but rather were directed to the use of conventional technology in a well-known environment. The Federal Circuit found that no claims exhibited an inventive solution to any problem presented. Further, the Federal Circuit explained that specification did not describe any new physical components or combinations, and failed to provide any technical details for the tangible components that were mentioned. Instead, the court explained that the specification “predominately describes the system and methods in purely functional terms.” The court also explained: “Likewise, the server is described simply in terms of performing generic computer functions such as storing, receiving, and extracting data.” Ultimately, the claims: (1) were not directed to a solution for a technological problem; and (2) did not attempt to solve “a challenge particular to the Internet.” As a result, the claims were held to be directed to an abstract idea under Step 2A. With respect to Step 2B, the court determined that the claims failed to recite any elements (either individually or when considered as an ordered combination) that transform the abstract idea into a patent-eligible application of that idea. Ultimately, the court reaffirmed that generic computer

components that operate in well-understood, routine, conventional ways, are insufficient to add inventive concept to an otherwise abstract idea.

#### BASCOM v. AT&T (June 27, 2016)

The claims generally recited a system for filtering Internet content. The claimed filtering system is located on a remote ISP server that associates each network account with (1) one or more filtering schemes and (2) at least one set of filtering elements from a plurality of sets of filtering elements, thereby allowing individual network accounts to customize the filtering of Internet traffic associated with the account. The patent explains that the advantages of the invention are found in the combination of the then-known filtering tools in a manner that avoids their known drawbacks. The claimed filtering system avoids being “modified or thwarted by a computer literate end-user,” and avoids being installed on and dependent on “individual end-user hardware and operating systems” or “tied to a single local area network or a local server platform” by installing the filter at the ISP server. Thus, the claimed invention is able to provide individually customizable filtering at the remote ISP server by taking advantage of the technical capability of certain communication networks.

Under Step 2A of the Alice/Mayo framework, the Federal Circuit agreed with the district court that the filtering of content is an abstract idea because “it is a long-standing, well-known method of organizing human behavior, similar to concepts previously found to be abstract.” With respect to Step 2B, the court acknowledged that the limitations of the claims, when viewed individually, do recite a generic computer network and Internet components, none of which is inventive by itself. Based on the procedural posture of the case (i.e., a motion to dismiss where all inferences are to be given to the non-moving party) the court explained that the specific method of filtering Internet content claimed could not as a matter of law be said to be conventional or generic. Ultimately, the Federal Circuit explained that the “claims do not merely recite the abstract idea of filtering content along with the requirement to perform it on the Internet... Nor do the claims preempt all ways of filtering content on the Internet.” Thus, the Federal Circuit determined that the inventive concept was found in the ordered combination of claim limitations (i.e., there was “significantly more”).

#### Rapid Litigation Management v. CellzDirect (July 5, 2016)

The inventors of the '929 patent discovered that some fraction of hepatocytes (i.e., liver cells) are capable of surviving multiple freeze-thaw cycles. Armed with this discovery, the inventors developed an improved process of preserving hepatocytes, claimed in the '929 patent. The Federal Circuit determined

that the claims were not directed to a judicial exception (Step 2A) and, therefore, the 101 inquiry ended with a finding that the claims were patent eligible. This life sciences case is on this list because of what was said with respect to the issue of preemption. On the issue of preemption, the Federal Circuit recognized that it is not the test for determining patent-eligibility, but explained that preemption is certainly an important consideration. In this case the defendant managed to engineer around the patent, which the court explained was in accordance with the conclusion that the claim is “not directed to a patent-ineligible building block of human ingenuity.”

This ruling, if applied outside the life sciences context, could be very important. In many instances engineering around a software patent claim to accomplish substitute functionality would frequently, if not almost always, be possible. There is much more to be decided with respect to the remaining viability of a preemption argument, but patent owners and applicants in the software space should absolutely explore “engineering around” arguments.

