



## 35 USC 101 Subject Matter Eligibility Cases – 2020 Update

In the initial 2018 publication, eligible and ineligible Court of Appeals for the Federal Circuit (CAFC) cases were described along with practice hints on how to be consistent with the eligible cases and distinguish the ineligible cases. This 2020 Update, provides (1) additional assessments of CAFC cases issued after the 2018 publication; and (2) a grouping of selected PTAB opinions that apply the USPTO's 2019 Subject Matter Eligibility Examination Guidance (the "USPTO Guidance"). The "Mappings sheet" has been updated to include a mapping for each new CAFC and PTAB case assessment as well as comparisons to the USPTO Guidance for patent eligibility considerations.

*This paper/spreadsheet was created by the authors for the Intellectual Property Owners Association IPO Patent Eligibility Subcommittee of the Software Related Inventions Committee to provide background to IPO members. It should not be construed as providing legal advice or as representing the views of IPO, the authors, or their employers.*

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## Introduction

Overview: In 2014, the U.S. Supreme Court decided *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, which dealt with whether patent claims directed to a computer-implemented scheme for mitigating “settlement risk” were patent eligible under 35 U.S.C. §101, or were instead drawn to a patent-ineligible abstract idea. The Court found that the claims were drawn to the abstract idea of intermediated settlement, and that merely requiring generic computer implementation failed to transform that abstract idea into a patent-eligible invention.

This document provides a digest of the current patent eligibility Federal Circuit caselaw in the wake of *Alice* from a software related inventions perspective. This December 2020 update provides (1) additional assessments of Federal Circuit cases applying the *Alice* test that have issued since the 2018 publication of this document ; and (2) a grouping of selected PTAB opinions that apply the USPTO's 2019 Subject Matter Eligibility Examination Guidance (the "USPTO Guidance"). The Mappings sheet has been updated to include a mapping for each new Federal Circuit and PTAB case assessment, including a column indicating USPTO examples that are directed to similar software related technology as covered by the respective mapped case. The Mappings sheet also now has several columns comparing decisions to the USPTO Guidance for *Alice* Step 2A Prong 1 abstract ideas and Prong 2 considerations. Note that while PTAB cases have generally followed the USPTO guidelines, the Federal Circuit has expressly stated that they are not bound by the USPTO Guidance and its adaptation of the *Alice* test for subject matter eligibility. In particular, the Federal Circuit in *In re Rudy* stated that "[w]e are not ... bound by the Office Guidance, which cannot modify or supplant the Supreme Court's law regarding patent eligibility, or our interpretation and application thereof." (Citing *In re Rudy*, 956 F.3d 1379, 1383 (Fed. Cir. April 24, 2020)). However, the Federal Circuit still concluded "that although a portion of the Board's analysis is framed as a recitation of the Office Guidance [i.e., no finding of a practical application of the claimed abstract idea], in this particular case the Board's reasoning and conclusion are nevertheless fully in accord with the relevant case law." (Id. at 1384).

As a result, recent decisions have found slight discrepancies between the analysis performed by the USPTO and the Federal Circuit. Once an abstract idea is found, the USPTO under the new guidelines focuses more on the presence of a "practical application" under Step 2A Prong Two and largely avoids discussions an "inventive concept" under the second step of *Alice*. In contrast, the Federal Circuit is more likely to move directly to "inventive concept" and rest its decision on patentability there, with practical application concerns folding into the existing *Alice* framework. In many cases this appears to be a distinction without a difference, but the differing approaches may require different treatment, briefing, and patent drafting to best survive scrutiny in both prosecution and litigation.

Discussion: The constitutional basis for the patent system is in Article I, Section 8, Clause 8 of the U.S. Constitution, which states that “[c]ongress shall have the power... [t]o promote the progress of science and **useful arts**, by securing for limited times to authors and **inventors** the exclusive right to their respective writings and **discoveries**” (emphasis added). Of particular note in this passage is that there is no mention of business methods or "abstract ideas."

Congress:

The Patent Act states that “[w]hoever 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.” Therefore, the code establishes broad categories of patent protection -- processes, machines, manufacture, or composition of matter.

The Patent Act expands on what is "new" in §§ 102 and 103. For example § 102 prohibits patenting of inventions that were previously disclosed or patented, identically, by others (i.e., requiring novelty in view of the prior art) and §103 prohibits patenting of inventions that were previously disclosed or patented, with only obvious differences, by others (i.e., requiring non-obviousness in view of the prior art ). Moreover, § 112 of the Patent Act provides additional conditions and requirements with regard to clarity and specificity.

The America Invents Act (AIA) touched on patent eligibility concerns by providing additional mechanisms to challenge issued patents at the USPTO. For example, the Covered Business Method (CBM) proceeding was a transitional program that sunset on September 16, 2020 and provided the ability to challenge business method patents at the PTO based on, for example, subject matter eligibility, novelty, obviousness, clarity/specificity. The AIA also includes Post Grant Review (PGR) and Inter Partes Reexamination (IPR) as other administrative options for challenging patent validity. PGR and IPR challenges are not limited to business method patents. The AIA provisions of CBM, PGR and IPR do not mention the concept of "abstract ideas."

Courts:

*State Street Bank* – In *State Street Bank & Trust Co. v. Signature Fin. Grp.*, 149 F.3d 1368 (Fed. Cir. 1998), the court considered whether claims directed to pooling the assets of mutual funds were directed to statutory subject matter. The court took an expansive view of § 101, stating that "[t]he plain and unambiguous meaning of § 101 is that any invention falling within one of the four stated categories of statutory subject matter may be patented, provided it meets the other requirements for patentability set forth in Title 35, i.e., those found in §§ 102, 103, and 112." *Id.* at 1372. The court ultimately found that the claims were patent eligible because they produced a useful, concrete and tangible result.

*Mayo* – Following the *State Street Bank* decision, filings for business method patents experienced an uptick in the USPTO. In *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289 (2012), the Court considered the eligibility of patent claims covering processes that help doctors who use thiopurine drugs to treat patients with autoimmune diseases determine whether a given dosage level is too low or too high. The Court articulated a two-step framework in which it is first determined whether the claims at issue are directed to a patent-ineligible concept (i.e., law of nature, natural phenomena, or abstract ideas). If so, the Court then asks whether the claim's elements, considered both individually and as an ordered combination, transform the nature of the claim into a patent-eligible invention. The Court determined that the claimed processes were natural laws that had not been transformed into patent eligible applications of those laws.

*Alice* – The Court applied the two step framework of *Mayo* to claims directed to using a third-party intermediary to mitigate settlement risk in *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014). The Court found that, under the first step of the *Mayo* framework, the claims were directed to the abstract idea of intermediated settlement. The Court also found that the claims failed under step two of the *Mayo* framework as not transforming the nature of the claim into a patent-eligible application. More particularly, the Court described step two as a search for an "inventive concept." *Id.* at 2355 (citing *Mayo* ).

With respect to the case law on patent subject matter eligibility, we note that the lineage for the term "abstract idea" from *Alice* is: *Alice* (US 2014) -> *Myriad* (US 2012) -> *Diehr* (US 1981) ->

*Rubber Tip Pencil* (US 1874) and *Le Roy* (US 1853). For example, in *Rubber Tip*, the Court held that “[e]verybody **knew**” the idea and in *Le Roy*, the Court noted that “if the principle is stated to be applicable to any special purpose, so as to produce any result **previously unknown**, in the way and for the objects described, the patent is good. It is no longer an abstract principle.”

Berkheimer - The Federal Circuit's decision in *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1370 (Fed. Cir. 2018) likely had the most dramatic impact on patent subject matter eligibility law since the Supreme Court's introduction of the two step eligibility framework test in *Alice* and *Mayo*. As discussed in further detail in this document under the case digest for *Berkheimer*, while confirming that “patent eligibility is ultimately a question of law,” the Federal Circuit held that “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field [under step two of the *Alice* test] is a question of fact.” *Id.* at 1368. Ultimately, the Court found that, when there is an issue of material fact when addressing this *Alice* step two inquiry, this issue cannot be decided on summary judgment as a matter of law.

USPTO's 2019 Subject Matter Eligibility Examination Guidance (the “USPTO Guidance”): As of the effective date of January 7, 2029, the USPTO Guidance revised the procedures for determining whether a patent claim or patent application claim is directed to a judicial exception (laws of nature, natural phenomena, and abstract ideas) under Step 2A of the Court's *Alice* test as set forth in the USPTO's Guidance in two ways.” 84 Fed. Reg. 50, Pg. 50 (Jan. 7, 2019). First, under a prong 1 of Step 2A, the USPTO Guidance “explains that abstract ideas can be grouped as, e.g., mathematical concepts, certain methods of organizing human activity, and mental processes” as extracted and synthesized from Federal Circuit and Supreme Court decisions. *Id.* at 50, 52-53. Second, under a prong 2 of Step 2A, the USPTO Guidance explains that a patent claim or patent application claim that recites a judicial exception is not “directed to” the judicial exception if the judicial exception is integrated into a practical application of the judicial exception. *Id.* at 50, 54-55. A claim that recites a judicial exception, but is not integrated into a practical application, is directed to the judicial exception under Step 2A of the *Alice* test and must then be evaluated under Step 2B (inventive concept) to determine the subject matter eligibility of the claim. *Id.* at 50, 55-56. The USPTO Guidance supports this clarification of the *Alice* test for these three categories of “abstract ideas” with claim examination examples corresponding to Federal Circuit and Supreme Court decisions. *Id.* at 55-56.

## Instructions

The mappings table can be used to quickly index into the Federal Circuit and PTAB caselaw analysis on the basis of technology (i.e., position in the software stack) or legal issue. Simply selecting the case name will jump you to the relevant portion of the discussion.

Legend for "Tribunal" column: Provides filtering between Federal Circuit cases ("CAFC") and PTAB cases.

Legend for "Eligibility" column:

"Y" - Federal Circuit or PTAB found all claims on appeal eligible under Alice Test or USPTO 2019 Guidance.

"N" - Federal Circuit or PTAB found all claims on appeal eligible under Alice Test or USPTO 2019 Guidance..

"Y & N" - Federal Circuit or PTAB found certain claims on appeal eligible under Alice Test or USPTO 2019 Guidance and other claims ineligible under the same test or for other reasons.

"N/A" - Federal Circuit found certain claims directed to abstract idea under step 1 of Alice Test but remanded for lower court factual inquiry on step 2 of Alice for "inventive concept".

"Probably Not" - See relevant case assessment for further explanation.

Legend for "AI/Machine Learning" column: "X" denotes that asserted patents in Federal Circuit or PTAB cases has claims directed to an aspect of Artificial Intelligence (e.g., AI Machine Learning). You'll find that only one PTAB case was identified as having AI related claims. But more AI related patents are likely to be appealed to the PTAB and Federal Circuit in the future.

Legend for "Guidelines examples" column:

Provides closest USPTO Guideline examples to the software technology covered in the patent applications reviewed by the applicable Federal Circuit or PTAB panel. See link below to "USPTO Guidelines Index To Examples" to access referenced examples. If this cell is left blank or "N/A", no USPTO Guideline examples were found to be applicable.

The judge tracker table provides an eye chart of which judges were involved in which Federal Circuit decisions.

The tabs for the summaries of the relevant PTAB decisions follow the Federal Circuit case tabs.

This document was prepared by IPO's Software-Related Inventions committee.

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The views and s expressed by the contributors are their own views and not necessarily the views of the law firms and companies with which the contributors are associated.

Additional information:

<https://www.uspto.gov/patent/laws-and-regulations/examination-policy/subject-matter-eligibility>

<https://www.uspto.gov/sites/default/files/documents/ieg-example-index.pdf>

Mappings

Case	Tribunal	Decision Date	Eligible?	Case Opinion Before/ After Publication of USPTO 2019 SME Guidelines	Software Category							Legal Issue						Contributor			
					User Interface	Data Structure	Data Transfer/ Network Transfer	AI / Machine Learning	Data Storage	Data Processing/Ot her	USPTO Guideline Examples	Directed To (Alice Step 1)	USPTO 2019 SME Guidelines - Revised Alice Step 2A			Revised Alice Step 2B					
													Mathematical Concept	Mental Processes	Certain Methods of Organizing Human Activity	Prong One			Integrated Into Practical Application	Inventive Concept (Alice Step 2)	Procedural Considerations
																Prong Two					
<a href="#">Aatrix</a> <a href="#">(data processing system for designing, creating, and importing data into a viewable form)</a>	CAFC	2/14/18	Y	Before	X	X						2, 34	"Like many claims that focus on software innovations, [claim 1] is a system claim [directed to] a data processing system which clearly requires a computer operating software, a means for viewing and changing data, and a means for viewing forms and reports. This is very much a tangible system." <i>Aatrix</i> , 882 F.3d 1121 at 1125. Fed. Cir. ruled that "district court erred in holding claim 1 ineligible because it was directed to intangible matter [i.e., abstract idea of collecting and organizing data] and should have instead performed an Alice/Mayo analysis of claim 1...and the remaining claims." <i>Id.</i> 1125-26. Thus, although Fed. Cir. found that Alice/Mayo could be resolved at step 1 (i.e., not abstract but "a tangible system"), also looked to Alice step 2 in to find "inventive concept" elements.						The claimed inventions "allowed data to be imported from an end user application without needing to know proprietary database schemas and without having to custom program the form files to work with each outside application." <i>Aatrix</i> , 882 F.3d 1121 at 1127. And also, "permit data to be retrieved from a user application and inserted into a form, eliminating the need for hand typing in the values and eliminating the risk of transcription error." <i>Id.</i>	Fed. Cir. 2018, appeal from M.D. Florida - vacated the district court's motion to dismiss based on every claim being ineligible under 35 USC 101, reversed its denial of <i>Aatrix's</i> motion for leave to file a second amended complaint, and remanded for further proceedings	Burton
<a href="#">Amdocs</a> <a href="#">(distributed networking enhancement of network accounting records)</a>	CAFC	11/1/16	Y	Before		X	X		X			2, 34	Held as directed to abstract idea of "correlating two network accounting records to enhance the first record". This was not refuted by the appeals court.					Claim entails an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases).	Appeal from US District Court for ED Virginia - Reversed and Remanded	Brink	
<a href="#">Ameranth</a> <a href="#">(information management and synchronous communications system for generating and transmitting menus)</a>	CAFC	11/29/16	N	Before						X		2, 23, 37	PTAB: generating a second menu from a first menu and sending the second menu to another location/CAFC: the ability to generate menus with certain features.		X		No	Nothing significantly more - "claims the addition of conventional computer components to well-known business practices"	Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board CBM decision of ineligibility	Forrest	
<a href="#">American Axle</a> <a href="#">(method for manufacturing a shaft assembly of a driveline system)</a>	CAFC	10/3/19	N	After						X		N/A	The claims are "directed to the utilization of a natural law (here, Hooke's law and possibly other natural laws) in a particular context."				No	"The claimed advance is simply controlling various known characteristics." Direction "to engage in a conventional, unbounded trial-and-error process does not make a patent eligible invention, even if the desired result... would be new and unconventional."	Appeal from the United States District Court for the District of Delaware	Moore	
<a href="#">Ancora Technologies</a> <a href="#">(method of restricting software operation within a license for use)</a>	CAFC	11/16/18	Y	Before					X			27	Claims are directed to an improvement in computer functionality that has specificity required to transform a claim from one claiming only a result to one claiming a way to achieve it.					N/A	Appeal from Western District of Washington	Bednarz	

<a href="#">Automated Tracking Sojs.</a> <a href="#">(identification, tracking, location, and/or surveillance of tagged objects anywhere in a facility or area)</a>	CAFC	7/30/19	N	After					X	36	The asserted claims in this case relate to processes and systems to perform the functions of "identification, tracking, location, and/or surveillance of tagged objects anywhere in a facility or area" for inventory control.			X	No	Fed Circuit found that "claim elements [viewed] individually or as an ordered combination...do not contain an inventive concept sufficient to confer patent eligibility."	Appeal from Northern District of Georgia	Burton
<a href="#">BASCOM.</a> <a href="#">(distributed networking based content filters)</a>	CAFC	6/27/16	Y	Before		X	X			2, 34	"Claims and their specific limitations do not readily lend themselves to a step-one finding that they are directed to a nonabstract idea" in contrast to Enfish.				Yes	"an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces"	Appeal from US District Court for ND Texas- Granted Motion to Dismiss is Vacated and Remanded	Brink
<a href="#">Berkheimer</a> <a href="#">(storing object structures with reduced redundancy)</a>	CAFC	2/14/18	Y	Before						2, 34	Claims 1-3 and 9 are directed to the abstract idea of parsing and comparing data; claim 4 is directed to the abstract idea of parsing, comparing, and storing data; and claims 5-7 are directed to the abstract idea of parsing, comparing, storing, and editing data. Resolved under Alice step 2 with respect to dependent claims 4-7.					Claims 1-3 and 9 do not capture the purportedly inventive concepts. "Claims 4-7, in contrast, contain limitations directed to the arguably unconventional inventive concept [of storing object structures in the archive without substantial redundancy [, which] improves system operating efficiency and reduces storage costs." <i>Berkheimer v. HP Inc.</i> , 881 F.3d 1360, 1370 (Fed. Cir. 2018).	Fed. Cir. 2018, appeal from N.D. Illinois - affirmed indefiniteness of claims 10-19 and claims 1-3 and 9 are ineligible under Alice test; but vacated grant of summary judgment that dependent claims 4-7 are ineligible under § 101 because there is a fact question as to whether the claims 4-7 "contain limitations directed to the arguably unconventional inventive concept described in the specification"	Burton
<a href="#">BSG</a> <a href="#">(considering historical usage information while inputting data)</a>	CAFC	8/15/18	N	Before	X				X	N/A	The district court concluded that the asserted claims "are directed to the abstract idea of considering historical usage information while inputting data."			X	No	The Court held that the claims lack an inventive concept sufficient to transform them into patent-eligible subject matter. The recitation of a database structure slightly more detailed than a generic database does not save the asserted claims at step one.	Appeal from the United States District Court for the Eastern District of Texas	Moore
<a href="#">Cardionet (an improved cardiac monitoring device)</a>	CAFC	4/17/20	Y	After					X	4, 40	Directed to an improved cardiac monitoring device and not to an abstract idea.				Yes	N/A	Appeal from the United States District Court for the District of Massachusetts	George
<a href="#">Cellspin Soft</a> <a href="#">(acquiring and transferring data from a Bluetooth enabled data capture device to one or more web services via a Bluetooth enabled mobile device)</a>	CAFC	6/25/19	N/A	After						N/A	"The asserted claims are drawn to the [abstract] idea of capturing and transmitting data from one device to another."			X	No	Fed Circuit held the district court erred in its step two analysis by not considering the ways the invention was alleged to be unconventional.	Appeal from the United States District Court for the Northern District of California	Drachtman
<a href="#">Chamberlain</a> <a href="#">(movable barrier operator system)</a>	CAFC	8/21/19	N	After					X	8, 21, 40, 41	"the broad concept of communicating information wirelessly, without more, is an abstract idea."	X			No	With respect to Step 2, the court found that the claims didn't include any inventive concept beyond the excluded abstract idea.	Appeal from the United States District Court for the Northern District of Illinois	George



<a href="#">ChargePoint</a> <a href="#">(adding networking capability to the charging station)</a>	CAFC	3/28/19	N	After			X							1, 2, 40	the claim is directed to the abstract idea of communication over a network for device interaction	X				No	The court said that the only inventive concept is the abstract idea itself.	Appeal from the United States District Court for the District	Forrest
<a href="#">Classen</a> <a href="#">(method of determining whether an immunization schedule affects the incidence or severity of a chronic immunemediated disorder in a treatment group)</a>	CAFC	8/31/11	Y & N	Before						X				40	Collecting and comparing known information		X			No	Claims that only provide the information were not eligible.  Claims that implement an immunization schedule were eligible.	Appeal from the United States District Court for the District of Maryland on Summary Judgment	Forrest
<a href="#">Core Wireless</a> <a href="#">(user interface with an application summary)</a>	CAFC	1/25/18	Y	Before	X									22, 23, 37	The Federal Circuit found that the claims were directed an "improved user interface," a non-abstract idea, rather than the abstract idea of an index. Specifically, the claims were "directed to a particular manner of summarizing and presenting information in electronic devices."					The court concluded that the claims an improvement to computer technology because they improved the ability of a user to use the computer.	Fed. Cir. 2018 appeal from ED Texas – Affirmed denial of LG's motion for summary judgement under 35 USC 101 and for JMOL that claims are anticipated and not infringed	George	
<a href="#">Customedia</a> <a href="#">(data delivery system for providing automatic delivery of multimedia data products from one or more multimedia data product providers)</a>	CAFC	3/6/20	N	After						X				7, 8, 36, 41	The claims are directed to data management and processing systems. "The claims of the '090 and '494 patents do not enable computers to operate more quickly or efficiently, nor do they solve any technological problem. They merely recite reserving memory to ensure storage space is available for at least some advertising data.	X			No	No - "the claims recite only generic computer components, including a programmable receiver unit, a storage device, a remote server and a processor."	Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board	Forrest	
<a href="#">CyberSource</a> <a href="#">(obtaining IP addresses of credit card transactions to detect fraud)</a>	CAFC	8/16/11	N	Before	X					X				7, 35	Focuses on machine or transformation. Correlating credit card numbers with IP addresses to detect fraud		X		No	Claims were interpreted very broadly and could be performed by a human mind - mental process.	Appeal from the United States District Court for the Northern District of California Summary Judgment of Ineligibility	Forrest	
<a href="#">Data Engine Technologies LLC</a> <a href="#">(navigating through three-dimensional electronic spreadsheets)</a>	CAFC	10/9/18	Y & N	Before	X									23, 37	Claims are directed to a specific and particular manner of navigating a three-dimensional spreadsheet that improves the efficient functioning of computers.					N/A	Appeal from District Court of Delaware	Bednarz	
<a href="#">DDR Holdings</a> <a href="#">(composite web page generation)</a>	CAFC	12/5/14	Y	Before	X	X								1, 34, 40	Cited several abstract ideas proposed by both parties and the dissent, but did not settle on one. Resolved at Step 2.				X	Clicking on a link to a vendor website from a host website results in the creation of a hybrid page that shows vendor content in a look and feel of the host website containing the link.	Fed. Cir. 2018 appeal from ED of Texas - Affirmed. Denial of JMOL appealed. Reviewed de novo.	Forrest	
<a href="#">Digitech</a> <a href="#">(a device profile and a method of generating a device profile)</a>	CAFC	7/11/14	N	Before	X	X				X				3, 5	A data structure	X			No	Not tangible - cites Nujiten	Appeal from the United States District Court for the Central District of California Summary Judgment of Ineligibility	Forrest	

<a href="#">Electric Power</a> <a href="#">(real-time performance monitoring of an electric power #69)</a>	CAFC	8/1/16	N	Before	X					X	40	Collecting, displaying, and analyzing information		X	No	Did not go beyond the abstract idea	Appeal from C.D. California - Decided August 1, 2016	Forrest
<a href="#">Enfish</a> <a href="#">(self-referential database)</a>	CAFC	5/12/16	Y	Before		X				X	34	The Federal Circuit held that the claims are not directed to an abstract idea and that the 101 inquiry must consider whether the claims' "character as a whole is directed to excluded subject matter." The Court then stated, "[w]e do not read Alice to broadly hold that all improvements in computer-related technology are inherently abstract" and noted that software can "make non-abstract improvements to computer technology just as hardware improvements can" under <i>Alice</i> .			N/A	Step 2 not reached given determination that claims recite eligible subject matter.	Appeal from Central District of California reversing summary judgment finding all claims invalid as ineligible under 101.	Kukkonen
<a href="#">Exergen</a> <a href="#">(detecting human body temperature)</a>	CAFC	3/8/18	Y	Before						X	N/A	The asserted claims employ a natural law to achieve their purpose [as] the claims recite a 'method of detecting human body temperature' and 'a body temperature detector			Yes	The Court held that the claimed measurement method "was not conventional, routine and well-understood" as supported by the specification.	Appeal from District Court of Massachusetts	Burton
<a href="#">Fairwarming</a> <a href="#">(detecting improper access of a patient's protected health information (PHI) in a computer environment)</a>	CAFC	10/11/16	N	Before						X	40	Collecting, analyzing and providing a notification		X	No	Sending a notification is not significantly more. An old practice in a new environment.	Appeal from Appeal from the United States District Court for the Middle District of Florida	Forrest
<a href="#">Finjan</a> <a href="#">(behavior based virus scanning)</a>	CAFC	1/10/18	Y	Before		X	X				1, 40, 41	A method of providing computer security by scanning a downloadable and attaching the results of that scan to the downloadable itself in the form of a "security profile."			Yes	A security profile identifies code in an inspector received downloadable that performs hostile or potentially hostile operations. The security profile is linked the downloadable before the downloadable is made available to web clients.	Fed. Cir. 2018 appeal from ND Cal. - Jury Decision Affirmed	Forrest
<a href="#">Glasswall Solutions Limited</a> <a href="#">(processing an electronic file to create a substitute electronic file containing only allowable content data)</a>	CAFC	12/20/18	N	Before						X	34	Claims are directed to comparing a file's content to a set of rules, extracting confirming data, and then duplicating the conforming data.		X		Claims do not amount to anything more than an instruction to apply the abstract idea of filtering nonconforming data and regenerating a file without it.	Appeal from Western District of Washington	Bednarz

<a href="#">In re Downing (resource planning forecast product)</a>	CAFC	12/7/18	N	Before						X	35	Claims are directed to concept of personal management, resource planning, or forecasting.		X (collecting, analyzing, and displaying information" - court referred to mental processes, but this is traditionally known as certain methods of organizing human activity)		Only generic computer components	Appeal from PTAB	Bednarz
<a href="#">In re Gitlin (implementing a multi- dimensional interpolation)</a>	CAFC	6/13/19	N	After						X	N/A	Claim recited a mathematical algorithm.	X		No	Merely calling for a mathematical algorithm to be performed more efficiently or with a particular input is not patent eligible.	Appeal from examination.	Kiklis
<a href="#">In re Villena (system for distributing real-estate related information)</a>	CAFC	8/29/18	N	Before						X	7	The claims are directed to the concept of property valuation, and "a fundamental economic practice long prevalent in our system of commerce."		X (fundamental economic practice)		No inventive concept - abstract idea on a computer.	Appeal from PTAB	Bednarz
<a href="#">In re Wang (phonetic symbol system)</a>	CAFC	6/20/18	N	Before		X					6	Not a physical or tangible thing and not a process as things are simply being defined and not acted upon.	X		No	Claims a set of phonetic symbols where each sound is uniquely represented by one or more letters - "e" for bed.	Non-precedential. Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. 13/219,680.	Forrest
<a href="#">Interval Licensing (displaying content on unused portions of a display device)</a>	CAFC	7/20/18	N	Before	X						37	"providing information to a person without interfering with the person's primary activity,"		X	No	Placing an abstract idea on a computer is not an inventive concept.	Appeal from judgment on the pleadings.	Kiklis
<a href="#">Int. Ventures (2015) (3 patents: calculating a budget for spending and sending summaries of spending; tailoring website information based on user preferences or browsing habits; organizing images that were scanned)</a>	CAFC	7/6/15	N	Before	X					X	1,7	Three patents in different fields. See case tab.		X	No	No technology based problem and solution.	Appeal from the United States District Court for the Eastern District of Virginia Summary Judgment finding of invalidity based on claim construction	Forrest
<a href="#">Int. Ventures (2017) (computer- implemented method for identifying and characterizing stored electronic files)</a>	CAFC	11/3/17	N	Before	X					X	8,34	Remotely accessing and retrieving user specified information		X	No	The claim lacked detail of how high level functions were done.	Appeal from the United States District Court for the Western District of Pennsylvania Motion to Dismiss	Forrest

<a href="#">Koninklijke</a> <a href="#">(error checking in data transmission)</a>	CAFC	11/15/19	Y	After						X	3, 4, 23, 37, 40	The Fed. Circ. held that claims 2-4 are patent-eligible under Alice Step 1 because "they are directed to a non-abstract improvement in an existing technological process (i.e., error checking in data transmission)."				N/A	N/A	Appeal from the United States District Court for the District of Delaware	Moore		
<a href="#">McRO</a> <a href="#">(set of phoneme sequence rules that define an output morph weight set stream)</a>	CAFC	9/13/16	Y	Before						X	3, 5, 39	The Federal Circuit found that the "specific structure of the claimed rules would prevent broad preemption of all rules-based means of automating lip-synchronization, unless the limits of the rules themselves are broad enough to cover all possible approaches." According to the Federal Circuit, the "limitations in claim 1 prevent preemption of all processes for achieving automated lip-synchronization of 3-D characters." The Federal Circuit thus held the representative claim was not directed to an abstract idea, and thus did not meet Alice step one, thereby ending the inquiry.					N/A Step 2 not reached given determination that claims recite eligible subject matter.	Appeal from Central District of California reversing grant of judgment on the pleadings	Kukkonen		
<a href="#">Packet Intelligence</a> <a href="#">(packet monitor for examining packets passing through a connection point on a computer network)</a>	CAFC	7/14/20	Y	After							40	Claim is directed to a packet monitor for examining packets passing through a connection point on a computer network and, therefore, patent-eligible.				N/A	N/A	Appeal from the United States District Court for the Eastern District of Texas	Moore		
<a href="#">SIPCO</a> <a href="#">(low-power, limited transmission range communication device)</a>	CAFC	9/25/19	Y	Before							8, 21, 40, 41	The Court found that SIPCO's patent was directed to a technical invention because "the claimed invention implements a communication system that connects an unconnected, remote device with a central station."				Yes	N/A	Appeal from the United States Patent and Trademark Office	George		
<a href="#">Solutran</a> <a href="#">(method for processing paper checks)</a>	CAFC	7/30/19	N	After							N/A	The claims are directed to the abstract idea of crediting a merchant's account as early as possible while electronically processing a check.				X	No	The claims "simply instruct the practitioner to implement the abstract idea with routine, conventional activity."	Appeal from the United States District Court for the District of Minnesota	Drachtman	
<a href="#">SRI International</a> <a href="#">(hierarchical event monitoring and analysis within an enterprise network)</a>	CAFC	3/20/19	Y	After							X	1, 2, 40	"The claims are directed to using a specific technique—using a plurality of network monitors that each analyze specific types of data on the network and integrating reports from the monitors—to solve a technological problem arising in computer networks: identifying hackers or potential intruders into the network."				X	Yes	N/A	Appeal from the United States District Court for the District of Delaware	Forrest
<a href="#">TecSec v. Adobe</a> <a href="#">(multi-level security for files transmitted over a data network)</a>	CAFC	10/23/20	Y	After								41	The Federal Circuit found the claims were not directed to an abstract idea because they contained technical limitations, such as "object-oriented key manager" and specified uses of a "label" in addition to encryption. The court reviewed the specification and found that the claims are "directed to solving a problem specific to computer data networks." And the court concluded "[i]n light of what the claim language and specification establish, we conclude that the claims are directed to improving a basic function of a computer data-distribution network, namely, network security."					N/A	N/A	Appeal from a summary judgment ruling finding the claims eligible at the district court.	Kiklis

<a href="#">Trading Technologies (2017)</a> <a href="#">(graphical user interface)</a>	CAFC	1/18/17	Y	Before	X						22, 23, 37	The Federal Circuit found that "the patents describe a trading system in which a graphical user interface 'display[s] the market depth of a commodity traded in a market' including various static and dynamic displays and this graphical user interface solves "problems of prior graphical user interface devices...relating to speed, accuracy and usability." Further, the Federal Circuit found that "the challenged patents do not simply claim displaying information on a graphical user interface" but rather "require a specific, structured graphical user interface paired with a prescribed functionality directly related to the graphical user interface's structure that is addressed to and resolves a specifically identified problem in the prior state of the art."					The Federal Circuit found that "the static price index as an inventive concept" that permits more efficient and accurate trade placement when using electronic trading systems. In addition, Federal Circuit found that the claimed trading system presents "specific technologic modifications to solve a problem or improve the functioning of a known system."	Fed. Cir. 2017 appeal from ND Ill. – Affirmed. Non-Precedential	George
<a href="#">Trading Technologies (2019)</a> <a href="#">(displaying market information on a screen)</a>	CAFC	4/30/19	N	After	X						N/A	"the focus of the claimed advance over the prior art" is providing a trader with additional financial information to facilitate market trades			X	No	The abstract idea cannot provide the inventive concept. The claims merely added additional data to a prior art user interface.	Appeal from a CBM	Kiklis
<a href="#">U of Florida</a> <a href="#">(integrating physiologic treatment data)</a>	CAFC	2/26/19	N	After					X		40	"collecting, analyzing, manipulating, and displaying data."	X			No		Precedential - Appeal from the United States District Court for the Northern District of Florida	Forrest
<a href="#">Visual Memory</a> <a href="#">(memory system with programmable operational characteristics)</a>	CAFC	8/15/17	Y	Before		X		X			27	The court found that the claims were directed to a technological improvement: an enhanced computer memory system.					The court concluded that the claims were not directed to an abstract idea, and thus did not analyze the claims under step two of the Alice test.	Fed. Cir. 2017. Appeal from U.S. District Court for District of Delaware. Reversed - Claims were directed to an improvement to computer memory systems and not directed to an abstract idea.	Bednarz
<a href="#">Voit</a> <a href="#">(buying and selling an item relating to unique subjects)</a>	CAFC	2/8/19	N	After					X		7, 8	entering, transmitting, locating, compressing, storing, and displaying data (including text and image data) to facilitate the buying and selling of items.			X	No	Directed to the abstract idea of processing data to buy and sell items.	Non-precedential. Appeal from the United States District Court for the Eastern District of North Carolina	Forrest
<a href="#">Voter Verified</a> <a href="#">(self-verification of a ballot)</a>	CAFC	4/20/18	N	Before					X		35	"concept of voting, verifying the vote, and submitting the vote for tabulation"			X	No	lacked an "inventive concept" and that the "standard components" cited in the claims (e.g., "a standard personal computer," "a visual display device", "a keyboard", "data storage devices," "a laser printer," and "a scanner") "are not sufficient to transform abstract claims into patent-eligible subject matter."	Appeal from United States District Court for the Northern District of Florida; also Federal Circuit ruled no issue preclusion since <i>Alice</i> case did not change governing law of § 101 and "§ 101 issue was not actually litigated" since "the § 101 issue of invalidity was not necessary to the judgment in the first district court action.	Burton



<a href="#">PTAB - Ex parte Avery (improved electronic polling graphical user interface)</a>	PTAB	7/8/20	Y	After	X						23	The claims directed to a process or method of displaying an electronic polling request on a graphical user interface and receiving scoring information from a user	X		Yes - UI limitations of "layering layer over an image" to "easily provide evaluation of the image in two criteria simultaneously by positioning an on-screen cursor" provides a specific technological improvement over prior electronic polling GUI.	N/A - Since practical application found in Step 2A, prong 2, Board did not reach this question.	Appeal from Examiner Rejection	Burton
<a href="#">PTAB Ex Parte Basham (multi-tiered storage system)</a>	PTAB	2/24/20	Y	After				X			27	Board held that claim 2 is not directed to an abstract idea, but rather a specific implementation, including receiving a command, directed to an object, from an application, determining storage for the object in a multi-tiered storage system, and storing the object.	X		N/A	N/A	Appeal from Examiner rejection. The Board reversed the Examiner's 101 rejection and held that the Examiner erred at Step 2A, Prong One in determining that the claims recite an abstract idea. Prong Two and Revised Alice Step 2B not reached.	Bednarz
<a href="#">PTAB - Ex Parte Retancourt (service station sale authorization)</a>	PTAB	8/30/19	Y & N	After	X		X				42	Claims are directed to using wireless tags and communication devices to authorize transactions for fuel at service stations		X	Y & N (claims upheld the specified information sent in authorization request for specific amounts of fuel, claims rejected that generically recited transmission of authorization request without specific information)	N (for generic claims)	Appeal from Examiner rejection	Lowery
<a href="#">PTAB - Ex Parte Boldt (dynamically splitting large PDF print jobs into independent segments)</a>	PTAB	2/28/20	Y	After					X		4, 5	Claims are directed to dynamically splitting PDF print jobs into independent segments to facilitate printing large print jobs	X		Y	Hardware elements that transform data into a concrete result	Appeal from Examiner rejection.	Forrest
<a href="#">PTAB - Ex Parte Bulleit and Stanley K. Yeatts (proactive search engine)</a>	PTAB	3/9/20	Y	After			X				5, 7	Claims are directed to using a proactive search engine for providing and displaying a series of links to a plurality of sponsored Web sites, where the proactive search engine is configured to search the Web independent of user key word input as the user device navigates the Internet		X	Y	Use of a proactive search engine is not conventional.	Appeal from Examiner rejection.	Forrest
<a href="#">PTAB - Ex parte Fautz (magnetic resonance imaging device)</a>	PTAB	5/15/19	Y	After					X		41	The claims recite mathematical concepts and thus abstract ideas under Prong One of the Guidance.	X		Yes - Integrated into MR tomography device and "Appellant is concerned with solving the technical problem of improving sensitivity correction in MR tomography devices"	N/A - did not analyze after integration into practical application was found	Appeal from Examiner Rejection	Lowery

<a href="#">PTAB - Ex parte Hannun</a> ( <a href="#">speech to text recognition software</a> )	PTAB	12/11/19	Y	After				X		X	38, 39	The claims recite specific software steps and do not recite mental processes or methods of organizing human activity. The description of mathematical algorithms in the specification are not relevant because they are not present in the claims.				Yes - any alleged abstract concept integrated into specific features to achieve a technological result of improved speech-to-text recognition.	Allegation of no inventive concept not supported by sufficient evidence from Examiner.  PTAB also separately reversed 103 rejection (see detailed analysis).	Appeal from Examiner Rejection	Lowery
<a href="#">PTAB - Ex Parte Hsu</a> ( <a href="#">search query improvement</a> )	PTAB	9/26/19	Y & N	After						X	40	Claims are directed to using time of day to improve search query results	X	X		Y & N (dependent claims with specific recitations of techniques to improve query results based on specification upheld, generic claims rejected)	N/A	Appeal from Examiner rejection	Lowery
<a href="#">PTAB Ex Parte Kavis</a> ( <a href="#">detecting fraudulent coupons during a purchase transaction</a> )	PTAB	12/2/19	N	After						X	7	The Board held that the claimed limitations recite the mental process of comparing coupon data because the claims include an observation, an evaluation, and judgment by receiving data, sending the data, and comparing the data to determine whether the coupon is fraudulent. The Board also held that the claims are directed to a method of organizing human behavior because the claims recite commercial or legal interactions.		X	X	N	N	Appeal from Examiner rejection. The Board reversed the Examiner's 101 rejection for failure to explain which abstract idea the claims were directed to and then entered its own 101 rejection.	Kiklis
<a href="#">PTAB - Ex Parte Kim</a> ( <a href="#">audio output</a> )	PTAB	7/24/19	Y & N	After						X	38	Claims are directed to using vector quantization to decode audio data for output	X	X		Y & N (method claims rejected, device claims upheld)	N	Appeal from Examiner rejection	Lowery
<a href="#">PTAB - Ex parte Kimizuka</a> ( <a href="#">golf club fitting process</a> )	PTAB	5/15/19	N	After						X	36 (Claim 1)	The claims are directed to mental processes that could be practically performed in the human mind of collecting data and making relevant determinations based on the data.		X		No - processor, database, and measuring steps insufficient to render practical application	No - same steps were well-known, routine, and conventional	Appeal from Examiner Rejection	Lowery
<a href="#">PTAB - Ex parte Lundgren</a> ( <a href="#">a method of compensating a manager</a> )	PTAB	4/20/04	Probably Not	Before						X	35, 36	The claims are directed to a method of compensating a manager		X	X	No computer involved	No	Appeal from examiner rejection based on Technological arts requirement. No such test.	Forrest
<a href="#">PTAB Ex Parte Martin</a> ( <a href="#">automatically providing lab test results over a network</a> )	PTAB	12/9/19	Y	After			X				42	The Board found that the claims were not directed to an abstract idea because the claims include, for example, "scanning a document . . . using a second document processing device," "identifying, using said second document processing device, said lab test . . . based only on said machine readable code" and various other actions using the second document processing device.				N/A	N/A	Prong One, Prong Two, and Revised Alice Step 2B not reached after Alice Step 1 assessment.	Kiklis
<a href="#">PTAB - Ex Parte Milne</a> ( <a href="#">sharing video among customers</a> )	PTAB	12/9/19	N	After			X				N/A	The Board held that sharing content among two or more persons fits into the abstract idea category of "managing personal behavior or relationships or interactions between people."			X	N	N	Appeal from Examiner rejection	Kiklis
<a href="#">PTAB - Ex parte Olson</a> ( <a href="#">heart catheter mapping system</a> )	PTAB	3/25/19	Y	After						X	41	The claims contain mathematical concepts used to map the coordinate position of the catheter tool onto a three dimensional image.	X			Yes - algorithms are used in particular way to improve catheter system and integrated into a particular machine in the catheter navigation system	N/A	Appeal from Examiner Rejection	Lowery

<a href="#">PTAB - Ex Parte Rogers (data storage)</a>	PTAB	8/23/19	Y	After					X	4	Claims are not directed to abstract idea of storing data more efficiently by having multiple file entries in a file allocation table index the same clusters on a storage medium.  Steps 2A, Prongs 1 and 2 and Revised Alice Step 2B not reached after Alice Step 1 assessment.				N/A	N/A	Appeal from Examiner rejection.	Moore	
<a href="#">PTAB - Ex parte Savescu (project workflow creation method)</a>	PTAB	4/1/19	N	After					X	42 (Claim 2)	The claims contain project management concepts regarding workflow tracking that correspond to methods of organizing human activity			X	No - server and web page creation insufficient to render practical application	No - server and web page were well-known, routine, and conventional	Appeal from Examiner Rejection	Lowery	
<a href="#">PTAB - Ex parte Smith (trading derivatives in hybrid derivatives system)</a>	PTAB	2/1/19	Y	After						X	42 (Claim 1)	The claims contain derivative trading steps found in any derivatives market, which are fundamental economic practices			X (fundamental economic practice)	Yes - timing mechanism for orders sufficient to create practical application	N/A	Appeal from Examiner Rejection	Lowery
<a href="#">PTAB - Ex Parte Vdovina (manipulating and using seismic data)</a>	PTAB	7/24/19	Y & N	After						X	3	Claims are directed to manipulating and using seismic data.	X	X		No - claims 1 and 11 use the output of the mathematical concepts in a model, which is itself mathematical concept.  Yes - claims 15 and 16 produce an image of a subsurface region and drill a well, respectively, which are practical applications.	N/A	Appeal from Examiner rejection.	Moore



	Judge																		
	Prost	Newman	Mayer	Plager	Lourie	Clevenger	Schall	Bryson	Linn	Dyk	Moore	O'Malley	Reyna	Wallach	Taranto	Chen	Hughes	Stoll	Rader
<a href="#">Aatrix</a>											x (opinion)		x (dissent)		x				
<a href="#">Amdocs</a>		x		x (opinion)									x (dissent)						
<a href="#">Ameranth</a>													x (opinion)			x		x	
<a href="#">American Axle</a>										x (opinion)	x (dissent)				x				
<a href="#">Ancora Technologies</a>										x				x	x (opinion)				
<a href="#">Automated Tracking Sols.</a>												x		x					x
<a href="#">BASCOM</a>		x (concur)										x				x (opinion)			
<a href="#">Berkheimer</a>											x (opinion)				x				x
<a href="#">BSG</a>													x	x			x (opinion)		
<a href="#">Cardionet</a>				x						x									x
<a href="#">Cellspin Soft</a>					x							x			x				
<a href="#">Chamberlain</a>					x							x				x (opinion)			
<a href="#">ChargePoint</a>	x												x		x				
<a href="#">Classen</a>		x (opinion)									x (dissent)								x (add'l)
<a href="#">Core Wireless</a>											x (opinion)	x		x (cip/dip)					
<a href="#">Customedia</a>	x									x	x								
<a href="#">CyberSource</a>	x							x		x (opinion)									
<a href="#">Data Engine Technologies</a>								x					x						x (opinion)
<a href="#">DDR Holdings</a>			x (dissent)											x		x (opinion)			
<a href="#">Digitech</a>											x		x (opinion)				x		
<a href="#">Electric Power</a>								x							x (opinion)				x
<a href="#">Enfish</a>											x				x		x (opinion)		
<a href="#">Exergen</a>								x				x					x (dissent)		
<a href="#">Fairwarning</a>				x	x														x (opinion)
<a href="#">Finjan</a>									x	x (opinion)							x		
<a href="#">Glasswall Solutions Ltd.</a>					x				x						x				
<a href="#">In re Downing</a>				x (opinion)				x		x									
<a href="#">In re Gitlin</a>													x			x	x		
<a href="#">In re Villena</a>	x																x		x (opinion)
<a href="#">In re Wang</a>							x						x						x
<a href="#">Interval Licensing</a>				x (concur in											x	x (opinion)			
<a href="#">Int. Ventures (2015)</a>										x (opinion)			x			x			
<a href="#">Int. Ventures (2017)</a>	x												x	x (opinion)					
<a href="#">Koninklijke</a>										x						x			x
<a href="#">McRO</a>													x (opinion)		x				x
<a href="#">Packet Intelligence</a>					x (opinion)								x (dissent)				x		
<a href="#">Sipco</a>												x	x						x (opinion)
<a href="#">Solutran</a>																x	x		x
<a href="#">SRI International</a>					x							x							x
<a href="#">TecSec v. Adobe</a>	x												x		x (opinion)				
<a href="#">Trading Technologies (2017)</a>		x (opinion)										x		x					
<a href="#">Trading Technologies (2019)</a>						x					x (opinion)			x					
<a href="#">U of Florida</a>	x										x			x					
<a href="#">Visual Memory</a>												x (opinion)					x (dissent)		x
<a href="#">Voit</a>														x	x				x
<a href="#">Voter Verified</a>		x			x								x						

 Eligible  
 Ineligible

## **Aatrix v. Green Shades Software, Inc.**

Overview: Appeal from M.D. Florida - Decided February 14, 2018

Aatrix Software appealed grant of Green Shade's Rule(b)(6) motion to dismiss complaint based on the district court's holding that all asserted claims of the two patents-in-suit (US Patent No. 7,171,615 and US Patent No. 8,984,393) are invalid as ineligible subject matter under 35 USC 101. Aatrix also appealed the district court's denial of Aatrix's motion for leave to file a second amended complaint.