McRo v. Bandai (September 13, 2016)

The patents relate to automating a part of a 3D animation method. Essentially, the patents cover lip synchronization of animated characters so that the lips of the animated character move normally. The claims covered an improvement, which was pivotal in the Federal Circuit analysis. The district court had determined that the claim was drawn to the abstract idea of automated rules-based lip synchronization of a 3D animation. Under Step 2A, the Federal Circuit disagreed with this articulation of the abstract idea, reminding of previous admonitions about oversimplifying the claims by looking at them generally and failing to take into account the specific limitations in the claim itself. The Federal Circuit explained that the claims themselves set out meaningful requirements for a first set of rules and application of those rules. “When looked at as a whole, claim 1 is directed to a patentable, technological improvement over the existing, manual 3-D animation techniques. The claim uses the limited rules in a process specifically designed to achieve an improved technological result in conventional industry practice.” Therefore, the claim was not directed to an abstract idea and the court did not need to reach Step 2B.

On the issue of the role of preemption in the patent eligibility analysis, the Federal Circuit explained that the preemption concern arises if claims try to improperly monopolize the basic tools of scientific and technological work, not when they are directed to a specific invention. Thus, the court looks “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.”

FairWarning IP v. Latric Systems (October 11, 2016)

The claims generally covered a method of detecting improper access of a patient’s protected health information (PHI) in a computer environment. The Federal Circuit determined under Step 2A that the claims were directed to an abstract idea, which was defined as analyzing records of human activity to detect suspicious behavior. The analyzed claim merely collects information regarding accesses of a patient’s personal health information, analyzes the information according to one of several rules to determine if the activity indicates improper access, and then provides notification if it determines that improper access has occurred. The court explained that while the claims recite one of a few possible rules they were distinguished from *McRo* because in *McRo* there was a specific asserted improvement that transformed a process traditionally carried out by human artists into an automated process executed on computers. “The claims here are more like those in *Alice* than *McRo*,” the Federal Circuit wrote. “FairWarning’s claims merely implement an old practice in a new environment.” The Federal Circuit also distinguished *Enfish*, saying: “The claims here, in contrast, are not directed to an improvement in the way computers operate, nor does FairWarning contend as much.” With respect to Step 2B, the Federal Circuit concluded that after searching for “something more” there was nothing in the patent, either with respect to the individual limitations or as ordered combinations, that made the claims eligible.

Amdocs (Israel) Limited v. Openet Telecom, Inc. (November 1, 2016)

Under Step 2A, the district court determined that the claim was directed to the abstract idea of correlating two network accounting records to enhance the first record. Under Step 2B, the district court found that the claim did not add a sufficient inventive concept to confer eligibility. Without breaking its analysis down into a traditional framework that separated Step 2A from 2B, the Federal Circuit recognized that the claim of the ‘065 patent was patent eligible because it entails an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases). While the solution requires arguably generic components, the claim’s limitations necessarily require that these generic components operate in an unconventional manner to achieve an improvement in computer functionality. With respect to the ‘510 patent, the Federal Circuit explained that even if the claim were viewed as being directed to an abstract

idea under Step 2A, as opposed to an improvement in computer functionality, the claim would add significantly more under Step 2B because the limitations all depend upon the system's unconventional distributed architecture. With respect to the '984 patent, even if the claim were directed to an abstract idea it would have added significantly more under Step 2B for the same reason as would the claim of the '510 patent.

While the decision in this case is somewhat difficult to follow because it is not broken down into the Step 2A and 2B framework as is most other decisions, it is important because it stands for the proposition that claims are not directed to an abstract idea when generic components are described in the claim to operate in unconventional ways to achieve an improvement in computer functionality.

What can we learn looking back on the 2016 cases? That this is a difficult standard to apply, and seems inconsistent and result oriented when you try!