Federal Circuit Holding: The Federal Circuit vacated the district court's motion to dismiss, reversed its denial of Aatrix's motion for leave to file a second amended complaint, and remanded for further proceedings. The Federal Circuit based its decision on the district court denying Aatrix leave to amend without claim construction and in view of the proposed second amended complaint providing factual allegations that, taken as true, would directly affect the district court's Alice patent eligibility analysis that the asserted claims include inventive concepts that are not routine or conventional.

Judge Reyna concurred with the majority's decision to vacate both the motion to dismiss and denial for leave to file a second amended complaint. But Judge Reyna disagreed with the majority's broad statements on the role of factual evidence in a § 101 inquiry.

Technology: Both patents are directed to "systems and methods for designing, creating, and importing data into a viewable form on a computer so that a user can manipulate the form data and create viewable forms and reports." [1]

Discussion: The Federal Circuit found that the district court effectively ignored Aatrix Software's declarations regarding its claimed inventions having inventive concepts that were substantially more than routine and conventional. The Federal Circuit indicated that the proposed second amended complaint provided "evidence" of inventive concepts for analysis under prong 2 of the Alice test for eligible subject matter. The Court explained that "plausible factual allegations may preclude dismissing a case under § 101 inquiry where... 'nothing on th[e] record... refutes those allegations as a matter of law or justifies dismissal under Rule 12(b)(6).'" [2]

In coming to its decision, the Court found that "[i]n assessing the claims under Alice/Mayo step two, the district court found that the claimed 'data file containing data from a user application for populating the viewable form' describes a 'well understood' and 'routine' component and function of a computer." [3] But "[t]he district court supplied no reasoning or evidence for its finding that the claimed data file 'describes a 'well understood' and 'routine' component and function of a computer'". [4]

Representative claim: 1. A data processing system for designing, creating, and importing data into, a viewable form viewable by the user of the data processing system, comprising:  
(a) a form file that models the physical representation of an original paper form and establishes the calculations and rule conditions required to fill in the viewable form;  
  
(b) a form file creation program that imports a background image from an original form, allows a user to adjust and test print the background image and compare

user to adjust and test print the background image and compare the alignment of the original form to the background test-print, and creates the form file;

(c) a data file containing data from a user application for populating the viewable form; and

(d) a form viewer program operating on the form file and the data file, to perform calculations, allow the user of the data processing system to review and change the data, and create viewable forms and reports.

Practice tips and takeaways:

- 1) As noted in Berkheimer, when drafting your patent application, consider providing “problem/solution” in the specification to highlight the various inventive concepts of your software related invention as an improvement over known prior art (e.g., Aatrix’s claimed “data file contains an inventive concept directed to improved importation of data and interoperability with third-party software.” [5]) Explicitly stating advantages of your inventive concept may help support the inventive concept captured in your claims as not routine or conventional.
- 2) When filing a complaint, consider providing support from your patent specification that your asserted claims include inventive concepts that are not routine and conventional.

Case link: <http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/17-1452.Opinion.2-12-2018.1.PDF>

Art Unit, Examiner: 2176, Quoc Tran

Citations: [1] Aatrix, 882 F.3d 1121, 1123 (Fed. Cir. 2018).  
[2] Aatrix, 882 F.3d at 1125, citing FairWarning IP, LLC v. Iatric Sys., Inc., 839 F.3d 1089, 1097 (Fed. Cir. 2016) (quoting BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC, 827 F.3d 1341, 1352 (Fed. Cir. 2016).  
[3] Aatrix, 882 F.3d at 1129, citing J.A. 26.  
[4] *Id.*  
[5] *Id.*

Panelists: Moore, Taranto, Reyna (dissent)

## **Amdocs (Israel) Limited v. Openet Telecom, Inc.**

Overview: Appeal from E.D. Virginia - Decided November 1, 2016

Amdocs appeals district court's granting of Openet's motion on the pleadings finding that the patents at issue were not directed to eligible subject matter under 35 USC 101.

Patents at issue: US Patent Nos. 7,631,065; 7,412,510; 6,947,984; and 6,836,797 (Continuations of 6,418,467, '797 being CIP)

Decision: Reversed and remanded.

The patents relate to accounting and billing problems encountered by network service providers.

Discussion: The '065 patent concerns a system, method, and computer program for merging data in a network-based filtering and aggregating platform as well as a related apparatus for enhancing networking accounting data records. The '510 patent concerns a system, method, and computer program for reporting on the collection of network usage information. The '984 patent concerns a system and accompanying method and computer program for reporting on the collection of network usage information from a plurality of network devices. The '797 patent concerns a system, method, and computer program for generating a single record reflecting multiple services for accounting purposes.

The court found the claims to involve a close decision of similarity to the claims of BASCOM and DDR Holdings versus Digitech and in re TLI, holdings, "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. Indeed, even 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.'" [1]

The court points to the description, "As explained by the patent, this distributed enhancement was a critical advancement over the prior art", further finding "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). The 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." [2]

Representative claim: 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.

Practice tips and takeaways:

When drafting specifications, consider being specific with respect to how the invention operates to provide an improvement over the state of the art.

Consider carefully describing interactions and operations between components that may be considered conventional to relate a story of how these components act in an unconventional manner.

Case link:

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/15-1180.Opinion.10-28-2016.1.PDF>

Art Unit, Examiner:

2442, Robert Harrell (7,631,065); 2142 Robert Harrell (7,412,510); 2142, Hai Nguyen (6,947,984)

Citations:

[1] Amdocs (ISRAEL) LTD. V. Openet Telecom, INC., 841 F. 3D 1288, 1300 (Fed. Cir. 2016).  
[2] Id. at 1300-1301.

Panelists:

Plager, Newman, Reyna (dissent)

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citation:

Panelists:

**Apple, Inc., Domino's Pizza, Inc., Domino's Pizza LLC, Fandango, LLC, Opentable, Inc. v. Ameranth**

Appeals from the PTAB - Decided November 29, 2016. U.S. Patent No. 6,384,850 involved generating menus on a computer - Covered Business Method decision review. [1]

The claims were found directed to an abstract idea of generating a second menu from a first menu. The additional elements were found to be routine and conventional giving the claims a broadest reasonable interpretation. No inventive concept was found in dependent claims. For at least some of the dependent claims, the specification provided no description of how to implement the claimed functions, such as linking an order to a table.

1. An information management and synchronous communications system for generating and transmitting menus comprising: a. a central processing unit, b. a data storage device connected to said central processing unit, c. an operating system including a graphical user interface, d. a first menu consisting of menu categories, said menu categories consisting of menu items, said first menu stored on said data storage device and displayable in a window of said graphical user interface in a hierarchical tree format, e. a modifier menu stored on said data storage device and displayable in a window of said graphical user interface, f. a sub-modifier menu stored on said data storage device and displayable in a window of said graphical user interface, and g. application software for generating a second menu from said first menu and transmitting said second menu to a wireless handheld computing device or Web page, wherein the application software facilitates the generation of the second menu by allowing selection of categories and items from the first menu, addition of menu categories to the second menu, addition of menu items to the second menu and assignment of parameters to items in the second menu using the graphical user interface of said operating system, said parameters being selected from the modifier and sub-modifier menus.

See Electric Power tab - Consider making sure your specification contains details of how claimed functionality is performed and avoids characterization of elements that are claimed as conventional or typical or commonly known. Also avoid referencing well-known business practices. There was a technical problem involved here (how to hierarchically display a large menu on a small screen), but the claims lacked some specifics of how the technical problem was solved.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/15-1703.Opinion.11-28-2016.1.PDF>

2173, Cao H. Nguyen

[1] Apple, Inc. et al., v. Ameranth, Inc. 842 F.3d 1229, 2016 U.S. App. LEXIS 21277, 120 U.S.P.Q.2d (BNA) 1844 (Fed. Cir. 2016).



Reyna, Chen, Stoll

Overview:

Discussion:

Representative claim:

Practice tips and

Case link:

Art Unit, Examiner:

Citation:

Panelists:

## **American Axle & Manufacturing(AAM), Inc. v. Neapco Holdings LLC**

Appeal from the United States District Court for the District of Delaware - Decided October 3, 2019 - US Patent No. 7,774,911 involving methods of manufacturing driveline propeller shafts with liners designed to attenuate vibrations transmitted through a shaft assembly. [1]

Alice Step 1: The claims of the '911 patent are "directed to the utilization of a natural law (here, Hooke's law and possibly other natural laws) in a particular context." The problem with AAM's argument is that the solution to these desired results is not claimed in the patent. The Fed. Cir. has repeatedly held that features that are not claimed are irrelevant as to step 1 or step 2 of the Mayo/Alice analysis.

Further, the court reiterated that the "distinction between results and means is fundamental to the step 1 eligibility analysis, including in law-of-nature cases, not just abstract-idea cases."

The dissent opinion "suggests that failure of claim to designate how to achieve the desired result is exclusively an issue of enablement." [1]

Alice Step 2: The Fed. Cir. determined that the "claimed advance is simply controlling various known characteristics of the liner so as to achieve attenuation of two vibration modes simultaneously, whether that is by changing the mass or thickness of the liner, altering the location of the liner in the prop shaft, or modifying any other physical attributes that will produce the claimed dual-attenuation." The only guidance for achieving said advance is to perform a plurality of experiments. The Fed. Cir. holds that "this direction to engage in a conventional, unbounded trial-and-error process does not make a patent eligible invention, even if the desired result to which that process is directed would be new and unconventional." The remaining steps in the claims were considered by the Fed. Cir. to be routine and conventional. [1]

Overall, the dissent describes the overreaching of the majority in the finding of being directed to a law of nature and applying the nothing more standard stating "The majority has concluded that the *Nothing More* question will be decided on appeal as a matter of law, without briefing and argument, and without regard to what the experts think. I cannot fathom the confusion that will be caused by declaring that claims are ineligible as directed to a natural law, when it is clear to all involved that this patent does not recite any particular natural law. Every mechanical invention must apply the laws of physics—that does not render them all ineligible, or maybe it does now. Section 101 simply should not be this sweeping and this manipulatable."

The Fed. Cir. stated that appellant did not argue before the district court or on appeal that any of the dependent claims change the outcome of the eligibility analysis. However, AAM filed a petition for rehearing that the dependent claims were not waived and, in fact, argued that

location of the liner (which is recited in dependent claims) was argued and not fully considered.

1. A method for manufacturing a shaft assembly of a driveline system, the driveline system further including a first driveline component and a second driveline component, the shaft assembly being adapted to transmit torque between the first driveline component and the second driveline component, the method comprising:  
providing a hollow shaft member; tuning at least one liner to attenuate at least two types of vibration transmitted through the shaft member; and

positioning the at least one liner within the shaft member such that the at least one liner is configured to damp shell mode vibrations in the shaft member by an amount that is greater than or equal to about 2%, and the at least one liner is also configured to damp bending mode vibrations in the shaft member, the at least one liner being tuned to within about  $\pm 20\%$  of a bending mode natural frequency of the shaft assembly as installed in the driveline system.

22. A method for manufacturing a shaft assembly of a driveline system, the driveline system further including a first driveline component and a second driveline component, the shaft assembly being adapted to transmit torque between the first driveline component and the second driveline component, the method comprising:  
providing a hollow shaft member; tuning a mass and a stiffness of at least one liner; and

inserting the at least one liner into the shaft member;

wherein the at least one liner is a tuned resistive absorber for attenuating shell mode vibrations and wherein the at least one liner is a tuned reactive absorber for attenuating bending mode vibrations.

Sufficient detail should be including in the application draft describing the solution to the problem rather than simply applying a natural law or mathematical formula. This should be extended to the claim scope where, at the very least, dependent claims should include limitations with sufficient detail to describe the solution to the problem.

Carefully review the claims to determine if the claims are directed to the result rather than how to solve the problem at hand.

Further, the dissent focused on enablement, which many believe is often convoluted with 101 issues. Clearly drafting a specification and claims with details for how to solve the problem and how results are achieved will help distinguish over simply stating "apply" said law of nature.

[http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-1763.OPINION.7-31-2020\\_1628791.pdf](http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-1763.OPINION.7-31-2020_1628791.pdf)

3726, John C. Hong

[1] Am. Axle & Mfg., Inc. v. Neapco Holdings LLC, 966 F.3d 1347, 1348 (Fed. Cir. 2020)

Dyk, Moore, and Taranto (Moore dissent)

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:



Author:

### **Ancora Technologies Inc v HTC America Inc**

Precedential. Appeal from district court's final judgment in the U.S. District Court for the Western District of Washington regarding US Patent No. 6,411,941. Court found that under Enfish that the claims were not directed to ineligible subject matter. Rather, the claimed advance is a concrete assignment of specified functions among a computer's components to improve computer security and a claimed improvement in computer functionality eligible for patenting.

[1]

The court reviewed a number of previous holdings that found patentable subject matter including *Finjan*, *Enfish*, *Visual Memory*, *Core Wireless Licensing*, and *Data Engine Technologies*. In accordance with those precedents, we conclude that claim 1 of the '941 patent is not directed to an abstract idea. Improving security—here, against a computer's unauthorized use of a program—can be a non-abstract computer-functionality improvement if done by a specific technique that departs from earlier approaches to solve a specific computer problem. The claimed method here specifically identifies how that functionality improvement is effectuated in an assertedly unexpected way: a structure containing a license record is stored in a particular, modifiable, non-volatile portion of the computer's BIOS, and the structure in that memory location is used for verification by interacting with the distinct computer memory that contains the program to be verified.

1. A method of restricting software operation within a license for use with a computer including an erasable, non-volatile memory area of a BIOS of the computer, and a volatile memory area; the method comprising the steps of: selecting a program residing in the volatile memory, using an agent to set up a verification structure in the erasable, non-volatile memory of the BIOS, the verification structure accommodating data that includes at least one license record, verifying the program using at least the verification structure from the erasable non-volatile memory of the BIOS, and acting on the program according to the verification.

Claim 1 of the '941 patent was found to be directed to a solution to a computer-functionality problem: an improvement in computer functionality that has “the specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it.” Use this approach when drafting claims to maximize the likelihood of having patentable subject matter.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-1404.Opinion.11-16-2018.pdf>

2161, Calvin Hewitt II

[1] *Ancora Technologies, Inc v. HTC America, Inc.*, 908 F.3d 1343 (Fed. Cir. 2018)

Dyk, Wallach, Taranto

Bednarz

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

## **Automated Tracking Sols., LLC v Coca-Cola Co.**

Appeal from Northern District of Georgia - Decided July 30, 2019.

This opinion is nonprecedential but still provides useful insights for practice tips for drafting specification and claims that may avoid abstract subject matter rejections under 35 U.S.C. § 101. The patents at issue were US Patent Nos. 7,551,089; 7,834,766; 8,842,013; and 8,896,449.

The Federal Circuit in *Automated Tracking Sols., LLC v. Coca-Cola Co.* affirmed the district court's holding that the asserted "inventory control" software patent claims were directed to ineligible subject matter under 35 U.S.C. § 101. The asserted claims in this case relate to processes and systems to perform the functions of "identification, tracking, location, and/or surveillance of tagged objects anywhere in a facility or area." Because the breadth of the two representative claims on appeal were directed to a "collecting data," "analyzing that data", and "determining results based on the analysis of data" and did not include any "non-conventional" elements or "particular configuration or arrangement" of otherwise conventional elements, the Federal Circuit found that the claims were directed to an abstract idea under *Alice* step one. Moreover, under *Alice* step two, the Federal Circuit found the two representative claims lacked an "inventive concept in the individual claim limitations or their ordered combination" and, thus, were directed to ineligible subject matter under § 101. [1]

All four Asserted Patents are titled "Method and Apparatus for Tracking Objects and People" and share a common specification. "Under *Alice* step one, the district court concluded that the representative claims were directed to the patent-ineligible abstract idea of "collecting data, analyzing it, and determining the results based on the analysis of data." This analysis follows the *Electric Power Group* line of cases.

"The district court determined under *Alice* step two that the claims lacked an inventive concept because nothing in the claim limitations or their ordered combination was sufficient to transform the abstract idea into a patent-eligible application. *Id.* at 1290. Accordingly, the district court held all four patents ineligible under § 101."

In affirming the district court's *Alice* analysis of the claims, the Federal Circuit stated that its "concerns lie with ATS's portrayal of the breadth of the representative claims. The representative claims simply do not require a particular configuration or arrangement of RFID system components. Nor do the representative claims require multiple antenna coverage areas." Thus, Fed Circuit found that "claim elements [viewed] individually or as an ordered combination...do not contain an inventive concept sufficient to confer patent eligibility."

Of note, ATS conceded that the district court's decision not to analyze ATS's two additional proposed representative claims (claim 1 of the US 8,842,013 patent and claim 1 of the US 8,896,499 patent) did not affect the § 101 analysis.

1. (US 7,834,766) A system for locating, identifying and/or tracking of an object, the system

comprising:

a first transponder associated with the object;

a reader that is configured to receive first transponder data via a radio frequency (RF) signal from the first transponder;

an antenna in communication with the reader and having a first coverage area;

a processor coupled to the reader, wherein the processor is configured to receive the first transponder data from the reader and to generate detection information based on the received first transponder data, the detection information comprising first sighting and last sighting of the first transponder in the first coverage area; and

a storage device that is configured to store the detection information.

49. (US 7,551,089) A system for locating, identifying, and/or tracking of at least one object, said system comprising:

a transponder affixable to the object, the transponder associated with a transponder identification (ID);

a reader for detecting a transponder ID;

an antenna for communicating radio frequency (RF) signals between said reader and said transponder, the RF signals including the transponder ID;

a storage device for storing known transponder IDs and detection information associated with the stored known transponder IDs, wherein the detection information indicates whether the stored known transponder ID has been previously detected by the system; and

a processor for comparing the known transponder IDs stored in said storage device with the detected transponder ID, and determining whether the detected transponder ID is a detected known transponder ID based on the comparison of the known transponder IDs with the detected transponder ID.

The Federal Circuit's decision provides insights for (i) both drafting claims that avoid 101 and (2) identifying more than the broadest independent claim for purposes of appeal where dependent claims may provide elements that individually or in combination with the independent claims provide an inventive concept sufficient to confer patent eligibility. In this case, ATS should **not** have conceded "that the two claims analyzed by the district court are representative of all the claims in all four patents". Other dependent claims may have been enough to avoid 101.

<http://www.ca9.uscourts.gov/sites/default/files/opinions-orders/17-1494.Opinion.2-15-2018.1.PDF>



2612, Thomas Mullen (for US 7,551,089 and US 7,834,766); 2685, Van Thanh Trieu (for US 8,842,013; and US 8,896,449)

[1] Automated Tracking Sols., LLC v. Coca-Cola Co., 2017-1494 (Fed. Cir. 2018)

Moore, Wallach, Stoll

## BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC

### Overview:

Appeal from N.D. Texas - Decided June 27, 2016

BASCOM appeals grant of Motion to Dismiss for failure to state a claim based on invalidity under 35 USC 101.

Patent at issue: US Patent No. 5,987,606

### Holding:

BASCOM has shown that claims of the '606 patent pass step two of the Alice two-part framework. Motion to Dismiss is vacated and case remanded.