2017

As a "preview for 2017": it is the necessity to have what is specifically innovative disclosed in the claims. Really. There were cases in 2017 where the Federal Circuit acknowledged that a patent eligible innovation may well have been disclosed in the specification, but which was not found in the claims. Wow. Many legacy software patents (prosecuted in the 1990's and 2000's) had the description of the technology (if one actually existed) only in the specification while the claims were written to be quite broad. The Federal Circuit, guided by the S.Ct.) now required both a thick technical description of the innovation and why it is an improvement (see *Enfish*) and incorporation of what is innovative into the claims! Today the extremely broad claims, allowed by the PTO in years gone by, do little more than contaminate the entire patent; the entire litigation arc will focus on the most broad and easily invalidated claim, which will be deemed representative.

Of course, means plus function claims would import the technological description of the specification into the claims, but do not forget the teachings of the Algorithm Cases, which require 100% of the algorithms disclosed in the specification when using means plus function claims. Even if you are not going to use means plus function claims that level of disclosure is most wise, assuming of course the client gives the practitioner sufficient time and budget to actually do what the law seems to be increasingly requiring.

*Trading Technologies Int'l v. CQG* – Non-Precedential (Fed. Cir. Jan. 18, 2017)

In a non-precedential opinion the Federal Circuit found claims to a graphical user interface (GUI) patent to be patent eligible.

The '132 and '304 patents describe and claim a method and system for the electronic trading of stocks, bonds, futures, options and similar products. The patents explain problems that arise when a trader attempts to enter an order at a particular price, but misses the price because the market moved before the order was entered and executed. Federal Circuit agreed with the district court that the claims do not relate to an abstract idea. The Federal Circuit added further that the graphical user interface does not represent a long known idea, which is a threshold criterion for abstract idea ineligibility. Cf. *DDR Holdings supra*. Notwithstanding the patent eligibility finding on Step 2A, both the district court and Federal Circuit agreed that even if the claims were abstract there was an inventive concept that amounted to significantly more.

The claims that have been found to be patent eligible under 35 U.S.C. 101 were under review by the Patent Trial and Appeal Board (PTAB) in a Covered Business Method (CBM) review because the PTAB believed the graphical user interface patent claims were likely patent ineligible. After this non-precedential ruling the PTAB did find the claims to the '304 patent to be patent eligible, agreeing with the Federal Circuit. (Notwithstanding, on the same day the PTAB terminated the CBM on the '304 patent the same panel of PTAB judges issued a final written decision finding the claims of another Technology Trading International GUI patent to be patent ineligible. See CBM2-15-00179.)

It is unfortunate that the Federal Circuit did not make this decision precedential. Still, the analysis should be at least somewhat instructive moving forward. It is also further worth noting that the Legislative History of the America Invents Act does specifically include mention from Senator Chuck Schumer (D-NY), the champion for CBM, that GUI patents were not intended to be susceptible to CBM review at the PTAB. It is also further worth noting that Trading Technologies has received patents on these same innovations in Europe where there is a prohibition on patenting business methods and a specific requirement that there be a technological solution to a technological problem in order for a patent to issue. When there is such a technological solution at CBM review is supposed to be prohibited based on the express language of the Statute.

*Intellectual Ventures v. Capital One*, 850 F.3d 1332 (Fed. Cir. 2017)

The claimed invention at issue was directed to a system and method for editing XML documents. The claimed invention creates the dynamic document based upon "management record types" ("MRTs")

and “primary record types” (“PRTs”). A PRT is a simple data structure that contains unspecified data extracted from XML documents and an MRT is merely a collection of PRTs.

Under Step 2A, the Federal Circuit determined the claimed invention was directed to an abstract idea, as the Court has previously concluded with patents reciting similar data manipulation steps. While the Federal Circuit noted that the data structures added a degree of particularity to the claims, the underlying concept embodied by the limitations merely encompass the abstract idea itself of organizing, displaying, and manipulating data of particular documents. According to the Court, the PRTs and MRTs are just defined labels for generic data types that transfer data from one type of electronic document to another.

With respect to Step 2B, the Federal Circuit explained that the mere fact that the inventor applied his own coined labels to conventional structures did not make the underlying concept inventive. Furthermore, although this patent claims to have met a need in the art to allow users to view and update XML documents in different formats, manipulate the data and perform actions without programming skills, the claims recited nothing inventive or transformative to achieve that stated goal. In essence, whether the steps are viewed individually or as an ordered combination, the claimed invention recited no more than routine steps of data collection and organization using generic computer components and conventional computer data processing activities. Therefore, there was no inventive concept present in the claims to transform the abstract idea into a patent eligible application.

Thales Visionix Inc. v. U.S., 850 F.3d 1343 (Fed. Cir. 2017)

Thales Visionix, Inc. appealed from the U.S. Court of Federal Claims judgment on the pleadings holding that claims of U.S. Patent No. 6,474,159 are directed to patent-ineligible subject matter. The ‘159 patent discloses an inertial tracking system for tracking the motion of an object relative to a moving reference frame. The ‘159 patent claims provide a method that eliminates many “complications” inherent previous solutions for determining position and orientation of an object on a moving platform, with multiple advantages disclosed over the prior art in the specification.

Although the invention is certainly of the type that would be patent eligible, the claims themselves did not contain as much detail as they could. Nevertheless, the Federal Circuit explained the claims are not merely directed to the abstract idea of using “mathematical equations for determining the relative position of a moving object to a moving reference frame,” as the Claims Court found. Rather, the Federal Circuit found the claims to be directed to systems and methods that use inertial sensors in a

non-conventional manner to reduce errors in measuring the relative position and orientation of a moving object on a moving reference frame.

“Just as claims directed to a new and useful technique for defining a database that runs on general-purpose computer equipment are patent eligible, *Enfish*, 822 F.3d at 1337-38, so too are claims directed to a new and useful technique for using sensors to more efficiently track an object on a moving platform.”

The presence of a mathematical equation did not doom the claims to being abstract. The Federal Circuit explained “the claims seek to protect only the application of physics to the unconventional configuration of sensors as disclosed. As such, these claims are not directed to an abstract idea and thus the claims survive Alice step one.”

With a different panel it would be easy to see this case going another way. What likely saved the claims was the specification explaining that the inertial sensors do not use a convention approach with respect to measuring inertial changes relative to the earth. Instead, the inertial sensors measure the gravitation field in the platform frame. This allowed the panel to follow *Enfish*. Still, it would have been preferable to draft the claims to incorporate that core uniqueness in the claim itself. Patents with an inventive concept disclosed in the specification but not in the claims were found patent ineligible in *RecogniCorp* and *Two-Way Media*, discussed *infra*.

*RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322 (Fed. Cir. 2017)

The patent in question, U.S. Patent No. 8,005,303, sought to encode images in a way that required less memory and bandwidth.

Under Step 2A, the Federal Circuit explained “[t]he inquiry often is whether the claims are directed to “a specific means or method” for improving technology or whether they are simply directed to an abstract end-result.” In this situation the Federal Circuit concluded that the claim was directed to an abstract idea of encoding and decoding image data, which they characterized as “an abstract concept long utilized to transmit information.” *RecogniCorp* argued *Diamond v. Diehr*, 450 U.S. 175 (1981) was dispositive in its favor because of the presence of a mathematical formula in the claims. The Federal Circuit explained that adding one abstract idea (i.e., math) to another abstract idea (encoding and decoding) does not render a claim non-abstract. The Federal Circuit distinguished *Diehr* by saying the Supreme Court

focused on the claim as a whole, and the patent claim in *Diehr* was directed to otherwise eligible subject matter, while the claim of the '303 patent was not.