### Technology:

Filtering Internet content remotely while providing individual filtering by user.

### Discussion:

Claims recite an Internet filter installed on a remote server such as an ISP server. The filter is provided access to individualized filtering mechanisms for each user. When a user makes a request for data, the filter identifies the user making the request and associates that user with their individual filtering mechanism. Based on the request and the filtering mechanism, the requested data is provided or withheld based on the filtering policy.

The specification describes this as an improvement over the state of the art, which either required individual filtering mechanisms to be installed on each workstation, or for filters installed on local or ISP servers which use a one size fits all filter that is applied to all users.

The court found that the claims were directed to "content filtering system for filtering content retrieved from an Internet computer network" [1], and agreed with the district court that "filtering content is an abstract idea because it is a long-standing, well-known method of organizing human behavior." [2]

However, the court recognized that although the limitations of the claims, taken individually recite generic computer network and Internet components and are not inventive by themselves, the court considered the ordered combination and determined "an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces." [3]

The court noted that the claimed method of filtering did not pre-empt all ways of filtering content on the Internet, but 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." [4] The claims carve out a specific location for the filtering system (a remote ISP server) and require the filtering system to give users the ability to customize filtering for their individual network accounts.

Representative claim: 1. A content filtering system for filtering content retrieved from an Internet computer network by individual controlled access network accounts, said filtering system comprising:

- a local client computer generating network access requests for said individual controlled network accounts;
- at least one filtering scheme;
- a plurality of sets of logical filtering elements; and
- a remote ISP server coupled to said client computer and said Internet computer network, said ISP server associating each said network account to at least one filtering scheme and at least one set of filtering elements, said ISP server further receiving said network access requests from said client computer and executing said associated filtering scheme utilizing said associated set of logical filtering elements.

Practice tips and takeaways: When drafting specifications, consider being specific in description of the arrangement and relative positioning of components of the system. A specifically described arrangement provides a position supporting a technical improvement. In addition, more specific arrangement precludes allegations of pre-emption.

Case link: <http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/15-1763.Opinion.6-23-2016.1.PDF>

Art Unit, Examiner: 2785, Ly Hua

Citations: [1] BASCOM Global Internet Svcs v. AT&T Mobility, 827 F. 3D 1341 at 1348 (Fed. Cir. 2016).  
[2] *Id.*  
[3] *Id.* at 1350.  
[4] *Id.*

Panelists: Chen, O'Malley, Newman (concur)

## Berkheimer v. HP Inc

### Overview:

Appeal from N.D. Illinois - Decided February 14, 2018

Berkheimer appeals grant of Summary Judgment holding claims 1-7 and 9 of patent-in-suit (US Patent No. 7,447,713) as invalid as ineligible subject matter under 35 USC 101. Berkheimer also appeals holding that claims 10-19 of the patent-in-suit are invalid for indefiniteness.

Federal Circuit Holding: Court affirmed indefiniteness of claims 10-19 of the patent-in-suit and that claims 1–3 and 9 of the patent-in-suit are ineligible under Alice test because they "do not capture the purportedly inventive concepts" identified in the specification as an unconventional improvement to storing parsed data to eliminate redundancies and improve efficiencies in data storage. [1] The court vacated, however, the district court's grant of summary judgment that dependent claims 4–7 are ineligible under § 101 because there is a fact question as to whether the claims 4-7 "contain limitations directed to the arguably unconventional inventive concept described in the specification". [2] The Court then remanded for further proceedings.

Technology: Digital processing and archiving of files. The system parses files into multiple objects and tags the objects to create relationships between them, and then compares the objects to archived objects to identify variations based on predetermined standards and rules. The system eliminates redundant storage of common text and graphical elements between stored documents.

### Discussion:

With respect to the appeal of patent eligibility, the Federal Circuit found that Berkheimer maintained that limitations included in dependent claims 4–7 bear on patent eligibility and never agreed to make claim 1 representative of all claims of patent-in-suit. In support of this finding, the Court stated that "Mr. Berkheimer advanced meaningful arguments regarding limitations found only in the dependent claims". [3] This is a key finding, not only that Berkheimer did not waive his patent eligibility arguments with respect to dependent claims 4-7, but provides guidance for the Court's abstract analysis under the Alice test step 2.

Under Alice test step 1, the Court found that the claims at issue were either directed to the "abstract idea of parsing and comparing data" (i.e., claims 1-3 and 9), "the abstract idea of parsing, comparing and storing data" (i.e., claim 4), or "the abstract idea of parsing, comparing, storing, and editing data" (i.e., claims 5-7). [4] The Court further found that, even though Berkheimer's patent teaches "the parser transforms data from source to object code [, that is not enough to] demonstrate non-abstractiveness without evidence that this transformation improves computer functionality in some way." [5]

Focusing on Alice test step 2, the Court held that "[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact." [6] The Court further held that, when there is no genuine issue of material fact when addressing this Alice step 2 question, "this issue can be decided on summary judgment as a matter of law." [7] However, the Court ruled that the district court judge erred in concluding there are no factual questions in its Alice step 2 inquiry and resolving this case at summary judgment.

In overturning the district court's ruling, the Court found that dependent claims 4-7 "contain

in overturning the district court ruling, the court found that dependent claims 4-7 “contain limitations directed to the arguably unconventional inventive concept described in the specification” for “storing a reconciled object structure in the archive without substantial redundancy.” [8] In support, the Court stated that “[t]he specification states that storing object structures in the archive without substantial redundancy improves system operating efficiency and reduces storage costs” and that “known asset management systems did not archive documents in this manner.” [9] Accordingly, although the Court did not decide that claims 4-7 were patent eligible under § 101, the Court indicated that Berkheimer had sufficiently identified the inventive concept and advantage over known prior art in the specification and captured such inventive concept in the dependent claims such that specification’s disclosure supports a fact question as to the eligibility of claims at issue so summary judgment is not warranted.

Representative claims: 1. A method of archiving an item in a computer processing system comprising:  
presenting the item to a parser;

parsing the item into a plurality of multipart object structures wherein portions of the structures have searchable information tags associated therewith;

evaluating the object structures in accordance with object structures previously stored in an archive;

presenting an evaluated object structure for manual reconciliation at least where there is a predetermined variance between the object and at least one of a predetermined standard and a user defined rule.

4. The method as in claim 1 which includes storing a reconciled object structure in the archive without substantial redundancy.

Note: Claim 1 found to be directed to abstract idea and not incorporate any inventive concept. But dependent claim 4 found to include an inventive concept under Alice step 2.

Practice tips and takeaways:

1) When drafting your patent application, consider providing “problem/solution” in the specification to highlight the various inventive concepts of your software related invention as an improvement over known prior art (e.g., Berkheimer’s inventive concept of “archiv[ing] documents in an inventive manner that improves these aspects of the disclosed archival system”). Consider explicitly and repeatedly stating advantages of your inventive concept that support the inventive concept captured in your claims as not routine or conventional.

2) When filing an appeal to a 101 rejection, do not always rely on your independent claim as representative of all the pending claims at issue. Consider identifying each dependent claim that has an additional limitation that is supported in the specification as an inventive concept improvement over known prior art.

Case link: <http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/17-1437.Opinion.2-6-2018.1.PDF>

Art Unit, Examiner: 2168, Thuy Pardo

Citations: [1] Berkheimer v. HP Inc., 881 F.3d 1360, 1370 (Fed. Cir. 2018).  
[2] *Id.*  
[3] *Id.* at 1365.  
[4] *Id.* at 1367.  
[5] *Id.*  
[6] *Id.* at 1368.  
[7] *Id.*  
[8] *Id.* at 1370.  
[9] *Id.*

Panelists: Moore, Taranto, Stoll

### **BSG Tech v. Buyseasons, Inc. et al**

Overview: Appeal from E.D. Texas - Decided August 15, 2018 - US Patent Nos. 6,035,294, 6,243,699, and 6,195,652 involving “self-evolving generic index” for organizing information stored in a database. [1]

Discussion: The claims at issue are directed toward systems and methods of indexing that combine some or all of these features. The district court concluded that the asserted claims “are directed to the abstract idea of considering historical usage information while inputting data” and lack an inventive concept sufficient to transform them into patent-eligible subject matter. The Federal Circuit affirmed. [1]

Regarding step one, the Federal Circuit explained that (a) the recitation of a database structure slightly more detailed than a generic database is insufficient to overcome step one, (b) narrowing of claim scope, by itself, does not satisfy Alice’s test, and (c) the benefits described by BSG Tech relate to the flow for performing the abstract idea not improvements to the database functionality.

Regarding step two, the Federal Circuit concluded that the only alleged unconventional feature of BSG Tech’s claims is the requirement that users are guided by summary comparison usage information or relative historical usage information. But this simply restates the abstract idea.

Representative claims: [294 Patent] 1. A method of storing marketplace information for multiple types of items in a database, comprising:

providing a user with a first data entry interface for selecting an item classification;

providing the user with a parameters list that displays a plurality of parameters previously related to the item classification by a plurality of previous users during a process of loading item descriptions;

providing a second data entry interface that allows the user to add an additional parameter to the parameters list; and

providing a third data entry interface that allows the user to associate individual parameters from the parameters list with individual values from a values list; thereby describing an item falling within the item classification as a set of parameter-value pairs.

[699 Patent] 1. A method of indexing and retrieving data being posted by a plurality of users to a wide area network, comprising:

providing the users with a mechanism for posting the data as parametrized items; providing the users with listings of previously used parameters and previously used values for use in posting the data;

providing the users with summary comparison usage information corresponding to the

previously used parameters and values for use in posting the data; and

providing subsequent users with the listings of previously used parameters and values, and corresponding summary comparison usage information for use in searching the network for an item of interest.

[652 Patent] 1. A method of storing marketplace information for multiple types of items in a database having a structure, comprising: providing a user with a parameter list relating to at least a portion of the multiple types of items;

providing a first data entry interface that allows the user to add an additional parameter to the parameter list without modifying the structure of the database;

and providing a second data entry interface that allows the user to use the additional parameter to record additional data relating to the item.

Practice tips and takeaways:

When the application and claims relate to abstract ideas, any unconventional aspects of the technology should be emphasized and detailed in the specification. Avoid describing the unconventional feature only in the context of the abstract idea.

Case link:

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/17-1980.Opinion.8-15-2018.pdf>

Art Unit, Examiner:

2771, Wayne P Amsbury (USPN 6,035,294, USPN 6,243,699, and USPN 6,195,652)

Citations:

[1] BSG Tech LLC v. Buyseasons, Inc., 899 F.3d 1281 (Fed. Cir. 2018)

Panelists:

Reyna, Wallach, and Hughes



### **Cardionet T, LLC v. INFOBIONIC, INC.**

**Overview:** Appeal from the United States District Court for the District of Massachusetts decided April 17, 2020, precedential. Appeal on a motion to dismiss 12(b)(6). Eligible - US Patent No. 7,941,207 is directed to an improved cardiac monitoring device that detects beat-to-beat timing of cardiac activity, detects premature ventricular beats, and determines the relevance of the beat-to-beat timing to atrial fibrillation or atrial flutter, taking into account the variability in the beat-to-beat timing caused by premature ventricular beats identified by the device's ventricular beat detector.

**Discussion:** Eligible - not directed to abstract idea. "The patent's systems and techniques also analyze information regarding the time period between ventricular contractions (i.e., the R to R interval) to detect atrial fibrillation and atrial flutter using nonlinear statistical approaches." Claim 1 "is directed to an improved cardiac monitoring device and not to an abstract idea. In particular, the language of claim 1 indicates that it is directed to a device that detects beat-to-beat timing of cardiac activity, detects premature ventricular beats, and determines the relevance of the beat-to-beat timing to atrial fibrillation or atrial flutter, taking into account the variability in the beat-to-beat timing caused by premature ventricular beats identified by the device's ventricular beat detector. In our view, the claims "focus on a specific means or method that improves" cardiac monitoring technology; they are not "directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." McRO, 837 F.3d at 1314 (citations omitted)" Contrast to the University of Florida. In Cardionet, technical details were provided in the specification. "The specification is helpful in determining what the claims were directed to." "When read as a whole, and in light of the written description, we conclude that claim 1 of the '207 patent is directed to an improved cardiac monitoring device and not to an abstract idea. In particular, the language of claim 1 indicates that it is directed to a device that detects beat-to-beat timing of cardiac activity, detects premature ventricular beats, and determines the relevance of the beat-to-beat timing to atrial fibrillation or atrial flutter, taking into account the variability in the beat-to-beat timing caused by premature ventricular beats identified by the device's ventricular beat detector. In our view, the claims "focus on a specific means or method that improves" cardiac monitoring technology; they are not "directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." McRO, 837 F.3d at 1314 (citations omitted)." Further, only the intrinsic record is necessary to understand the prior art for an Alice Step one analysis.

Representative claim: 1. A device, comprising:  
a beat detector to identify a beat-to-beat timing of cardiac activity;  
  
a ventricular beat detector to identify ventricular beats in the cardiac activity;  
  
variability determination logic to determine a variability in the beat-to-beat timing of a collection of beats;  
  
relevance determination logic to identify a relevance of the variability in the beat-to-beat timing to at least one of atrial fibrillation and atrial flutter; and  
  
an event generator to generate an event when the variability in the beat-to-beat timing is identified as relevant to the at least one of atrial fibrillation and atrial flutter in light of the variability in the beat-to-beat timing caused by ventricular beats identified by the ventricular beat detector.

Practice tips and takeaways: The court found that the claims were directed to a new technique and associated system, not automation of a known technique. The description of technical advantages provided in the specification was persuasive to the court in evaluating the technical improvement of the claims.

Case link: [http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/19-1149.Opinion.4-17-2020\\_1571885.pdf](http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/19-1149.Opinion.4-17-2020_1571885.pdf)

Art Unit, Examiner: 3762, George Manuel

Citation: Cardionet, LLC *et al.* v. Infobionic, INC., No. 2019-1149, 2020 WL 1897237 (Fed. Cir. Apr. 17, 2020).

Panelists: Dyk, Plager, Stoll



Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Cellspin Soft, Inc. v. FitBit, Inc. et al.**

Appeal from Northern District of California - Decided June 25, 2019.

Precedential Opinion

US Patent Nos. 8,738,794; 8,892,752; 9,258,698; and 9,749,847

The Federal Circuit vacated the district court opinion and remanded back, finding the claims to be directed to an abstract idea but that the district court erred in its step two analysis. The claims are directed to connecting a data capture device, e.g., a digital camera, to a mobile device so that a user can automatically publish content from the data capture device to a website.

Claims held to be abstract because they generally involve capturing and transmitting data from one device to another. However, the district court erred in its step two analysis by not considering the ways the invention was alleged to be unconventional. For example, it was alleged to be unconventional to separate the steps of capturing and publishing data so that each step would be performed by a different device linked via a wireless, paired connection. The district court erred by ignoring the principle, implicit in *Berkheimer* and explicit in *Aatrix*, that factual disputes about whether an aspect of the claims is inventive may preclude dismissal at the pleadings stage under § 101.

1. A method for acquiring and transferring data from a Bluetooth enabled data capture device to one or more web services via a Bluetooth enabled mobile device, the method comprising:  
providing a software module on the Bluetooth enabled data capture device;

providing a software module on the Bluetooth enabled mobile device;

establishing a paired connection between the Bluetooth enabled data capture device and the Bluetooth enabled mobile device;

acquiring new data in the Bluetooth enabled data capture device, wherein new data is data acquired after the paired connection is established;

detecting and signaling the new data for transfer to the Bluetooth enabled mobile device, wherein detecting and signaling the new data for transfer comprises:

determining the existence of new data for transfer, by the software module on the Bluetooth enabled data capture device; and

sending a data signal to the Bluetooth enabled mobile device, corresponding to existence of new data, by the software module on the Bluetooth enabled data capture device automatically, over the established paired Bluetooth connection, wherein the software module on the Bluetooth enabled mobile device listens for the data signal sent from the Bluetooth enabled data capture device, wherein if permitted by the software module on the Bluetooth enabled data capture device, the data signal sent to the Bluetooth enabled mobile device comprises a data signal and one or more portions of the new data;

transferring the new data from the Bluetooth enabled data capture device to the Bluetooth enabled mobile device automatically over the paired Bluetooth connection by the software module on the Bluetooth enabled data capture device;

receiving, at the Bluetooth enabled mobile device, the new data from the Bluetooth enabled data capture device;

applying, using the software module on the Bluetooth enabled mobile device, a user identifier to the new data for each destination web service, wherein each user identifier uniquely identifies a particular user of the web service;

transferring the new data received by the Bluetooth enabled mobile device along with a user identifier to the one or more web services, using the software module on the Bluetooth enabled mobile device;

receiving, at the one or more web services, the new data and user identifier from the Bluetooth enabled mobile device, wherein the one or more web services receive the transferred new data corresponding to a user identifier; and  
making available, at the one or more web services, the new data received from the Bluetooth

The decision illustrates that it is worth arguing the Berkheimer line of cases in litigation (and implicitly prosecution as well) to avoid a motion to dismiss, summary judgment, etc., especially if there are clear factual disputes over the inventive aspects of the claims.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-1817.Opinion.6-25-2019.pdf>

709, Sulaimen Nooristany

Cellspin Soft, Inc. v. FitBit, Inc. 927 F.3d 1306 (Fed. Cir. 2019)

LOURIE, O'MALLEY, and TARANTO

### Chamberlain Group Inc v Techtronic Industries Co

- Overview: Appeal from the United States District Court for the Northern District of Illinois., decided August 21, 2019, US Patent No. 7,224,275. Ineligible - reversed district court's decision that the claims were eligible under 101. The court focused on the difference between the claims and the prior art and found that the difference, wireless transmission, is an abstract idea without further inventive concept.
- Discussion: The Federal Circuit evaluated the claims in the context of the prior art to focus on the difference — finding that the “only described difference between the prior art movable barrier operator systems and the claimed movable barrier operator system is that the status information about the system is communicated wirelessly, in order to overcome certain undesirable disadvantages of systems using physical signal paths—additional cost, exposed wiring, and increased installation time.” Except for the wireless transmission, the court found that the remaining elements were “generally well understood in the art.” With respect to the wireless transmission, the court found the wireless transmission of status to be an abstract idea: “the broad concept of communicating information wirelessly, without more, is an abstract idea.” With respect to Step 2, the court found that the claims didn't include any inventive concept beyond the excluded abstract idea: "In other words, beyond the idea of wirelessly communicating status information about a movable barrier operator, what elements in the claim may be regarded as the “inventive concept”? ... [W]ireless transmission is the only aspect of the claims that CGI points to as allegedly inventive over the prior art. . . . Wireless communication cannot be an inventive concept here, because it is the abstract idea that the claims are directed to. Because CGI does not point to any inventive concept present in the ordered combination of elements beyond the act of wireless communication, we find that no inventive concept exists in the asserted claims sufficient to transform the abstract idea of communicating status information about a system into a patent-eligible application of that idea."
- Representative claim: 1. A movable barrier operator comprising: a controller having a plurality of potential operational status conditions defined, at least in part, by a plurality of operating states;
- a movable barrier interface that is operably coupled to the controller;
- a wireless status condition data transmitter that is operably coupled to the controller, wherein the wireless status condition data transmitter transmits a status condition signal that: corresponds to a present operational status condition defined, at least in part, by at least two operating states from the plurality of operating states; and
- comprises an identifier that is at least relatively unique to the movable barrier operator, such that the status condition signal substantially uniquely identifies the movable barrier operator.



Practice tips and  
takeaways:

Unfortunately, the court blurs a bit of 102/103 and 101 analysis here. The court reads out elements of the claim that it views as not novel and then finds that the remaining element is abstract. Be mindful of whether your new element(s) can be considered abstract. Ideally, you will have an argument that the new element(s) of the claims are eligible and not abstract.

Case link:

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-2103.Opinion.8-21-2019.pdf>

Art Unit, Examiner:

2612, Donnie Crossland

Citation:

Chamberlain Group Inc v Techtronic Industries Co., 935 F.3d 1341 (Fed. Cir. 2019)

Panelists:

Lourie, O'Malley, Chen

Case link: [http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/19-1149.Opinion.4-17-2020\\_1!](http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/19-1149.Opinion.4-17-2020_1!)

Art Unit, Examiner:

Citations:

Panelists:





571885.pdf

Overview:

Discussion:

Representative claim:

Practice tips and

Case link:

Art Unit, Examiner:

Citation:

Panelists:

### ChargePoint Inc v SemaConnect Inc

Ineligible: Precedential Appeal from the United States District Court for the District of Maryland. Rule 12(b)(6) stage. US Patent No. 8,138,715 describes and claims networking power stations for charging electric vehicles so that charging can be controlled in various ways, such as free charging by a restaurant, reduced charging at peak demand on the grid, supplying power to the grid, etc.

Ineligible - "determine whether the focus of claim 1, as a whole, is the abstract idea. As explained below, we conclude that it is." "The problem identified by the patentee, as stated in the specification, was the lack of a communication network that would allow drivers, businesses, and utility companies to interact efficiently with the charging stations. For example, the specification states that "[t]here is a need for a communication network which facilitates finding the recharging facility, controlling the facility, and paying for the electricity consumed." "Claim 1 is directed to the abstract idea of communication over a network to interact with a device connected to the network." "Notably, however, the specification never suggests that the charging station itself is improved from a technical perspective, or that it would operate differently than it otherwise could." "Nor does the specification suggest that the invention involved overcoming some sort of technical difficulty in adding networking capability to the charging stations. "

Significantly more/inventive concept not found. The only inventive concept "is the abstract idea itself" Part of that may be due to the extensive background that describes networks as being an essential part of electric vehicle systems. One way to look at this case is that the claims were interpreted as too broad and encompassing too much of electric vehicle networks. The background might have been used to invalidate the patent given such a broad claim interpretation.