Under Step 2B, the Federal Circuit found the claims lacked an inventive concept that transforms the claimed subject matter from an abstract idea into a patent-eligible application. The Federal Circuit distinguished *BASCOM Global Internet Services v. AT&T*, 827 F.3d 1341 (Fed. Cir. 2016) by saying the claims did not allege a particularized application of encoding and decoding image data, further pointing out that “claim 1 does not even require a computer; the invention can be practiced verbally or with a telephone.” That characterization by the Federal Circuit was disingenuous because the claim, a method claim, specifically required displaying images on a display, selecting facial features from an area on the display and then reproducing a composite image on a second display. How that could be accomplished verbally or over the telephone is not explained by the Federal Circuit, and in fact would be impossible. Having said that, the morale of the story here is probably to beware method claims, to make sure more tangible components are present in the claims, that the claims incorporate the inventive concept (not just the specification) and to more consciously fall into the safe harbor of *McRo, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), it is necessary for rules engine to both be specifically disclosed and incorporated into the claims.

*Credit Acceptance Corp. v. Westlake Services*, 859 F.3d 1044 (Fed. Cir. 2017)

This case began with the filing of a petition for CBM review of U.S. Patent No. 6,950,807, which includes both system and method claims directed to “provid[ing] financing for allowing a customer to purchase a product selected from an inventory of products maintained by a dealer.”

*Credit Acceptance* argued that the claims were not abstract because they improved the functionality of a general purpose computer by programming fundamentally new features. Under Step 2A, the Federal Circuit explained that mere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology. The Federal Circuit explained that the claims here focus not on such an improvement in computers as tools, as was the case in *Enfish*, but on certain independently abstract ideas that use computers as tools. Ultimately, the Federal Circuit concluded that there was “no meaningful distinction between this type of financial industry practice and “the concept of intermediated settlement” held to be abstract in *Alice*.”

Under Step 2B, the Federal Circuit explained that merely configuring generic computers in order to “supplant and enhance” an otherwise abstract manual process is precisely the sort of invention that the

Supreme Court in *Alice* deemed ineligible for patenting. In concluding that the claims do not add significantly more to an otherwise abstract idea the Federal Circuit explained that in this case the claims do not provide details as to any non-conventional software for enhancing the financing process. Ultimately the Federal Circuit found the claims not even arguably inventive and, therefore, insufficient to establish a sufficient inventive concept of an abstract idea.

*Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253 (Fed. Cir. 2017)

The patent at issue was U.S. Patent No. 5,93,740. The '740 patent teaches that computer systems at the time of filing frequently used a three tiers of memory to enhance performance – low speed, medium speed and high-speed memory, which were described as problematic for various reasons. The invention described in the '740 patent overcame the limitations of the prior art by creating a memory system having programmable characteristics, which would allow it to be used with multiple different processors without any reduction in performance.

“Our review of the '740 patent claims demonstrates that they are directed to an improved computer memory system, not to the abstract idea of categorical data storage,” Judge Stoll wrote. “The specification explains that multiple benefits flow from the '740 patent’s improved memory system.” Dissenting, Judge Hughes disagreed, saying that the claims covered “nothing more than a black box,” and that “the patent lacks any details about how [the invention’s purpose] is achieved.”

The majority found three flaws with Judge Hughes’ conclusion. First, the patent included an appendix having 263 frames of computer code. Thus, the majority found the assumption that those frames of computer code taught nothing was improper. “Second, whether a patent specification teaches an ordinarily skilled artisan how to implement the claimed invention presents an enablement issue under 35 U.S.C. § 112, not an eligibility issue under § 101,” Judge Stoll wrote. Third, the majority explained that the dissent assumes the innovative effort was found in the programming, but that assumption is contradicted by the patent specification itself. After pointing to various places within the specification that explained that the invention is an improved memory system, Judge Stoll concluded: “Configuring the memory system based on the type of processor connected to the memory system is the improvement in computer technology to which the claims are directed.”

*Return Mail, Inc. v. U.S. Postal Service*, 868 F.3d 1350 (Fed. Cir. 2017)

This case began as a CBM review at the PTAB. The representative claim was directed to a method for processing a plurality of undeliverable mail items. According to the specification, the claimed invention “overcomes the historical problems with prior art manual handling” and “does so quickly, more accurately, and at substantially less cost.” It teaches encoding useful information, such as the name and address of intended recipients, on mail items in the form of a two-dimensional barcode. Undeliverable mail items are returned to a processing location, where the barcodes are scanned. The scanned information is then processed, such as by obtaining corresponding updated address data from a computer or database, and the updated information is then electronically provided to the sender to be used as the sender deems appropriate. In other words, the claimed invention allows returned mail to be processed “virtually entirely automatically through the exchange of data files between computers.”

Under Step 2A, the Federal Circuit determined that the claimed invention was directed to an abstract idea. The Federal Circuit specifically pointed out that the encoding and decoding mail recipient information is a process that can be, and has been, performed in the human mind. Therefore, the claims simply recited an existing business practice with the benefit of generic computing technology, which is insufficient under Step 2A to result in a finding of patent eligibility.

Under Step 2B, the Federal Circuit pointed out that the claims only recite routine, conventional activities such as identifying undeliverable mail items, decoding data on those mail items, and creating output data. The claimed invention does not improve the functioning of the computer or barcode system. Instead, the claimed invention merely applies those functionalities in the context of processing returned mail. This was not enough to demonstrate the presence of an inventive concept to turn an otherwise abstract idea into patent-eligible subject matter.

Although irrelevant to the discussion of patent eligibility, it may be interesting to note that it is curious as to how these patent claims were susceptible to CBM review. In *Unwired Planet LLC v. Google Inc.*, 841 F.3d 1376 (Fed. Cir. 2016), the Federal Circuit had previously ruled that an invention that can be used for a financial business purpose does not mean that the patent qualifies for CBM review. In this case the invention could be used as part of a financial process, but could also be used for many more uses outside a financial context.

*Smart Systems Innovations v. Chicago Transit Authority* (Oct. 18, 2017)

The patents in question deal with various methods of using a bankcard to fund mass transit rides through the use of an open-payment fare system, which allows riders to conveniently and quickly access

mass transit by using existing bankcards, thereby eliminating the need for, and added operational cost of, dedicated fare-cards.

In its appeal, Under Step 2A, the Federal Circuit panel found that the asserted patent claims, when taken together, are directed to financial transactions in the field of mass transit and not directed to a new type of bankcard, turnstile, database or methods for processing data that would improve existing technological processes. The Federal Circuit panel was unconvinced by Smart Systems' argument the claimed invention solved time of transaction issues at turnstiles.

With respect to Step 2B, Smart Systems argued that the asserted claims solved a technical problem with conventional industry practice, and represent an unconventional way to make an electronic process better. The Federal Circuit disagreed, finding that the asserted claims failed to provide an inventive concept. The Federal Circuit explained the asserted claims recite the abstract idea of collecting financial data using generic computer components and, therefore, offer no inventive concept that transforms them into patent-eligible subject matter.

In dissent Judge Linn would have found the claims of two of the asserted patents to be patent eligible under Step 2A. More specifically, Judge Linn explained that to find the claims abstract the majority had to rewrite the claims, or at least ignore the specific limitations of the claims, which specifically relate to a transit system and incorporate various physical components.

The moral of the story here may well be that payment gateways will be perceived to be both abstract and non-inventive regardless of whether they address existing problems in an innovate way and incorporate tangible elements into the claim.

Two-Way Media LTD. V. Comcast Cable Communications, LLC (Nov. 1, 2017)

The patents at issue describe the invention as an improved scalable architecture for delivering real-time information. Embedded in the architecture is a control mechanism that provides for the management and administration of users who are to receive real-time information. The patents also describe monitoring network conditions and generating records about the real-time streams.

The claims at issue recite either: (1) a method for routing information using result-based functional language, (2) monitoring the delivery of real-time information to a user or users, or (3) measuring the

delivery of real-time information for commercial purposes. The claims requires the functional results of “converting,” “routing,” “controlling,” “monitoring,” and “accumulating records,” but does not sufficiently describe how to achieve these results in a non-abstract way. The proposed construction by Two-Way Media, that the claims are sufficiently tied to a particular scalable network architecture, were unpersuasive. The Federal Circuit explained that “[a]t best, the constructions propose the use of generic computer components to carry out the recited abstract idea, but that is not sufficient.” Therefore, the claims were found under Step 2A to be directed to an abstract idea.