1. An apparatus, comprising:  
a control device to turn electric supply on and off to enable and disable charge transfer for electric vehicles;

a transceiver to communicate requests for charge transfer with a remote server and receive communications from the remote server via a data control unit that is connected to the remote server through a wide area network; and

a controller, coupled with the control device and the transceiver, to cause the control device to turn the electric supply on based on communication from the remote server.

2. The apparatus of claim 1, further comprising an electrical coupler to make a connection with an electric vehicle, wherein the control device is to turn electric supply on and off by switching the electric coupler on and off.

Be careful regarding "need" statements. Here the court used a broad need statement in the application to characterize the invention: "the idea of network-controlled charging stations." Perhaps if the application had first described the problem as needing to program each charging station individually, leading to inflexibility and extra work, the result might have been different.



The background section is very long, and describes that "As is clear from the previous discussion, communication networks are an essential part of electric vehicle recharging systems...."

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-1739.Opinion.3-28-2019.pdf>

2858, Edward Tso

ChargePoint Inc v SemaConnect Inc., 920 F.3d 759 (Fed. Cir. 2019)

Prost, Reyna, Tarranto

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citation:

Panelists:

### **Classen Immunotherapies, Inc. v. Biogen IDEC**

Appeal from the D. of Maryland - Decided August 31, 2011. US Patent No. 5,723,283 involved collecting and comparing known information. [1]

Two other patents in the case were held eligible because they involved an immunization step. Claim 1 in the '283 patent was held ineligible because no immunization step was required. Note that the claim actually recites comparing, does not require a computer to do the comparing, and lacks any step based on the comparison.

1. A method of determining whether an immunization schedule affects the incidence or severity of a chronic immune-mediated disorder in a treatment group of mammals, relative to a control group of mammals, which comprises immunizing mammals in the treatment group of mammals with one or more doses of one or more immunogens, according to said immunization schedule, and comparing the incidence, prevalence, frequency or severity of said chronic immune-mediated disorder or the level of a marker of such a disorder, in the treatment group, with that in the control group.

See Electric Power tab. This case is often cited for the bare proposition that any claim that performs: "collecting and comparing known information" is not eligible. However, the claim does not require a computer, and does not perform any step based on the comparison. Other claims in this case that did perform the immunization step were found eligible. Thus, if your claim performs any step based on a comparison of collected data, Classen actually supports eligibility.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/06-1634-1649.pdf>

1636, Nancy J. Leith

[1] Classen Immunotherapies, Inc. v. Biogen Idec 659 F.3d 1057, 2011 U.S. App. LEXIS 18126, 100 U.S.P.Q.2d (BNA) 1492 (Fed. Cir. 2011).

Newman, Rader, Moore (dissent)

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

## **Core Wireless Licensing v. LG Electronics, Inc.**

Appeal from E.D. Texas - Decided January 25, 2018

LG Electronics appealed the District Court decision which denied LG's motion for summary judgment of subject matter ineligibility under 35 USC 101 and denied LG's motion for JMOL that the claims are anticipated and not infringed. The Federal Circuit decision affirmed the district court.

Patents-at-Issue: US Patent No. 8,713,476, US Patent No. 8,434,020, US Patent No. 6,415,164

Federal Circuit Holding: The court affirmed the finding of subject matter eligibility under 35 USC 101.

Technology: A graphical user interface that includes an application summary window to display a limited set of information related to one or more applications without actually launching those application(s).

The Federal Circuit indicated that "[t]he claim further requires the application summary window list a limited set of data, 'each of the data in the list being selectable to launch the respective application and enable the selected data to be seen within the respective application.'" [1] The application summary window restricts a type of data that can be displayed in the summary window, and the claim recites that the summary window "is displayed while the one or more applications are in an un-launched state". [2] "These limitations disclose a specific manner of displaying a limited set of information to the user, rather than using conventional user interface methods to display a generic index on a computer." [3] The Federal Circuit referenced the patent specifications and their teaching of problems associated with prior art interfaces. For example, users of prior systems had to "drill down through many layers to get to desired data or functionality [which] could seem slow, complex and difficult to learn, particularly to novice users." [4] In contrast, the claimed invention involves "[d]isplaying selected data or functions of interest in the summary window allows the user to see the most relevant data or functions without actually opening the application up." [5] To the Federal Circuit, this represented a specific improvement over conventional user interfaces and associated methods. Using the summary window to provide information about an application that is in an unlaunched state "saves the user from navigating to the required application, opening it up, and then navigating within that application to enable the data of interest to be seen or a function of interest to be activated." [6] The Federal Circuit noted that the specification indicated the claims provided an improvement in the function of computers with small screens and presented a certain limited set of information to a user in a particular manner. For the section 101 analysis, the Federal Circuit notes: "At step one, we must 'articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful.' ... We also ask whether the claims are directed to a specific improvement in the capabilities of computing devices, or, instead, 'a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool.'" [7] The court found that the claims were not directed to an abstract idea under step one of the Alice test. Therefore, an analysis under step two to evaluate whether the claims recite something more need not be completed. [8]

1. A computing device comprising a display screen, the computing device being configured to display on the screen a menu listing one or more applications, and additionally being configured to display on the screen an application summary that can be reached directly from the menu, wherein the application summary displays a limited list of data offered within the one or more applications, each of the data in the list being selectable to launch the respective application and enable the selected data to be seen within the respective application, and wherein the application summary is displayed while the one or more applications are in an un-launched state.

Consider describing in your specification what technical problems are found in prior user interfaces and how your claimed graphical user interface solves those problems with improved technology. It appears to be helpful to claim the structure and/or process for the improvement, not just a result of the improvement. Try being specific as to how particular elements of the claims improve functioning of the computer system.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/16-2684.Opinion.1-23-2018.1.PDF>

2175, Thanh Vu (8,713,476 & 8,434,020); 2682, Charles Appiah (6,415,164)

[1] Core Wireless Licensing S.A.R.L., v. LG Electronics, Inc., 880 F.3d 1356, 1362 (Fed. Cir. 2018).

[2] *Id.* at 1363.

[3] *Id.*

[4] *Id.*

[5] *Id.*

[6] *Id.*

[7] *Id.* at 1361-62.

[8] *Id.* at 1363.

Moore, O'Malley, Wallach (cip/dip)

Overview:

Discussion:

Representative claim:

Practice tips and



takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

## **Customedia Technologies, LLC v. Dish Network Corporation**

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board - Decided March 6, 2020 - US Patent Nos. 8,719,090 and 9,053,494, which share a specification, involving comprehensive data management and processing systems.

Alice Step 1: Customedia argues that the functionality of the computer is improved by dedicating a section of the computer's memory to advertising data. The Fed. Circ. disagrees stating that "Even if we accept Customedia's assertions, the claimed invention merely improves the abstract concept of delivering targeted advertising using a computer only as a tool. This is not what the Supreme Court meant by improving the functioning of the computer itself nor is it consistent with our precedent applying this concept." Further, "[t]he claims of the '090 and '494 patents do not enable computers to operate more quickly or efficiently, nor do they solve any technological problem. They merely recite reserving memory to ensure storage space is available for at least some advertising data. The specification is silent as to any specific structural or inventive improvements in computer functionality related to this claimed system." [1]

Alice Step 2: "Aside from the abstract idea of delivering targeted advertising, the claims recite only generic computer components, including a programmable receiver unit, a storage device, a remote server and a processor." [1] Further, in the specification, Customedia describes the storage device and receiver units and known in the art, and, accordingly, found by the Fed. Circ. to be generic and functional hardware.

Claims found ineligible under 101.

The Fed. Circ. disagreed with the Board's decision regarding 102 issues. However, because the 101 ineligibility was upheld, the opinion did not address the 102 issues.

### '090 Patent

1. A data delivery system for providing automatic delivery of multimedia data products from one or more multimedia data product providers, the system comprising:  
a remote account transaction server for providing multimedia data products to an end user, at least one of the multimedia data products being specifically identified advertising data; and

a programmable local receiver unit for interfacing with the remote account transaction server to receive one or more of the multimedia data products and for processing and automatically recording the multimedia data products, said programmable local receiver unit including at least one individually controlled and reserved advertising data storage section adapted specifically for storing the specifically identified advertising data, said at least one advertising data storage section being monitored and controlled by said remote account transaction server and such that said specifically identified advertising data is delivered by said remote account transaction server and stored in said at least one individually controlled and reserved advertising data storage section.

If an argument for improvement of a computer's ability to function may be needed to overcome

101 rejections, the specification should have more detail than a generic computer's inherent ability.

[http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-2239.Opinion.3-6-2020\\_1546270.pdf](http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-2239.Opinion.3-6-2020_1546270.pdf)

'090 Patent: 3681, Donald Champagne'494 Patent: 3622, Donald Champagne

[1] Customedia Technologies LLC v Dish Network Corporation, 951 F.3d 1359 (Fed. Cir. 2020)

Prost, Dyk, and Moore

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citation:

Panelists:

### **CyberSource Corporation v. Retail Decisions, Inc.**

Appeal from the N.D. of California - Decided August 16, 2011. US Patent No. 6,029,154 involved obtaining and comparing intangible data. [1]

CyberSource involved a method of obtaining IP addresses of transactions and constructing a map of credit card numbers based on other transactions and using the map to determine if a credit card transaction is valid. The court indicated this claim simply obtains and compares intangible data pertinent to business risk. Note that nothing is done with the comparison. The court noted that the claims appeared to attempt to cover all methods of detecting credit card fraud, and went to efforts to simplify the claim claimed generation of a map by indicating it could be a simple list of credit card numbers.

2. A computer readable medium containing program instructions for detecting fraud in a credit card transaction between a consumer and a merchant over the Internet, wherein execution of the program instructions by one or more processors of a computer system causes the one or more processors to carry out the steps of:

a) obtaining credit card information relating to the transactions from the consumer; and

b) verifying the credit card information based upon values of a plurality of parameters, in combination with information that identifies the consumer, and that may provide an indication whether the credit card transaction is fraudulent, wherein each value among the plurality of parameters is weighted in the verifying step according to an importance, as determined by the merchant, of that value to the credit card transaction, so as to provide the merchant with a quantifiable indication of whether the credit card transaction is fraudulent, wherein execution of the program instructions by one or more processors of a computer system causes the one or more processors to carry out the further steps of;

obtaining other transactions utilizing an Internet address that is identified with the credit card transaction;

constructing a map of credit card numbers based upon the other transactions; and

utilizing the map of credit card numbers to determine if the credit card transaction is valid.

CyberSource involved a method of verifying validity of credit card transactions over the Internet and has been characterized in MPEP 2106 as “insignificant extrasolution activity” and “mere data gathering.” Characterize it as a business method. Point out that claims in Classen (often cited with CyberSource) that included immunization were found eligible. Point out how your claims actually do something, similar to the claims that were allowed in Classen. Argue that your claims are not related to any form of business method like CyberSource, but instead describe a technical solution to a technical problem. CyberSource is very limited to its facts and does not stand for the proposition that any case that collects and compares data in addition to other elements should be found ineligible.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/09-1358.pdf>

2765, Susanna M. Meinecke Diaz

[1] CyberSource Corp. v. Retail Decisions, Inc. 654 F.3d 1366, 2011 U.S. App. LEXIS 16871, 99 U.S.P.Q.2d (BNA) 1690 (Fed. Cir. 2011).

Dyk, Prost, Bryson

Overview:

Discussion:

Representative claim:



Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

Author:

## Data Engine Technologies LLC v Google LLC

Precedential. Appeal from entry of judgment on the pleadings from the United States District Court for the District of Delaware. Claims of U.S. Patent Nos. 5,590,259; 5,784,545; 6,282,551; and 5,303,146 are directed to patent-eligible subject matter, not abstract, directed to a specific improved method for navigating through complex three-dimensional electronic spreadsheets. Court also found other claims directed to abstract idea of collecting, recognizing, and storing changed information and that these were not eligible. [1]

Court found the asserted claims to be directed to patent-eligible subject matter. Spreadsheets were not easy to use and not user friendly.

The claims were directed to a specific method for navigating through three-dimensional electronic spreadsheets. The patent solved a known technological problem in computers in a particular way - by providing a highly intuitive, user-friendly interface with familiar notebook tabs for navigating the three-dimensional worksheet environment.

12. In an electronic spreadsheet system for storing and manipulating information, a computer-implemented method of representing a three-dimensional spreadsheet on a screen display, the method comprising:

displaying on said screen display a first spreadsheet page from a plurality of spreadsheet pages, each of said spreadsheet pages comprising an array of information cells arranged in row and column format, at least some of said information cells storing user-supplied information and formulas operative on said user-supplied information, each of said information cells being uniquely identified by a spreadsheet page identifier, a column identifier, and a row identifier;

while displaying said first spreadsheet page, displaying a row of spreadsheet page identifiers along one side of said first spreadsheet page, each said spreadsheet page identifier being displayed as an image of a notebook tab on said screen display and indicating a single respective spreadsheet page, wherein at least one spreadsheet page identifier of said displayed row of spreadsheet page identifiers comprises at least one user-settable identifying character;

receiving user input for requesting display of a second spreadsheet page in response to selection with an input device of a spreadsheet page identifier for said second spreadsheet page;

in response to said receiving user input step, displaying said second spreadsheet page on said screen display in a manner so as to obscure said first spreadsheet page from display while continuing to display at least a portion of said row of spreadsheet page identifiers; and

receiving user input for entering a formula in a cell on said second spreadsheet page, said formula including a cell reference to a particular cell on another of said spreadsheet pages having a particular spreadsheet page identifier comprising at least one user-supplied identifying character, said cell reference comprising said at least one user-supplied identifying character for said particular spreadsheet page identifier together with said column identifier and said row identifier for said particular cell.

Focus your claims and your specification on discussing how computers' functionality is improved.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/17-1135.Opinion.10-9-2018.pdf>

Joseph H. Feild

[1] Data Engine Technologies LLC v. Google LLC, 906 F.3d 999 (Fed. Cir. 2018)

Reyna, Bryson, Stoll

Bednarz

## DDR Holdings, LLC v. Hotels.com, L.P.

Overview: Appeal from E.D. Texas - Decided December 5, 2014

DDR Holdings, LLC sued multiple parties for infringement of US Patent No. 6,993,572 and other patents. The '572 patent was found eligible and infringed. Affirmed as the claims recite significantly more, reciting a claimed solution that "is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks. Mayer dissents, indicating the abstract concept is : "an online merchant's sales can be increased if two web pages have the same "look and feel". Only a generic computer is used to apply that concept. [1]

Discussion: The majority recites several of the proposed abstract ideas, and indicates it does not matter which one is used, as the claims recite significantly more than an abstract idea: "Instead, the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks." Conventional function of a computer when clicking on a link would direct someone away from the host website, not generate a hybrid page. Elements in claim 13 are referenced to support that view, including constructing and serving a hybrid web page that merges content from the vendor's page and includes elements from the host website. The dissent's view that it is the same concept as a kiosk in store is debunked by indicating one is not "suddenly and completely transported outside the warehouse store." No preemption is mentioned but not relied upon. Other cases (Alice, Ultramercial, buySAFE, Accenture, and Bancorp) are distinguished based on the claims not reciting "a commonplace business method aimed at processing business information, applying a known business process to the particular technological environment of the Internet, or creating or altering contractual relations using generic computer functions and conventional network operations."

Representative claim: Claim 13. An e-commerce outsourcing system comprising:  
a) a data store including a look and feel description associated with a host web page having a link correlated with a commerce object; and  
b) a computer processor coupled to the data store and in communication through the Internet with the host web page and programmed, upon receiving an indication that the link has been activated by a visitor computer in Internet communication with the host web page, to serve a composite web page to the visitor computer with a look and feel based on the look and feel description in the data store and with content based on the commerce object associated with the link.

Practice tips and takeaways: Consider characterizing a technical problem/solution in a technical manner in terms of the infrastructure used to implement the idea when drafting the application, or look for same during prosecution/assertion. Avoid as much as possible (but not entirely) discussing the business problem addressed by the invention. Try to include at least some examples in the specification that are not related to a business process. In DDR, an additional example could have been related to searching for information on different websites and integrating the data into an original website with the same look and feel

website with the same look and feel.

Case link: <http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/13-1505.Opinion.12-3-2014.1.PDF>

Art Unit, Examiner: 2145, Jason Cardone

Citations: [1] DDR Holdings, LLC v. Hotels.com, L.P. 773 F.3d 1245, 2014 U.S. App. LEXIS 22902, 113 U.S.P.Q.2d (BNA) 1097 (Fed. Cir. 2014).

Panelists: Chen, Wallach, Mayer (dissent)

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citation:

Panelists:

**Digitech Image Technologies, LLC v. Electronics for Imaging, Inc.**

Appeals from the C.D. of California - Decided July 11, 2014. US Patent No. 6,128,415 involved organizing and manipulating information through mathematical correlation. [1]

The claims are to a device profile and a method of generating a device profile. Nuijten is cited as support for not allowing a claim to just data, as the data was characterized as broader than even a signal. A profile alone is not tangible and hence not one of the statutory categories.

1. 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.

See Electric Power Tab - Make sure you have a claim that uses the profile. In this case, the profile helped solve a technical problem, and a claim using the profile to capture both spatial and color properties of an imaging device to provide a better output on a display device would have had a much better chance. Also, if claiming a data structure, make sure to disclose and claim a tangible - non-transitory medium on which the profile/data structure is stored.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/13-1600.Opinion.7-9-2014.1.PDF>

2721, Daniel G. Mariam

[1] Digitech Image Techs., LLC v. Electronics for Imaging, Inc. 758 F.3d 1344, 2014 U.S. App. LEXIS 13149, 111 U.S.P.Q.2d (BNA) 1717, 2014 WL 3377201 (Fed. Cir. 2014).

Reyna, Moore, Hughes

### **Electric Power Group, LLC v. Alstom S.A.**

- Overview: Appeal from C.D. California - Decided August 1, 2016. US Patent No. 8,401,710 involved collecting information, analyzing it, and displaying certain results of the collection and analysis - Technology: Receives lots of information from other sources related to a power grid, analyzes, and displays information about the grid. Quote: Though lengthy and numerous, the claims do not go beyond requiring the collection, analysis, and display of available information in a particular field, stating those functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance over conventional computer and network technology. The claims, defining a desirable information-based result and not limited to inventive means of achieving the result, fail under § 101. [1]
- Discussion: - Technology: Receives information from other sources related to a power grid, analyzes, and displays information about the grid. Quote: "Though lengthy and numerous, the claims do not go beyond requiring the collection, analysis, and display of available information in a particular field, stating those functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance over conventional computer and network technology." [2] The claims, defining a desirable information-based result and not limited to inventive means of achieving the result, fail under § 101.
- Representative claim: 12. A method of detecting events on an interconnected electric power grid in real time over a wide area and automatically analyzing the events on the interconnected electric power grid, the method comprising:
- receiving a plurality of data streams, each of the data streams comprising sub-second, time stamped synchronized phasor measurements wherein the measurements in each stream are collected in real time at geographically distinct points over the wide area of the interconnected electric power grid, the wide area comprising at least two elements from among control areas, transmission companies, utilities, regional reliability coordinators, and reliability jurisdictions;
  - receiving data from other power system data sources, the other power system data sources comprising at least one of transmission maps, power plant locations, EMS/SCADA systems;
  - receiving data from a plurality of non-grid data sources;
  - detecting and analyzing events in real-time from the plurality of data streams from the wide area based on at least one of limits, sensitivities and rates of change for one or more measurements from the data streams and dynamic stability metrics derived from analysis of the measurements from the data streams including at least one of frequency instability, voltages, power flows, phase angles, damping, and oscillation modes, derived from the phasor measurements and the other power system data sources in which the metrics are indicative of events, grid stress, and/or grid instability, over the wide area;
  - displaying the event analysis results and diagnoses of events and associated ones of the metrics from different categories of data and the derived metrics in visuals, tables, charts, or combinations thereof, the data comprising at least one of monitoring data, tracking data, historical data, prediction data, and summary data;
  - displaying concurrent visualization of measurements from the data streams and the dynamic



stability metrics directed to the wide area of the interconnected electric power grid;

accumulating and updating the measurements from the data streams and the dynamic stability metrics, grid data, and non-grid data in real time as to wide area and local area portions of the interconnected electric power grid; and

deriving a composite indicator of reliability that is an indicator of power grid vulnerability and is derived from a combination of one or more real time measurements or computations of measurements from the data streams and the dynamic stability metrics covering the wide area as well as non-power grid data received from the non-grid data source.

Practice tips and takeaways:

Electric Power is used quite often by examiners in rejections. The examiners only cite the cases that they are briefed on in training. The 101 training materials identify such cases (Chart: <https://www.uspto.gov/sites/default/files/documents/ieg-qrs.pdf>; Training Materials: <https://www.uspto.gov/patent/laws-and-regulations/examination-policy/training-materials-subject-matter-eligibility>). How to argue against: Attack the identification of the abstract idea: As instructed in the May 4, 2016 Memorandum at page 3:

Examiners should be familiar with any cited decision relied upon in making or maintaining a rejection to ensure that the rejection is reasonably tied to the facts of the case and to avoid relying upon language taken out of context. Examiners should not go beyond those concepts that are similar to what the courts have identified as abstract ideas.

Use the McRo, Enfish, and Berkheimer memos

Argue a technical solution to a technical problem, clearly identifying why the problem and the solution are technical in nature.

Recite and emphasize generation of new information that did not previously exist, which sets up an analogy to Enfish.

Recite and emphasize user interactivity that improves data presentation, which sets up an analogy to Core Wireless.

Point to a particular inventive technological process to distinguish from Electric Power.

The claims in Electric Power Group failed to assert any particular inventive technology. To be sure, the Federal Circuit similarly distinguished the claims in Trading Technologies Inc. v. CQG, Inc. (hereinafter Trading Technologies), as follows:

The claims in Electric Power Group failed to assert any particular inventive technology. To be sure, the Federal Circuit similarly distinguished the claims in Trading Technologies Inc. v. CQG, Inc. (hereinafter Trading Technologies), as follows:

"Claims directed to the "process of gathering and analyzing information of a specified content, then displaying the results," without "any particular assertedly inventive technology for

performing those functions,” were held ineligible in *Electric Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016)

Indeed, Electric Power Group qualified its own holding, as follows:  
And we have recognized that merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis.

Broadest reasonable interpretation: Argue that the interpretation of the claims is unreasonable.

Argue that the claims have been over simplified and improperly characterized broadly as “collecting information, analyzing it, and displaying certain results of the collection and analysis” in an attempt to compare the claims to Electric Power Group. The claims in *Enfish* and *McRO* may be similarly over simplified and broadly characterized, but instead, the claims were found eligible. In both *DDR Holdings* and *McRO* the claims were found eligible under § 101 by the courts. Thus, reciting elements that can be reduced to a summary of collecting information, analyzing information, and providing certain results is insufficient to render a claim ineligible under § 101. Yet, this is what the Examiner has done. The Examiner has removed any of the actual recited elements until the caricature of the claim elements meets the notion of an abstract idea.

Case link: <http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/15-1778.Opinion.7-28-2016.1.PDF>

Art Unit, Examiner: 2121, M. N. Von Buhr

Citations: [1] *Electric Power Group, LLC v. ALSTOM SA*, 830 F. 3d 1350. (Fed. Cir. 2016)  
[2] *Id* . at 1351.

Panelists: Taranto, Bryson, Stoll

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

### **Enfish, LLC v. Microsoft Corp.**

Appeal from C.D. California - Decided May 12, 2016. US Patent Nos. 6,151,604 and 6,163,775 involved a self-referential database. [1]

*Enfish* is a 2016 Federal Circuit decision in which the court, for the second time since the United States Supreme Court decision in *Alice Corp. v. CLS Bank* upheld the patent-eligibility of software patent claims. In particular, the Federal Circuit reversed a district court ruling that Enfish's asserted software claims directed to a database using a self-referential table were ineligible under § 101 and also vacated the lower court's holding that some of the claims were invalid as anticipated.

In *Enfish*, the Federal Circuit reversed the district court's grant of summary judgment, which found the claims of US Patent Nos. 6,151,604 and 6,163,775 not patent eligible under 35 U.S.C. § 101. In reversing, the court held, among other rulings, that the claims were not directed to an abstract idea under the first step of the *Alice* test (Step 2A). The court explained that this first step "is a meaningful one" and "cannot simply ask whether the claims involve a patent-ineligible concept, because essentially every routinely patent-eligible claim involving physical products and actions involves a law of nature and/or natural phenomenon—after all, they take place in the physical world." Rather, the inquiry must consider whether the claims' "character as a whole is directed to excluded subject matter." The court then stated, "[w]e do not read *Alice* to broadly hold that all improvements in computer-related technology are inherently abstract" and noted that software can "make non-abstract improvements to computer technology just as hardware improvements can" under *Alice*. The '604 and '775 patents claim a logical model for a computer database. A logical model is a system for a computer database that explains how the various elements of information in the database are related to one another. Contrary to conventional logical models, *Enfish*'s 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.

17. (6,151,604 Patent) A data storage and retrieval system for a computer memory, comprising: means for configuring said memory according to a logical table, said logical table including: a plurality of logical rows, each said logical row including an object identification number (OID) to identify each said logical row, each said logical row corresponding to a record of information;

a plurality of logical columns intersecting said plurality of logical rows to define a plurality of logical cells, each said logical column including an OID to identify each said logical column; and

means for indexing data stored in said table.

The *Enfish* decision confirms that improvements in computer-related technology are not always, by definition, abstract ideas under the first step of the *Alice* test. Thus, applicants may wish to consider identifying the improvement offered by the claimed invention and inquiring as to whether that improvement represents a specific improvement to the technology itself.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/15-1244.Opinion.5-10-2016.1.PDF>

2161, Apu Mofiz

[1] Enfish, LLC v. Microsoft Corp., 822 F. 3d 1327 (Fed. Cir. 2016).

Hughes, Taranto, Moore

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:



### **Exergen Corporation v. Kaz USA Inc.**

Nonprecedential. Appeal from U.S. District Court for the District of Massachusetts - Decided March 8, 2018. US Patent Nos. 6,292,685 and 7,787,938 directed to a "body temperature detector" and "method of determining human body temperature". [1]

The Federal Circuit in Exergen upheld the patent-eligibility of the patent claims. In particular, the Federal Circuit found that even though the patents are "directed to the measurement of a natural phenomenon (core body temperature)...the measurement method here was not conventional, routine, and well-understood" under step two of the Mayo/Alice test.

This opinion is nonprecedential but still provides useful insights for practice tips for drafting specification and claims that may avoid abstract subject matter rejection under 35 U.S.C. § 101 as being directed to a natural phenomenon.

In Exergen, the Federal Circuit upheld the district court's decision, finding the claims of US Patent Nos. 6,292,685 and 7,787,938 patent eligible under 35 U.S.C. § 101. Under step one of the Mayo/Alice test, the Court found that there was "no dispute in this case that the asserted claims employ a natural law to achieve their purpose [as] the claims recite a 'method of detecting human body temperature' and 'a body temperature detector.'" But the Court held "[e]ven if the concept of such [body temperature] measurement is directed to a natural phenomenon and is abstract at step one [of the Mayo/Alice test], the measurement method here [in the patent claims] was not conventional, routine and well-understood [under the Mayo/Alice test step two]."

The Court explained that "following years and millions of dollars of testing and development, the inventor determined for the first time the coefficient representing the relationship between temporal-arterial temperature and core body temperature and incorporated that discovery into an unconventional method of temperature measurement" that was supported in the specification with "mathematical equations to calculate core temperature based on ambient and skin temperature readings". The Court concluded that this satisfied the second step of Mayo/Alice as "the patent incorporated an inventive concept" in which the inventor "transformed the process into an inventive application of the formula."

The Court further concluded that the district court's "fact finding" with "cited evidence presented at trial and from the patent specifications" was "not clearly erroneous" and supported the conclusion that "the claimed combination" was not well-understood, routine, and conventional.

Claim 49 which depends from claim 48 of the US 6,292,685 patent, an apparatus claim, recites:

48. A body temperature detector comprising:

a radiation detector; and

electronics that measure radiation from at least three readings per second of the radiation detector as a target skin surface over an artery is viewed, the artery having

a relatively constant blood flow, and that process the measured radiation to provide a body temperature approximation, distinct from skin surface temperature, based on detected radiation.

49. The body temperature detector of claim 48 wherein the artery is a temporal artery.

Claim 24, which depends from claim 14, of the US 7,787,938 patent, a method claim, recites:

14. A method of detecting human body temperature comprising making at least three radiation readings per second while moving a radiation detector to scan across a region of skin over an artery to electronically determine a body temperature approximation, distinct from skin surface temperature.

24. The method of claim 14 wherein the artery is a temporal artery.

The Exergen decision confirms that even if claims are deemed abstract as employing a natural law or directed to a natural phenomenon under the first step of the Mayo/Alice test, individual limitations in the claim or the combination of the claim limitations as a whole may support an inventive concept under the second step of the Mayo/Alice test. But an inventor should add sufficient details in the specification (such as his/her mathematical equations) that support the derivation of their formula or algorithm, and the unconventional application of that formula or algorithm as claimed.

This practice tip for avoiding a 35 U.S.C. § 101 rejection under Mayo/Alice test step 2 is applicable to software-related inventions too where the application of a particular algorithm should be well supported in the specification to emphasize that steps or aspects of the application of the algorithm are not well known or conventional.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/16-2315.Opinion.3-6-2018.1.PDF>

3737, Jeoyuh Lin (US 6,292,685); 3768, Jacqueline Cheng (US 7,787,938)

[1] Exergen Corporation v Kaz USA Inc , 725 Fed.Appx. 959 (Fed. Cir. 2018) (emphasis added).

Moore, Bryson and Hughes

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citation:

Panelists:

**Fairwarning IP, LLC v. Iatric Systems, Inc.**

Appeal from the M.D of Florida - Decided October 11, 2016. US Patent No. 8,578,500 involved collecting and analyzing information to detect misuse and notifying a user when misuse is detected. [1]

- Technology/quote: According to the specification, pre-existing systems were able to record audit log data concerning user access of digitally stored PHI (personal health information). The claimed systems and methods record this data, analyze it against a rule, and provide a notification if the analysis detects misuse... FairWarning's claims merely implement an old practice in a new environment.

1. A method of detecting improper access of a patient's protected health information (PHI) in a computer environment, the method comprising:  
generating a rule for monitoring audit log data representing at least one of transactions or activities that are executed in the computer environment, which are associated with the patient's PHI, the rule comprising at least one criterion related to accesses in excess of a specific volume, accesses during a pre-determined time interval, accesses by a specific user, that is indicative of improper access of the patient's PHI by an authorized user wherein the improper access is an indication of potential snooping or identity theft of the patient's PHI, the authorized user having a pre-defined role comprising authorized computer access to the patient's PHI;

applying the rule to the audit log data to determine if an event has occurred, the event occurring if the at least one criterion has been met;

storing, in a memory, a hit if the event has occurred; and providing notification if the event has occurred.

Consider making sure your claims do something with the information that is collected beyond merely providing a notice that an event has occurred. As in Classen's eligible claims that actually call for immunization to be performed, modify your claims to perform something beyond just a notification.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/15-1985.Opinion.10-6-2016.1.PDF>

2495, Lisa C. Lewis

[1] FairWarning IP, LLC v. Iatric Sys. 839 F.3d 1089, 2016 U.S. App. LEXIS 18313, 120 U.S.P.Q.2d (BNA) 1293 (Fed. Cir. 2016).

Stoll, Plager, Lourie

### Finjan, Inc. v. Blue Coat Systems, Inc.

- Overview: Appeal from the United States District Court for the Northern District of California. Finjan sued in Northern District of California on multiple patents and received a jury award of about \$39.5 Million. US Patent No. 6,154,844 eligibility is discussed in the CAFC opinion. The claims were found eligible. Decided January 10, 2018. [1]
- Discussion: A security profile identifies code in an inspector received downloadable that performs hostile or potentially hostile operations. The security profile is linked to the downloadable before the downloadable is made available to web clients. The claims were construed by the district court to be more specific than the plain language of the claim, and that construction was used by the Federal Circuit. The construction may have helped overcome a "too high a level of generality" attack. The claim was found to do a "good deal more" than a virus scan on an intermediary computer that was found conventional in *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F. 3d 1307, 1319 (Fed. Circ. 2016). Found eligible at Step 1 and compared favorably to Enfish "as it enables a computer security system to do things that it could not do before."
- Representative claim: Claim 1: 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.
- Practice tips and takeaways: Creating a new data structure based on conventional activity (virus scanning) can satisfy the second, significantly more, prong of the Alice test, provided your claims recite more than just the result. Include specific steps that accomplish the result. Include clear description of these steps and the claim language used so that an unreasonably broad interpretation of claim terms can be traversed by pointing to the specification. If post USPTO, ensure the claim construction includes the specific steps.
- Case Link: <http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/16-2520.Opinion.1-8-2018.1.PDF>
- Art Unit, Examiner: 2785, Christopher Revak
- Citations: [1] Finjan, Inc. v. Blue Coat Systems, Inc., 879 F. 3d 1299 (Fed. Cir. 2018).
- Panelists: Dyk, Linn, Hughes

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

Author:

### **Glasswall Solutions Limited v. Clearswift Ltd.**

Court affirmed district court decision from U.S. District Court for the Western District of Washington that U.S. Patent Nos. 8,869,283 and 9,516,045 are invalid as patent ineligible abstract ideas under 35 U.S.C. 101. [1]

The court found that the district court's characterization of the claims as being directed to filtering was correct and that filtering is abstract. The claims did not purport to claim how the invention receives an electronic file, how it determines the file type, how it determines allowable content, how it extracts all the allowable data, how it creates a substitute file, how it parses the content according to predetermined rules into allowable and nonconforming data, or how it determines authorization to receive the non conforming data. Instead the claims are framed in wholly functional terms.

Court found the claims similar to the claims in Intellectual Ventures I LLC v. Symantec Corp. (Fed. Cir. 2016). The claims simply require generic computer-implemented steps.

Claims are unlike in Finjan - the claims do not filter based on behavior, but based on the allowable form of information in a file. It does not allow the computer to do something it could not previously do.

1. A method for processing an electronic file to create a substitute electronic file containing only allowable content data, the method comprising: receiving an electronic file containing content data encoded and arranged in accordance with a predetermined file type;

determining a purported predetermined file type of the received electronic file and an associated set of rules specifying values or range of values of allowable content data;

determining at least an allowable portion of the content data that conforms with the values or range of values specified in the set of rules corresponding to the determined purported predetermined file type;

extracting, from the electronic file, only the at least an allowable portion of content data;

creating a substitute electronic file in the purported file type, said substitute electronic file containing only the extracted allowable content data;

forwarding the substitute regenerated electronic file only if all of the content data from within the electronic file conforms to the values or range of values specified in the set of rules; and

forwarding the incoming electronic file if a portion, part or whole of the content data does not conform only when the intended recipient of the electronic file has pre-approved the predetermined file type when associated with the sender of electronic file.



The court found that the claims do not create a new kind of file or improve the functioning of the computer itself. It is important to frame the invention as something a computing device could not previously do.

Glasswall argued that its methods were novel and improved the technology used in electronic communications - this is not enough.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-1407.Opinion.12-20-2018.pdf>

2439, Jenise Jackson

[1] Glasswall Solutions Limited, Glasswall (IP) Limited v. Clearswift Ltd., 754 Fed.Appx. 996 (Fed. Cir. 2018)

Lourie, Linn, Taranto

Bednarz





Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

Author:

### **In Re: Robert E. Downing**

Court affirmed PTAB decision affirming Examiner's decision of rejection of claims 1, 2, 7, and 9 of U.S. Application No. 12/454,528, which includes all pending claims as unpatentable because they are directed to patent-ineligible subject matter, lacking adequate written description support, and indefinite. [1]

Examiner found the claims to be directed to the abstract idea of creating an electronic spreadsheet for personal management. The Board found that the claims were directed to the abstract idea of "personal management" or "resource planning" under Alice step one. The Board determined that under Alice step two, the remaining claim limitations recited nothing more than generic computer components, which were insufficient to transform the abstract concept into patent-eligible subject matter. The claims recited the use of Excel - which is a known and conventional computer platform and other generic computing components performing routine and conventional computer functions.

The court found that the claims as a whole are directed to the concept of personal management, resource planning, or forecasting and directed to an abstract idea. In addition, the court found that the claims did not have an inventive concept sufficient to transform the claims into patent-eligible subject matter under Alice step two.

1. A resource planning forecast product operable in a computer and recorded on a non-transitory computer-readable medium for retrieval interlinking non-business or business information relevant to the end user without mandatory reliance on a network or another computer file or Internet access to operate wherein the product is produced by processes of:

(a) designing a diffusion-based proprietary forecasting technique on an Excel computer platform for operation within a resource planning framework to:

(1) simplify forecasting initialization with defaults option and exclusion of advanced statistical requirements in forecasting,

(2) consider social and technological change,

(3) make forecasts of operations and development and strategic plans of 1-5-15 years simultaneously, and

(4) provide automatic updates reducing manual operations and storage requirements such that this process taken in combination improves the end user's ease of operation and assessments;

(b) structuring presentations on the same computer platform by linking display of the forecasted data with features of:

(1) additional resource planning applications beyond the typical such as an information resource utility and intangibles,

(2) adjacent display of the operations and development and strategic plans' 1-5-15 year forecasts, and

(3) comprehensive print views available simultaneously of forecasted activity reports, resource plans, and yearly performance next 15 years such that this process taken in combination expands the utility of resource planning in the field of forecasting;

and (c) constructing one-time settings for the structure, on the same computer platform, for the capability of accommodating the full extent of resource planning cited and more efficient operation by: (1) fixed display of self-explanatory instructions and definitions, (2) only 4 required

Unlike in McRo and DDR Holdings, the claims did not include an improvement and did not claim an improvement in Excel spreadsheets or an improved resource planning computer technology.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-1795.Opinion.12-7-2018.pdf>

3627, Luna Champagne

[1] In re Downing, 754 Fed.Appx. 988 (Fed. Cir. 2018)

Lourie, Bryson, Dyk

Bednarz

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:



### **In re Gitlin**

This is a non-precedential opinion finding the claims of US Patent Application No. 12/766,889 unpatentable on appeal from examination. The claims included a mathematical concept, multi-dimensional interpolation. [1]

At step 1, the court found that multi-dimensional interpolation was a mathematical concept by referring to an encyclopedia. At step 2, it is not clear that the claim required a computer, but even if it did, it was merely generic implementation.

A method for efficiently implementing a multi-dimensional interpolation in any number of dimensions, the method comprising implementing processing said interpolation's third interpolation input as a recursion.

Practitioners need to claim an improvement to a computer or some other technology when claiming a mathematical algorithm.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-1461.Opinion.6-13-2019.pdf>

2182, Michael D. Yaary

[1] In re Gitlin, 775 F. Appx. 689 (Fed. Cir. 2019)

Reyna, Chen, Hughes

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

Author:

### **In re Villena**

Non-precedential. Appeal from final decision of the USPTO PTAB. Federal Circuit affirmed PTAB decision that claims Appl. No. 13/294,044 were not eligible under 101. Claims directed to system for distributing real-estate related information. Court found the claims directed to a fundamental economic practice - concept of property valuation. [1]

Under Step 1 of the Alice test, like the risk hedging in *Bilski* and the concept of intermediated settlement in *Alice*, the concept of property valuation, that is, determining a property's market value, is "a fundamental economic practice long prevalent in our system of commerce." *Id.* (quoting *Bilski*, 561 U.S. at 611). Prospective sellers and buyers have long valued property and doing so is necessary to the functioning of the residential real estate market. As such, claim 57 is directed to the abstract idea of property valuation. Under step 2 of the Alice test, claim 57 does not include an inventive concept sufficient to transform the nature of the claim into a patent-eligible application.

57. A system for distributing real-estate related information, comprising:  
one or more computers configured to: receive user-provided information and determine a geographic region based on received user provided information;

produce a plurality of automated valuation method (AVM) values using residential property information, the residential properties being within the geographic region, the AVM values reflecting current market estimates for the residential properties;

provide display information to a remote terminal over a publicly accessible network based on the user-provided information, the display information enabling the remote terminal to generate a map-like display for the geographic region, the map-like display containing at least:  
respective icons for each of a plurality of residential properties within the geographic region, the 3 icons being spatially distributed relative to one another based on geographic information also residing in one or more computer-readable mediums; and

an AVM value for at least one of the plurality of residential properties within the map-like display, wherein each AVM value is pre-process [sic] such that an AVM value for the at least one residential property pre-exists before a user query of the respective property is performed, and wherein the one or more computers update each of the AVM values without requiring a user query.

The court found that the elements of claim 57 simply recite an abstract idea executed using computer technology, such as "one or more computers" and a "remote terminal" on a "publicly accessible network. In this case, the court noted that not every 101 determination contains genuine disputes regarding underlying facts material to the 101 inquiry.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/17-2069.Opinion.8-29-2018.pdf>

3689, Dennis Ruhl

[1] In Re Villena, 745 Fed.Appx. 374 (Fed. Cir. 2018)

Prost, Hughes, Stoll

Bednarz

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

### **In re Wang**

Non-precedential. Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. 13/219,680. Decided: June 20, 2018.

Relates to a set of phonetic symbols where each sound is uniquely represented by one or more letters - "e" for bed. The court indicated that what is claimed is not a physical or tangible thing and not a process as things are simply being defined and not acted upon.[1]

Addressing section 101's patentability requirements, we have stated that "[f]or all categories except process claims, the eligible subject matter must exist in some physical or tangible form." *Digitech Image Techs., LLC v. Elecs. For Imaging, Inc.*, 758 F.3d 1344, 1348 (Fed. Cir. 2014). "Because the phonetic symbol system that is the subject of Mr. Wang's claimed invention is not a "concrete thing," a "tangible article," or "a combination of two or more substances," it plainly does not meet the "physical or tangible form" requirement of section 101."

A phonetic symbol system comprising: a plurality of phonetic symbols, wherein each of said phonetic symbols is defined by one or more than one letter of English alphabet, the case or the style of said letter does not affect the sounds of said phonetic symbols, there are vowel phonetic symbols and consonant phonetic symbols of said phonetic symbols, each vowel is distinctively represented by one of said vowel phonetic symbols, and each consonant is distinctively represented by one of said consonant phonetic symbols.

What is claimed is not a physical or tangible thing and not a process as things are simply being defined and not acted upon. Query whether claiming it as stored on a storage device would make it eligible. Might be rejected as mere printed matter. Elements of a claim that recite data is not given weight unless that data can act upon something. Avoid claiming data related to money. Claim data that result or causes something to happen or be controlled.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/17-1827.Opinion.6-20-2018.pdf>

2659, Seong-Ah A Shin

[1] *In re Wang*, 737 Fed. Appx. 534 (Fed Cir. 2018)

Reyna, Schall, Stoll

Overview:

Discussion:

Representative claim:



Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

### **Interval Licensing LLC v. AOL, Inc.**

Appeal from the United States District Court for the Western District of Washington. This is a precedential opinion from a judgment on the pleadings involving US Pat. No. 6,034,652. The claims were directed to a user interface invention that displays content when the display is inactive (screen saver) and when there is some available screen space when active. [1]

An abstract idea was found because the claims were result oriented, without technical detail. The abstract idea was "displaying a second set of data without interfering with a first set of data." At step 2, the claims were found to not recite a technical solution.