Under Step 2B, the Federal Circuit found the claims lack an inventive concept, which precludes patent eligibility. Particularly important is the fact that Federal Circuit agreed with the district court conclusion that while the specification describes a system architecture as a technological innovation, the claim did not recite this architecture even under construction offered by Two-Way. The Federal Circuit further explained that the claim uses a conventional ordering of steps with conventional technology being used to achieve the desired result. Furthermore, the Federal Circuit did not see any inventive concept in the ordered combination of the limitations found in the claim, as can sometimes save a claim – See *BASCOM*. Thus, the claim failed to transform the abstract idea into something more and, therefore, the claim was not patent eligible.

#### New cases 2018

*Finjan, Inc. v. Blue Coat Sys.*, No. 2016-2520, 2018 U.S. App. LEXIS 601 (Fed. Cir. Jan. 10, 2018) (Before Dyk, Linn, and Hughes, J.) (Opinion for the court, Dyk, J.).

Finjan owns the '844, '731, '986 and '633 patents which are directed to identifying and protecting against malware. Finjan sued Blue Coat for infringement, and a jury found Blue Coat liable for infringement of all four patents, awarding Finjan approximately \$39.5 million. The court concluded that the '844 patent was directed to patent-eligible subject matter under 35 U.S.C. § 101. Blue Coat's motions for judgment as a matter of law and a new trial were denied.

The Federal Circuit first addressed subject matter eligibility of the '844 patent. Under *Alice Corp. v. CLS Bank Int'l*, it must first be determined whether the disputed claims are “directed to” a patent-ineligible concept. If they are, the court must consider whether claimed elements transform the claim into patent-eligible subject matter. The '844 patent is directed to a method of providing computer security by scanning a “downloadable” and attaching the results of that scan to the item itself in the form of a “security profile.” This allows access to be tailored for different users and ensures that threats are

identified before a file reaches a user's computer. The fact that the security profile "identifies suspicious code" allows the system to accumulate and utilize newly available, behavior-based information about potential threats. Therefore, the claims are directed to a non-abstract improvement in computer functionality, not an abstract concept of computer security. Blue Coat argued that the claims are abstract because they do not sufficiently describe a non-abstract implementation. However, the claims recite specific steps—generating a security profile that identifies suspicious code and linking it to a downloadable—that accomplish the desired results. They do not simply recite a result. Because the subject matter is non-abstract, the Court did not need to analyze step two of Alice. (Aside from 101 issues, the parties engaged in a series of procedural skirmishes as to JMOLs, and royalty/damage calculations, etc.)

The representative claim of U.S. Patent No. 6,154,844 (the '844 patent) was deemed to be claim 1, which reads:

A method comprising:

receiving by an inspector a Downloadable;

generating by the inspector a first Downloadable security profile that identifies suspicious code in the received Downloadable; and

linking by the inspector the first Downloadable security profile to the Downloadable before a web server makes the Downloadable available to web clients.



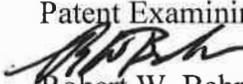
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**MEMORANDUM**

**DATE:** April 2, 2018

**TO:** Patent Examining Corps

**FROM:**   
Robert W. Bahr  
Deputy Commissioner  
for Patent Examination Policy

**SUBJECT:** Recent Subject Matter Eligibility Decisions

The most recent revision of the MPEP<sup>1</sup> was published on January 29, 2018 (the January 2018 MPEP Publication), and is current as of August 31, 2017. The January 2018 MPEP Publication incorporates the case law and guidance relating to patent subject matter eligibility under 35 U.S.C. § 101 as of August 31, 2017 into MPEP §§ 2106 through 2106.07. This memorandum discusses subject matter eligibility case law developments since August 31, 2017 through January of 2018.