18. A computer readable medium, for use by a content display system, encoded with one or more computer programs for enabling acquisition of a set of content data and display of an image or images generated from the set of content data on a display device during operation of an attention manager, comprising:

[1] acquisition instructions for enabling acquisition of a set of content data from a specified information source;

[2] user interface installation instructions for enabling provision of a user interface that allows a person to request the set of content data from the specified information source;

[3] content data scheduling instructions for providing temporal constraints on the display of the image or images generated from the set of content data;

[4] display instructions for enabling display of the image or images generated from the set of content data;

[5] content data update instructions for enabling acquisition of an updated set of content data from an information source that corresponds to a previously acquired set of content data;

[6] operating instructions for beginning, managing and terminating the display on the display device of an image generated from a set of content data;

[7] content display system scheduling instructions for scheduling the display of the image or images on the display device;

[8] installation instructions for installing the operating instructions and content display system scheduling instructions on the content display system; and

[9] audit instructions for monitoring usage of the content display system to selectively display an image or images generated from a set of content data.

Practitioners should focus on technical solutions, technical improvements or improved functionality for user-interface based inventions.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/16-2502.Opinion.7-20-2018.pdf>

2775, Jeffrey Brier

[1] Interval Licensing LLC v. AOL, Inc., 896 F.3d 1335 (Fed. Cir. 2018)

Taranto, Plager, and Chen (Plager filed an opinion concurring in part and dissenting in part)

Overview:

Discussion:

Representative claims:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citation:

Panelists:

### **Int. Ventures v. Cap One Financial**

Appeal from the E.D. of Virginia - Decided July 6, 2015. US Patent Nos. 8,083,137, 7,603,382, and 7,260,587 involved collecting, displaying, and manipulating data. [1]

There were three sets of claims for different inventions involved in this case. The court pointed out that just because a computer can do something faster does not transform the invention into something eligible. The first patent was very business method related - calculating a budget for spending and sending summaries of spending. The second patent involved tailoring website information based on user preferences or browsing habits. The claim interpretation was very broad, bringing in prior art of selecting advertisements for broadcast television based on time of day. Be careful seeking an overly broad interpretation of your claims. This interpretation was also used to distinguish from DDR, as the problem was not limited to the realm of the Internet. The third patent involved organizing images that were scanned. Nothing pointed out as solving a technical problem in a technical manner.

First Patent: A method comprising:

storing, in a database, a profile keyed to a user identity and containing one or more user-selected categories to track transactions associated with said user identity, wherein individual user-selected categories include a user pre-set limit; and

causing communication, over a communication medium and to a receiving device, of transaction summary data in the database for at least one of the one or more user-selected categories, said transaction summary data containing said at least one user-selected category's user pre-set limit.

Second patent: A system for providing web pages accessed from a web site in a manner which presents the web pages tailored to an individual user, comprising: an interactive interface configured to provide dynamic web site navigation data to the user, the interactive interface comprising:

a display depicting portions of the web site visited by the user as a function of the web site navigation data; and

a display depicting portions of the web site visited by the user as a function of the user's personal characteristics.

Third Patent: A method of automatically organizing digital images obtained from a plurality of hard copy prints, each of said hard copy prints having an image thereon, comprising the steps of: digitally scanning a plurality of hard copy prints that have been grouped into one or more categories, each category separated by an associated machine readable instruction form as to obtain a digital file of each of said images and digitally associating said one or more categories with said digital images in accordance with said associated machine readable instruction form executed by a computer;

storing said digital images files and associated categories on a digital storage medium; and

producing a product incorporating images from one or more of said categories as required by a customer.

See Electric Power tab - Distinguish in a manner similar to that used to distinguish Electric Power above. Alternatively, argue that the claims do not preempt all use of the claimed abstract idea. Assert a technical solution to a technical problem, but be sure to strongly characterize the problem as uniquely arising from technology and not business method related.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/14-1506.Opinion.7-1-2015.1.PDF>

2887, Thien Minh Le (USPN 8,083,137); 2167, Cheryl Renea Lewis (USPN 7,603,382, and 7,260,587)

[1] Intellectual Ventures I LLC v. Capital One Bank (USA) 792 F.3d 1363, 2015 U.S. App. LEXIS 11537, 115 U.S.P.Q.2d (BNA) 1636 (Fed. Cir. 2015).

Dyk, Reyna, Chen

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citation:

Panelists:



### **Int. Ventures v. Erie Indemnity**

Appeal from the W.D. of Pennsylvania - Decided November 3, 2017 (non-precedential). US Patent No. 7,757,298 involved remotely accessing and retrieving user specified information. [1]

The claims lacked sufficient detail regarding the generation of the identification value from the content of the file. The court generalized many of the decisions of ineligible subject matter to reach the decision.

1. A computer-implemented method for identifying and characterizing stored electronic files, said method comprising:
  - under control of one or more configured computer systems: selecting a file from a plurality of files stored in a computer storage medium, wherein selecting the file is performed according to at least one of:
    - selecting the file based on the size of the file by determining whether an aggregate size of plural identically-sized files exceeds a predetermined threshold;
    - selecting the file based on whether content of the file matches a file type indicated by a name of the file; or
    - selecting the file based on whether the file comprises data beyond an end of data marker for the file;
  - generating an identification value associated with the selected file, wherein the identification value is representative of at least a portion of the content of the selected file;
  - comparing the generated identification value to one or more identification values associated with one or more of a plurality of unauthorized files; and
  - characterizing the file as an unauthorized file if the identification value matches one of the plurality of identification values associated with the unauthorized files.

See Electric Power tab - consider indicating that this is a non-precedential decision and should not be relied upon to compare the pending claims to an abstract idea deemed ineligible by the courts. In addition, point to Classen if your claims do more with the analysis than merely characterizing a file. It may be helpful to try claiming something the computer is doing that helps the computer do it faster and does not merely replicate what a human would do.

<http://www.cafc.uscourts.gov/sites/default/files/17-1147.Opinion.11-1-2017.1.pdf>

2435, PannoReay Pich

[1] Intellectual Ventures I LLC v. Erie Indem. Co., 711 Fed. Appx. 1012, 2017 U.S. App. LEXIS 22060 (Fed. Cir. 2017).

Wallach, Prost, Reyna

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citation:

Panelists:

## Koninklijke KPN NV v. Gemalto M2M GmbH

Appeals from the United States District Court for the District of Delaware - Decided November 15, 2019 - US Patent No. 6,212,662 involved a device for improved error checking in data transmission sections. Claim 1-4 (all claims) found patent ineligible in District Court. Only claims 2-4 were appealed and found eligible.

Alice Step 1: The Fed. Circ. held that claims 2-4 are patent-eligible under Alice Step 1 because "they are directed to a non-abstract improvement in an existing technological process (i.e., error checking in data transmission)." More specifically, the "in time" limitation relative to permutations applied to original data modification recites "a specific implementation of varying the way check data is generated that improves the ability of prior art error detection systems to detect systematic errors." [1] The opinion leans heavily on the specification for identifying the problem and ensuring the solution is in the claims.

Also, Gemalto argued that the claims were ineligible because KPN doesn't recite the final step of using the checked data to detect errors. The Federal Circuit disagreed, describing how "[a] claim that is directed to improving the functionality of one tool (e.g., error checking device) that is part of an existing system (e.g., data transmission error detection system) does not necessarily need to recite how that tool is applied in the overall system (e.g., perform error detection) in order to constitute a technological improvement that is patent-eligible. Rather, to determine whether the claims here are non-abstract, the more relevant inquiry is 'whether the claims in th[is] patent[] 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 processes and machinery.'" [1]

1. A device for producing error checking based on original data provided in blocks with each block having plural bits in a particular ordered sequence, comprising:  
a generating device configured to generate check data; and

a varying device configured to vary original data prior to supplying said original data to the generating device as varied data;

wherein said varying device includes a permutating device configured to perform a permutation of bit position relative to said particular ordered sequence for at least some of the bits in each of said blocks making up said original data without reordering any blocks of original data.

2. The device according to claim 1, wherein the varying device is further configured to modify the permutation in time.

3. The device according to claim 2, wherein the varying is further configured to modify the permutation based on the original data.

4. The device according to claim 3, wherein the permutating device includes a table in which subsequent permutations are stored.

Drafting the specification and claims as a technical solution in light of a clear technical problem provides a stronger grounds for patent eligibility. If the client wants a broader independent claim, ensure there are dependent claims that clearly delineate the specific solution.

Regarding litigation, carefully consider the claims to assert initially and on appeal.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-1863.Opinion.11-15-2019.pdf>

213, Shelly A Chase

[1] Koninklijke KPN NV v Gemalto M2M GmbH, 942 F.3d 1143 (Fed. Cir. 2019)

Dyk, Chen, and Stoll

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**McRO, Inc. v. Bandai Namco Games Am. Inc.**

Appeal from C.D. California - Decided September 13, 2016.

The Federal Circuit in *McRO, Inc. v. Bandai Namco Games America* reversed the district court's holding that certain software patent claims in U.S. Patent Nos. 6,307,576 and 6,611,278 were directed to ineligible subject matter under 35 U.S.C. § 101. The claims in this case were directed to applying certain rules to automatically generate animated facial expressions based on a sound transcript, or "phoneme sequence." Because the claims were directed to a genus of rules, rather than the general concept of applying rules in the field, the Federal Circuit held there was no preemption of an abstract idea. Thus, the claims were not directed to ineligible subject matter under § 101. [1]

As an initial matter, the Federal Circuit held the claim's lack of any tangible elements was not material. Expanding on § 101 jurisprudence, the Federal Circuit noted that the "concern underlying the exceptions to § 101 is not tangibility, but preemption." The Federal Circuit reiterated its caution that district courts "must be careful to avoid oversimplifying the claims by looking at them generally and failing to account for the specific requirements of the claims."

Taking a close look at the claim language, the Federal Circuit held that the claimed "first set of rules" were not unlimited or unbounded—rather, they must evaluate sub-sequences consisting of multiple sequential phonemes. The claimed rules thus did not preempt the field, but rather were directed to a set of "rules with common characteristics, i.e., a genus." While genus claims may implicate enablement and written description issues under 35 U.S.C. § 112, the Federal Circuit explained, their breadth generally does not implicate § 101 subject matter eligibility issues.

Thus, the "specific structure of the claimed rules would prevent broad preemption of all rules-based means of automating lip-synchronization, unless the limits of the rules themselves are broad enough to cover all possible approaches." Here, the "limitations in claim 1 prevent preemption of all processes for achieving automated lip-synchronization of 3-D characters." Following the earlier *Enfish* decision, the Federal Circuit thus held the representative claim was not directed to an abstract idea, and thus did not meet *Alice* step one, thereby ending the inquiry.

1. A method for automatically animating lip synchronization and facial expression of three-dimensional characters comprising:

obtaining a first set of rules that define output morph weight set stream as a function of phoneme sequence and time of said phoneme sequence;

obtaining a timed data file of phonemes having a plurality of sub-sequences;

generating an intermediate stream of output morph weight sets and a plurality of transition parameters between two adjacent morph weight sets by evaluating said plurality of sub-sequences against said first set of rules;



generating a final stream of output morph weight sets at a desired frame rate from said intermediate stream of output morph weight sets and said plurality of transition parameters; and

The Federal Circuit's decision provides another data point for software patents generally. Key to the Federal Circuit's holding was that there are other alternatives to the claimed method (e.g., rules that only evaluated individual phonemes). Thus, although the representative claim was not directed to tangible material, it claimed patent-eligible subject matter because it did not preempt the underlying broader abstract concept.

<http://www.cafc.uscourts.gov/sites/default/files/s15-1080.Opinion.9-9-2016.2.pdf>

2672, Ryan Yang

[1] *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016).

Reyna, Taranto, Stoll

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

### **Packet Intelligence LLC v Netscout Systems Inc**

Precedential. Appeal from the United States District Court for the Eastern District of Texas - Decided July 14, 2020 - US Patent Nos. 6,665,725 claims 10 and 17, 6,839,751 claims 1 and 4, and 6,954,789 claims 19 and 20 were at issue. For the 101 analysis, claim 19 of US Patent No. 6,954,789 was agreed to as representative by both parties. Said claim was found eligible at the District Court level at Alice Step 1 but also included an Alice Step analysis, which was affirmed by the Federal Circuit in a 2-1 decision. The dissent focused on the 101 analysis.

In Alice Step 1, the District Court found that the claim was directed to "solving a discrete technical problem: relating disjointed connection flows to each other." Accordingly, the claim was directed to a specific technological solution. The Federal Circuit agreed stating "... the claims were not using a computer as a tool but, instead, recited a specific technique for improving computer network security" and that "... asserted patents' specifications make clear that the claimed invention presented a technological solution to a technological problem." [1]

Judge Reyna dissented stating that "the technological problem at issue was that prior art monitors could not recognize packets from multiple connections as belonging to the same conversational flow, then the 'solution' of classifying network traffic according to conversational flows rather than connection flows is conceptual, not technological, in the absence of specific means by which that classification is achieved." Further, Judge Reyna states that *the claim does not recite* the crucial element of how individual packets are actually identified, but that the specification does provide such detail. Therefore, alone the components and operations claimed do not transform it from claiming a result to claiming how to achieve said result. Judge Reyna believes the District Court erred in the relevant inquiry which should be whether the concrete means of how to achieve said result is claimed. Rather, the District Court relied on the patent as a whole and heavily on the specification to teach how to identify that certain packet belong to the same conversational flow. Not passing Alice Step 1, the dissent then included Alice Step 2 analysis. Judge Reyna states that the District Court's Alice Step 2 analysis used the abstract idea to serve as the inventive concept, which is improper. Accordingly, Judge Reyna would have remanded the case for a proper analysis of Alice Step 2. [1]

US 6,954,789 Claim 19. A packet monitor for examining packets passing through a connection point on a computer network, each packets conforming to one or more protocols, the monitor comprising:

(a) a packet acquisition device coupled to the connection point and configured to receive packets passing through the connection point;

(b) an input buffer memory coupled to and configured to accept a packet from the packet acquisition device;

(c) a parser subsystem coupled to the input buffer memory and including a slicer, the parsing subsystem configured to extract selected portions of the accepted packet and to output a parser record containing the selected portions;

(d) a memory for storing a database comprising none or more flow-entries for previously encountered conversational flows, each flow-entry identified by identifying information stored in the flow-entry;

(e) a lookup engine coupled to the output of the parser subsystem and to the flow-entry memory and configured to lookup whether the particular packet whose parser record is output by the parser subsystem has a matching flow-entry, the looking up using at least some of the selected packet portions and determining if the packet is of an existing flow; and

(f) a flow insertion engine coupled to the flow-entry memory and to the lookup engine and configured to create a flow-entry in the flow-entry database, the flow-entry including identifying information for future packets to be identified with the new flow-entry, the lookup engine configured such that if the packet is of an existing flow, the monitor classifies the packet as belonging to the found existing flow; and if the packet is of a new flow, the flow insertion engine stores a new flow-entry for the new flow in the flow-entry database, including identifying

Presenting a "technological solution to a technological problem" in the specification is quite valuable. As seen in this and many other cases, the specification is being more heavily relied on for determining patent eligibility under 101. However, as illustrated in the dissent, be sure that the specific aspects of how to achieve the technical solution are claimed.

[http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/19-2041.OPINION.7-14-2020\\_1618468.pdf](http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/19-2041.OPINION.7-14-2020_1618468.pdf)

6,665,725 - Khanh Q Dihn, 2668

6,839,751 - Thong H Vu, 2142

6,954,789 - Moustafa M Meky, 2157

[1] Packet Intelligence LLC v. NetScout Sys., Inc., 965 F.3d 1299, 1309–10 (Fed. Cir. 2020)

Lourie, Reyna, Hughes





### SIPCO LLC v Emerson Electric Co

- Overview: Appeal from the United States Patent and Trademark Office, decided September 25, 2019. Eligible - Appeal from the PTAB, which had determined the claims to be ineligible. The Federal Circuit reversed the PTAB's claim construction determination and its finding that SIPCO's patent (U.S. Patent No. 8,908,842) did not meet the second prong of the "technological invention" definition in § 42.301(b), and remanded for further proceedings.
- Discussion: The Federal Circuit examined the PTAB's claim construction, which was used by the PTAB to determine the claims to be ineligible. The Federal Circuit determined that the specification correlated "low-power" with a limited transmission range based on language in the specification that explained that a low-power transmitter was used to overcome problems associated with broader range transmission. The Court found that this intrinsic evidence was sufficient to construe "low-power" in the claims without considering extrinsic evidence, as the PTAB had done. Based on its construction, the Federal Circuit held that the claimed invention solved a technical problem (signal interference) with a technical solution (low-power, limited transmission range). The Federal Circuit remanded for the Board to consider the first prong of § 42.301(b)— "whether the claimed subject matter as a whole recites a technological feature that is novel and unobvious over the prior art." The Court found that SIPCO's patent was directed to a technical invention because "the claimed invention implements a communication system that connects an unconnected, remote device with a central station."
- Representative claim: 1. A device for communicating information, the device comprising:  
a low-power transceiver configured to wirelessly transmit a signal comprising instruction data for delivery to a network of addressable devices;  
  
an interface circuit for communicating with a central location; and  
  
a controller coupled to the interface circuit and to the low-power transceiver, the controller configured to establish a communication link between at least one device in the network of addressable devices and the central location using an address included in the signal, the communication link comprising one or more devices in the network of addressable, the controller further configured to receive one or more signals via the low-power transceiver and communicate information contained within the signals to the central location.
- Practice tips and takeaways: The description in the specification was crucial in determining whether the claim was a technical solution to a technical problem. The Court noted there may also be a disconnect between "unobvious" in the CBM statute and "obviousness" under 35 USC 103.
- Case link: <http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-1635.Opinion.9-25-2019.pdf>



Art Unit, Examiner: 2653, Binh Kien Tieu

Citation: SIPCO LLC v Emerson Electric Co, 939 F.3d 1301 (Fed. Cir. 2019)

Panelists: O'Malley, Reyna, Chen

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Solutran, Inc. v Elavon, Inc.**

Appeal from District of Minnesota - Decided July 30, 2019.

Precedential Opinion

US Patent No. 8,311,945

The Federal Circuit reversed the district court opinion, finding the claims to be not patent eligible. Claims directed to: system and method for processing paper checks in which in which (1) "data from the checks is captured at the point of purchase," (2) "this data is used to promptly process a deposit to the merchant's account," (3) the paper checks are moved elsewhere "for scanning and image capture," and (4) "the image of the check is matched up to the data file."

The claims are directed to the abstract idea of crediting a merchant's account as early as possible while electronically processing a check. The claims are written at a distinctly high level of generality rather than an improvement in the way computers operate or an improvement in the technical capture of information. The physicality of the paper checks being processed and transported is not by itself enough to exempt the claims from being directed to an abstract idea. The claims "simply instruct the practitioner to implement the abstract idea with routine, conventional activity."

1. A method for processing paper checks, comprising:

a) electronically receiving a data file containing data captured at a merchant's point of purchase, said data including an amount of a transaction associated with MICR information for each paper check, and said data file not including images of said checks;

b) after step a), crediting an account for the merchant;

c) after step b), receiving said paper checks and scanning said checks with a digital image scanner thereby creating digital images of said checks and, for each said check, associating said digital image with said check's MICR information; and

d) comparing by a computer said digital images, with said data in the data file to find matches.

Just because there is a "physical" aspect to an invention does not mean it will automatically be held eligible.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/19-1345.Opinion.7-30-2019.pdf>

3694, Mohammad Z Shaikh

Solutran, Inc. v. Elavon, Inc., 931 F.3d 1161 (Fed. Cir. 2019)

CHEN, HUGHES, and STOLL

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

### **SRI International, Inc. v. Cisco Systems, Inc.**

Precedential - Eligible Appeal from a final judgement of the United States District Court for the District of Delaware. U.S. Patent Nos. 6,484,203 and 6,711,615. The court describes the technical research regarding cyber-security to detect hackers trying to break into a computer system and indicates that at step one, "necessarily rooted in computer technology in order to solve a specific problem in the realm of computer networks." Decided: March 20, 2019.

Eligible - "The claims are directed to using a specific technique—using a plurality of network monitors that each analyze specific types of data on the network and integrating reports from the monitors—to solve a technological problem arising in computer networks: identifying hackers or potential intruders into the network." Laurie dissents, indicating the claims are the similar to those in *Electric Power*. The majority distinction is a little strange, seemingly indicating that improving the functioning of a computer is different than improving the functioning of a power grid? In any event, the technical problem/technical solution aspect was highlighted in the decision.

1. A computer-automated method of hierarchical event monitoring and analysis within an enterprise network comprising:  
deploying a plurality of network monitors in the enterprise network;

detecting, by the network monitors, suspicious network activity based on analysis of network traffic data selected from one or more of the following categories: {network packet data transfer commands, network packet data transfer errors, network packet data volume, network connection requests, network connection denials, error codes included in a network packet, network connection acknowledgements, and network packets indicative of well known network-service protocols};

generating, by the monitors, reports of said suspicious activity; and

automatically receiving and integrating the reports of suspicious activity, by one or more hierarchical monitors.

Practice tip - include description of technical problem/solution, focusing on making sure the problem is portrayed as a technical problem. "The specification bolsters our conclusion that the claims are directed to a technological solution to a technological problem. The specification explains that, while computer networks "offer users ease and efficiency in exchanging information," '615 patent col. 1 ll. 28–29, "the very interoperability and sophisticated integration of technology that make networks such valuable assets also make them vulnerable to attack, and make dependence on networks a potential liability." *Id.* at col. 1 ll. 36–39." Note also that there was a dissent in this case that indicated it was no different than *Electric Power*. Because of the technical emphasis in the application, the claims were able to slide by with arguably functional limitations. The recitation of the multiple categories may have been what saved this claim.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/17-2223.Opinion.3-20-2019.pdf>

US 6,484,203 - 2185, Thomas Heckler

US 6,711,615 - 2115, Thomas Heckler

SRI International, Inc. v. Cisco Systems, Inc., 918 F.3d 1368 (Fed. Cir. 2019)

LOURIE, O'MALLEY, and STOLL

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:



### **TecSec v. Adobe (10/23/2020)**

This is a precedential decision from a district court's summary judgment ruling that U.S. Patent No. 5,369,702 was patent eligible. The technology is methods for multi-level security of various kinds of files transmitted in a data network. [1]

Decided: October 23, 2020

The Federal Circuit found the claims were not directed to an abstract idea because they contained technical limitations, such as "object-oriented key manager" and specified uses of a "label" in addition to encryption. The court reviewed the specification and found that the claims are "directed to solving a problem specific to computer data networks." And the court concluded "[i]n light of what the claim language and specification establish, we conclude that the claims are directed to improving a basic function of a computer data-distribution network, namely, network security."