The U.S. Court of Appeals for the Federal Circuit (Federal Circuit) recently issued two precedential decisions finding claims to software-related inventions patent eligible under 35 U.S.C. § 101 because they are not directed to an abstract idea. These cases are consistent with a growing body of case law, including *Enfish* and *McRO*, confirming that software-based innovations can make “non-abstract improvements to computer technology” and be deemed patent-eligible subject matter at the first step of the *Alice/Mayo* analysis (Step 2A in the Office’s subject matter eligibility guidance, see MPEP § 2106.04 *et seq.*).

In *Finjan Inc. v. Blue Coat Systems, Inc.*, 879 F.3d 1299 (Fed. Cir. 2018), the claimed invention involves a method of virus scanning that scans an application program, generates a security profile identifying any potentially suspicious code in the program, and links the security profile to the application program. The claims were held patent eligible because the court concluded that the claimed method recites specific steps that accomplish a result that realizes an improvement in computer functionality. In particular, the method generates a security profile that identifies both hostile and potentially hostile operations, and can protect the user against both previously unknown viruses and “obfuscated code.” This is an improvement over traditional virus scanning, which only recognized the presence of previously-identified viruses.

<sup>1</sup> The January 2018 Publication of Revision 08.2017 of the Ninth Edition of the MPEP.

The method also enables more flexible virus filtering and greater user customization. The invention in *Finjan* was found by the district court to be similar to the hypothetical claim published by the Office as Abstract Idea Example 1 (eligible).

In *Core Wireless Licensing S.A.R.L., v. LG Electronics, Inc.*, 880 F.3d 1356 (Fed. Cir. 2018), the claimed invention involves a graphical user interface (GUI) for mobile devices that displays an application summary of each application on the main menu while those applications are in an unlaunched state. The claims to computing devices were held patent eligible because the court concluded that they are directed to an improved user interface for electronic devices, not to the abstract idea of an index. In particular, the claims contain precise language delimiting the type of data to be displayed and how to display it, thus improving upon conventional user interfaces to increase the efficiency of using mobile devices. Finding the claims eligible, the court compared the improved user interface in the patent claims to the improved systems claimed in *Enfish, Thales, Visual Memory, and Finjan*.

These two decisions demonstrate that a claim reciting a software-related invention focused on improving computer technology may not be directed to an abstract idea. The Office's current subject matter eligibility guidance is consistent with these decisions.

The Federal Circuit has also issued several precedential decisions finding claims to be ineligible as directed to an abstract idea without including an inventive concept (see MPEP § 2106.05) in the claim. *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372 (Fed. Cir. 2017) (local processing of payments for remotely purchased goods); *Two-Way Media Ltd. v. Comcast Cable Communications, LLC*, 874 F.3d 1329 (Fed. Cir. 2017) (sending, directing, monitoring receipt of, and accumulating records about information; monitoring delivery of real-time information to users; measuring delivery of real-time information for commercial purposes); *Smart Systems Innovations, LLC v. Chicago Transit Authority*, 873 F.3d 1364 (Fed. Cir. 2017) (collection, storage, and recognition of data related to financial transactions for a mass transit system); *Secured Mail Solutions LLC v. Universal Wilde, Inc.*, 873 F.3d 905 (Fed. Cir. 2017) (using a marking affixed to the outside of a mail object to communicate information about the mail object). These decisions are referenced in the Chart of Subject Matter Eligibility Decisions and Eligibility Quick Reference Sheet (each updated monthly), which are available on the USPTO [Subject Matter Eligibility webpage](#).

Examiners should continue to assess patent eligibility in view of the current subject matter eligibility guidance, which has now been integrated into the recently released revision of the MPEP, particularly MPEP § 2106. See MPEP § 2106.04(a)(1) for abstract ideas and MPEP § 2106.06(b) for improvements to computer functionality.