1. A method for providing multi-level multimedia security in a data network, comprising the steps of:

- A) accessing an object-oriented key manager;
- B) selecting an object to encrypt;
- C) selecting a label for the object;
- D) selecting an encryption algorithm;
- E) encrypting the object according to the encryption algorithm;
- F) labelling the encrypted object;
- G) reading the object label;

Practitioners should focus on ensuring that the specification describes a technical distinction over the prior art that is reflected in the claims.

[http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/19-2192.OPINION.10-23-2020\\_1674360.pdf](http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/19-2192.OPINION.10-23-2020_1674360.pdf)

2202, Bernarr E. Gregory

[1] TecSec, Inc. v. Adobe Inc., No. 2019-2192, 2020 WL 6228460 (Fed. Cir. 2020)

Taranto (author), Prost, Reyna

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

## Trading Techs. Int'l, Inc. v. CQG, Inc

Appeal from N.D. Illinois - Decided January 18, 2017

CQG appeals the district court's decision under 35 USC 101 that the asserted claims of US Patent Nos. 6,772,132 and 6,766,304 recite patent eligible subject matter. The appeal was limited to only the eligibility question under Section 101, and the Federal Circuit affirmed the district court's decision. This decision is a non-precedential decision.

Federal Circuit Holding: The court affirmed the finding of subject matter eligibility under 35 USC 101.

Technology: Methods and systems "for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange...on a graphical user interface" including displaying market depth information and submitting a trade based on a user selection of a portion of the user interface.

The Federal Circuit took claim 1 of the 304 patent as representative and analyzed the claim under the two-step Alice test. Going no farther than the first step, the Federal Circuit agreed with the district court's analysis that the patent claims are directed to solving problems found in prior graphical user interface devices used for computerized trading. For example, the Federal Circuit stated that "the patents describe a trading system in which a graphical user interface 'display[s] the market depth of a commodity traded in a market'" and the graphical user interface solves "'problems of prior graphical user interface devices...relating to speed, accuracy and usability.'" [1] The court found that these patents are directed to improvements in existing graphical user interface devices that have no "pre-electronic trading analog," and recite more than "'setting, displaying, and selecting' data or information that is visible on the [graphical user interface] device." [2] The court indicated that, "[f]or Section 101 purposes, the claimed subject matter is 'directed to a specific improvement to the way computers operate' because the claimed graphical user interface method imparts a specific functionality to a trading system 'directed to a specific implementation of a solution to a problem in the software arts.'" [3] The Federal Circuit liked the district court's analysis including their finding that "the challenged patents do not simply claim displaying information on a graphical user interface" but rather "require a specific, structured graphical user interface paired with a prescribed functionality directly related to the graphical user interface's structure that is addressed to and resolves a specifically identified problem in the prior state of the art." [4] With respect to step two of the Alice test, the Federal Circuit agreed with the district court, finding that the static price index was an inventive concept improving trade placement using an electronic trading system. Further, the electronic trading system is distinct from a conventional computer because the trading system provides "specific technologic modifications to solve a problem or improve the functioning of a known system." [5] Thus, the Federal Circuit found that the claims did not recite an abstract idea and, furthermore, recited something significantly more.

1. A method for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange having an inside market with a highest bid price and a lowest ask price on a graphical user interface, the method comprising:  
dynamically displaying a first indicator in one of a plurality of locations in a bid display region, each location in the bid display region corresponding to a price level along a common static price axis,

the first indicator representing quantity associated with at least one order to buy the commodity at the highest bid price currently available in the market;

dynamically displaying a second indicator in one of a plurality of locations in an ask display region, each location in the ask display region corresponding to a price level along the common static price axis, the second indicator representing quantity associated with at least one order to sell the commodity at the lowest ask price currently available in the market;

displaying the bid and ask display regions in relation to fixed price levels positioned along the common static price axis such that when the inside market changes, the price levels along the common static price axis do not move and at least one of the first and second indicators moves in the bid or ask display regions relative to the common static price axis;

displaying an order entry region comprising a plurality of locations for receiving commands to send trade orders, each location corresponding to a price level along the common static price axis; and

in response to a selection of a particular location of the order entry region by a single action of a user input device, setting a plurality of parameters for a trade order relating to the commodity and sending the trade order to the electronic exchange.

The Federal Circuit seemed to largely base its decision on the fact that the claimed graphical user interface addresses specific problems found in prior graphical user interfaces in this area (electronic trading). It is important to cast a problem in the prior art in terms of the technology and then make sure your claims recite an improvement to the technology that solves the problem. Judge Newman's opinion indicates that “[a]bstraction is avoided or overcome when a proposed new application or computer-implemented function is not simply the generalized use of a computer as a tool to conduct a known or obvious process, but instead is an improvement to the capability of the system as a whole.” The Federal Circuit panel found that close questions of subject matter eligibility should be “considered along with the understanding flowing from review of the patentability criteria of novelty, unobviousness, and enablement” because these statutory criteria provide context for the analysis of eligibility in light of the “patent-based incentive to technological progress.”

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/16-1616.Opinion.1-13-2017.1.PDF>

3624, Richard Weisberger

[1] Trading Techs. Int'l, Inc. v. CQG, Inc., 675 F. App'x 1001, 1004 (Fed. Cir. 2017).

[2] *Id.*

[3] *Id.* at 1006.

[4] *Id.*

[5] *Id.*

Newman, O'Malley, Wallach

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:



Panelists:

### **Trading Techs. Int'l, Inc. v. IBG LLC**

This is a precedential decision from a CBM finding the claims of U.S. Patent No. 7,783,556 invalid. The technology was displaying various market information to stock traders. [1]

At step 1, the only difference over the prior art was additional information being displayed. The court relied on Elec. Pwr. Group to find an abstract idea. At step 2, even if no other system had displayed this additional information, this is simply relying on the abstract idea which cannot be done to show an inventive concept.

1. A method for displaying market information on a graphical user interface, the method comprising:

receiving by a computing device a current highest bid price and a current lowest ask price for a tradeable object from an electronic exchange;

identifying by the computing device a long or short position taken by a user with respect to the tradeable object, wherein the long position is associated with a quantity of the tradeable object that has been bought by the user at a price, and wherein the short position is associated with a quantity of the tradeable object that has been sold by the user at a price;

computing by the computing device a plurality of values based on the long or short position, wherein each of the plurality of values represents a profit or loss if the long or short position is closed at a price level among a range of price levels for the tradeable object;

displaying via the computing device the plurality of values along a value axis;  
displaying via the computing device a first indicator at a first location corresponding to a first value along the value axis, wherein the first indicator represents a particular price based on any of the following prices: current best bid, current best ask, and a last traded price, and wherein the first value represents a profit or loss incurred by the user if the long or short position is closed at the particular price; and

moving the first indicator relative to the value axis to a second location corresponding to a second value along the value axis responsive to receipt of an update to the particular price, wherein the second value represents a profit or loss incurred by the user if the position is closed at the update to the particular price.

Practitioners should focus on technical solutions, technical improvements or improved functionality for user-interface based inventions.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/17-2323.Opinion.4-30-2019.pdf>

3695, Chia-Yi Liu

[1]Trading Techs. Int'l, Inc. v. IBG LLC, 921 F.3d 1378 (Fed. Cir. 2019)

Moore, Clevenger, Wallach

## University of Florida Research Foundation Inc v General Electric Company

Overview: Appeal from the United States District Court for the Northern District of Florida. Precedential - Ineligible. Appeal from the United States District Court for the Northern District of Florida motion to dismiss for failure to state a claim. US Patent No. 7,062,251 is directed to a bedside device collects physiologic treatment data from other bedside devices and converts the data to a canonical format using different drivers for each different bedside device. Decided: February 26, 2019.

### Discussion:

Precedential - Include to contrast Cardionet case. Adds nothing to Electric Power or Intellectual ventures - collecting, analyzing, manipulating and displaying data - collects physiologic treatment data and converts to canonical format from different treatment bed equipment using different drivers. Court hints that if the operation of the different drivers had been explained in more detail, it might have made a difference. The claims basically computerize prior pen and paper methods with greater speed and accuracy. The court found the invention was basically a "do it on a computer" replacement for prior pen and paper methods. There is no explanation of how the drivers operate. The drivers are only recited in claim 10, but in functional language that still does not describe how the conversion is performed. Contrast with Cardionet v. Infobionic where similar claims were found eligible: detecting heart rhythm problems from well known measurements [http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/19-1149.Opinion.4-17-2020\\_1571885.pdf](http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/19-1149.Opinion.4-17-2020_1571885.pdf). In Cardionet, the claims were found to "focus on a specific means or method that improves" cardiac monitoring technology; they are not "directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." McRO, 837 F.3d at 1314 (citations omitted)." In Cardionet, technical details were provided in the specification.

Representative claim: 1. A method of integrating physiologic treatment data comprising the steps of: receiving physiologic treatment data from at least two bedside machines;

converting said physiologic treatment data from a machine specific format into a machine independent format within a computing device remotely located from said bedside machines;

performing at least one programmatic action involving said machine-independent data; and

presenting results from said programmatic actions upon a bedside graphical user interface.

### Practice tips and takeaways:

Describe the technical benefits and technical details as much as possible.

### Case link:

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-1284.Opinion.2-26-2019.pdf>

### Art Unit, Examiner:

2617, Erika Alise Washington

Citations: Univ. of Florida Research Foundation Inc v General Electric Co., 916 F.3d 1363 (Fed. Cir. 2019)

Panelists: Prost, Moore, Wallach

## Visual Memory LLC v. NVIDIA Corp

Overview: Appeal from D. Delaware - Decided August 15, 2017.

District court held that Visual Memory's US Patent No. 5,953,740 was drawn to patent-ineligible subject matter and that complaint failed to state a claim under 12(b)(6). The '740 patent applies to a common three-tiered memory hierarchy used in computer systems, which includes a bulk storage memory, a medium-speed main memory, and a high-speed processor cache memory. This hierarchical memory system allows executing programs quick access to required data, but lacks versatility because it has to be designed based on the particular type of processor selected for use in that system. The '740 patent purportedly overcomes this deficiency by using a memory system with programmable operational characteristics ("POC") that self-configure based on the type of processor connected to the memory system. Visual Memory appealed the district court's dismissal of patent infringement complaint against NVIDIA. Federal Circuit reversed and concluded that the claims were directed to an improvement to computer memory systems and not directed to an abstract idea.

Discussion: Federal Circuit noted that Enfish and Thales informed their evaluation of whether claims are "directed to" an abstract idea. The key question is whether the focus of the claims is on the specific asserted improvement in computer capabilities or instead on a process that invokes a computer as a tool. [1] The court found that the claims were directed to an improved computer memory system, not to the abstract idea of categorical data storage. [2] The court noted that the specification explains multiple benefits that flow from the '740 patent's improved memory system. Thus, the court found that the claims were directed to a technological improvement: an enhanced computer memory system. The distinction between the '740 patent and patent-ineligible claims in Content Extraction and TLI Communications is that the claims in '740 are directed at specific improvements to computer functionality, while Content Extraction was related to a method for using a computer to extract data from hard copy documents, and TLI was related a method of classifying and storing digital images that merely involved a computer and server. [3] The court concluded that the claims were not directed to an abstract idea, and thus did not analyze the claims under step two of the Alice test.

Representative claim: 1. A computer memory system connectable to a processor and having one or more programmable operational characteristics, said characteristics being defined through configuration by said computer based on the type of said processor, wherein said system is connectable to said processor by a bus, said system comprising:

- a main memory connected to said bus; and
- a cache connected to said bus;
- wherein a programmable operational characteristic of said system determines a type of data

Practice tips and takeaways: If you are drafting an application, it is important to include and explain benefits in the specification. This is one of a few recent Federal Circuit cases that look to the specification to see if there are improvements to computer functionality. If the application has already been drafted

and you are in prosecution, attempt to find something that you can hang your hat on.

Case link: <http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/16-2254.Opinion.8-11-2017.1.PDF>

Art Unit, Examiner: 4171, David Robertson

Citations: [1] Visual Memory LLC v. NVIDIA Corp., 867 F.3d 1253, 1258 (Fed. Cir. 2017).  
[2] *Id.* at 1259.  
[3] *Id.* at 1260.

Panelists: O'Malley, Stoll, Hughes (dissent)

### **Voit Technologies LLC v Del-Ton Inc**

- Overview: Non-precedential. Appeal from the United States District Court for the Eastern District of North Carolina - 12(b)(6) motion to dismiss for failure to state a claim. Affirmed as Ineligible subject matter. The claims of US Patent No. 6,226,412 were found to be directed to the abstract idea of processing data to buy and sell items. Decided: February 8, 2019.
- Discussion: Directed to the abstract idea of processing data to buy and sell items. Did not improve the performance of the computer. Compression techniques were not new and statements that they improved the performance of the computer were too general. "Voit's broad assertion that the Asserted Claims "allow[ed] more rapid transmission of higher resolution digital images" via "advanced image data compression" is unsupported"
- Representative claim: 1. A method of buying and selling an item relating to unique subjects, comprising the steps of:
- a. providing at least one uniquely identifiable remote data terminal, for communicating with a central computer managing a relational database for a transaction between a buyer and a seller;
  - b. entering the following at the at least one data terminals:  
  
textual information descriptive of a subject in a structured fashion, including modifiable and non-modifiable data fields, and image information representative of the subject;
  - c. data-compressing the image data into a first image format;
  - d. separately transferring the textual and image data in the first format to the central computer by batch upload, the following steps being performed at the location of the central computer:  
  
determining which remote data terminals are authorized to transmit subject oriented textual and image data, and storing information relating thereto;  
  
receiving textual and image data from an authorized remote data terminal;  
  
creating a first set of unique records identifying the textual information associated with each subject received from each remote data terminal;  
  
creating a second set of unique records identifying the image data associated with each subject received from each remote data terminal;  
  
storing the image data separately from the textual information in a data-compressed second



storing the image data separately from the textual information in a data-compressed second image format;

storing the textual information separately from the image data in relational form, along with information identifying the location of the separately stored image data corresponding thereto;

receiving subject-related requests relating to the transaction from at least one of the remote data terminals;

locating textual information corresponding to the subject-related requests relating to the transaction when requested;

transmitting the located textual information to the requesting remote data terminal; and

locating subject-related image data in response to the request when requested;

transmitting the related image data in a second data-compressed format;

e. de-compressing the images in the second data compressed format at the requesting remote data terminal; and

f. displaying the de-compressed images along with textual information at the requesting remote data terminal.

Practice tips and takeaways:

Practice hints on overcoming electric power (analyze and display data is abstract idea) and intellectual ventures (improved speed inherent in computer) - directed to the abstract idea of processing data to buy and sell items. Include more description in the specification regarding how the claimed elements improve performance of the computer or some other technical aspect not directly related to commercial transactions. Making a business method faster will not suffice.

Case link: <http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/18-1536.Opinion.2-8-2019.pdf>

Art Unit, Examiner: Jayanti K Patel

Citations: Voit Technologies LLC v Del-Ton Inc., 757 Fed.Appx. 1000 (Fed. Cir. 2019)

Panelists: Wallach, Taranto, Stoll

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

## **Voter Verified, Inc. v. Election System & Software LLC**

Appeal from United States District Court for the Northern District of Florida - Decided April 20, 2018.

U.S. Reissue Patent RE40,449 at issue is directed to "voting methods and systems" that provide for "auto-verification" of a voter's ballot". [1]

After initially concluding that issue preclusion did not apply with respect to invalidity of patent claims under § 101 based on a prior infringement suit between the parties, the Federal Circuit in *Voter Verified* affirmed the subject matter ineligibility of the patent claims. In particular, the Federal Circuit found that the method and system "claims as a whole are drawn to the concept of voting, verifying the vote, and submitting the vote for tabulation" that is a "fundamental [human] activity" corresponding to an "abstract idea" under step two of the *Mayo/Alice* test. The Federal Circuit further found "no inventive concept in the claims sufficient to transform them into patent-eligible subject matter" under step two of the *Mayo/Alice* test.

In *Voter Verified*, the Federal Circuit first dealt with whether issue preclusion prevented Election Systems from relitigating the invalidity of patent claims under § 101 based on a prior infringement lawsuit between the parties. The prior lawsuit concluded after *Mayo* but before *Alice*. The Federal Circuit concluded that *Alice* did not result in an intervening change in the law, since the Supreme Court in *Alice* "did not alter the governing law of § 101" but merely applied the same test as the Court created in *Mayo*.

However, the Federal Circuit subsequently concluded that issue preclusion does not apply in this case since the "§ 101 issue was not actually litigated" but "barely considered" since "the § 101 issue of invalidity was not necessary to the judgment in the first district court action."

In its § 101 analysis, the Federal Circuit found that the claims of U.S. Reissue Patent RE40,449 patent ineligible. Under step one of the *Mayo/Alice* test, the Court found that the claims were directed to the abstract "concept of voting, verifying the vote, and submitting the vote for tabulation", noting that "[h]umans have performed this fundamental activity that forms the basis of our democracy for hundreds of years" and that these steps are "human cognitive actions." Under step two of the *Mayo/Alice* test, the court concluded that the claims lacked an "inventive concept" and that the "standard components" cited in the claims (e.g., "a standard personal computer," "a visual display device", "a keyboard", "data storage devices," "a laser printer," and "a scanner") "are not sufficient to transform abstract claims into patent-eligible subject matter."

"Method claim 85 is representative of the ""self-verification"" voting method claims of the Reissue Patent RE40,449.

85. A method for voting providing for self-verification of a ballot comprising the steps of:

(a) voting by a voter using a computer voting station programmed to present an election ballot, accept input of votes from the voter according to the election ballot, temporarily store the votes

of the voter;

(b) printing of the votes of the voter from the votes temporarily stored in the computer for the voting station;

(c) comparison by the voter of the printed votes with the votes temporarily stored in the computer for the voting station;

(d) decision by the voter as to whether a printed ballot is acceptable or unacceptable; and

(e) submission of an acceptable printed ballot for tabulation.

System claim 56 is representative of the ""self-verifying"" voting system claims of the Reissue Patent RE40,449.

56. A self-verifying voting system comprising:

one or more voting stations comprising:

(a) one or more computer programs which operate in a computer to display general voting instructions, at least one election ballot showing the candidates and/or issues to be voted on, and directions to the voter for operation of the system;

present the election ballot for voting and input of votes by the voter;

accept input of the votes from the voter;

print out the election ballot according to which the voter voted with the votes of the voter printed thereon, so that the votes of the voter are readable on said election ballot by the voter and readable by a ballot scanning machine; and  
record the votes in the computer;

(b) at least one computer with at least one display device, at least one device to accept voting input from a voter, and sufficient memory to provide for the operation of said computer program;

(c) a printer connected to said computer for printing the election according to which the voter voted;

(d) a ballot scanning machine for reading the votes on the printed ballot printed according to the election ballot which the voter voted and a means for tabulating the printed ballots generated by said one or more voting stations."

To avoid the § 101 subject matter issues raised by the Federal Circuit in *Verified Voter*, review all your method claims to determine if they can include steps that cannot be performed as "human cognitive actions" or mental process steps; if possible, include system claims that do not mirror the process steps of the method claims, and include components that can be supported as not being "standard components"; and support in your specification that your method steps include one or more limitations that represent a specific application under the USPTO 2019 Examination Guidelines and an inventive concept under that transforms the process (if deemed to be directed

...and an inventive concept under that transforms the process (if deemed to be directed to an abstract mental process or fundamental activity) into substantially more.

<http://www.cafc.uscourts.gov/sites/default/files/opinions-orders/17-1930.Opinion.4-18-2018.1.PDF/16-2315.Opinion.3-6-2018.1.PDF>

2887, April Alicia Taylor

[1] Voter Verified, Inc. v. Election Sys. & Software LLC, 887 F.3d 1376 (Fed. Cir. 2018)

Newman, Lourie, and Reyna

Overview:

Discussion:

Representative claim:



Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

## **Ex Parte Avery (Proceeding #2018007519)**

Applicant Appeal - Decided: July 8, 2020

Applicant appealed from a 101 rejection of claims 1-3, 5-14, 20 and 21 of US Pat. App. No. 13/297041. The Board reversed the Examiner's rejection, finding that the claim limitations that the Examiner ruled were merely collecting information and analyzing it instead integrate the otherwise abstract mental process into a practical application for electronic polling graphical user interfaces. The Board also reversed the Examiner's 103 obviousness rejection of the same claims.

**Technology:** The claims are directed to a method of displaying an electronic polling request on a graphical user interface and receiving scoring information from a user.

Under Step 2A, prong 1 of the Mayo/Alice test as augmented by the USPTO 2019 Revised Patent Subject Matter Eligibility Guidance (the "USPTO 2019 SME Guidance"), the Board found that the representative claims "recite a mental process" because the individual claim limitations pertain to either "collecting information, analyzing it, and displaying certain results" or "relates to the judgment of the user which pertains to [a] mental process." [2]

Under Step 2A, prong 2 of the USPTO 2019 SME Guidance, the Board found that several of the claim limitations integrate the abstract mental process into a practical application. In particular, citing the patent specification, the Board stated that limitations that integrate the claim into a practical application require "laying layer over an image provides a 2-dimensional graphical interface including an image, by which a user can position a pointing and selecting device over the image and quickly and easily provide evaluation of the image in two criteria simultaneously by positioning an onscreen cursor." The Board then concluded that "the use of the claimed method of laying layer over an image provides a specific technological improvement over prior electronic polling graphical user interfaces."

Since the Board found that the claims are subject matter eligible under Step 2A, prong 2, the Board did not reach the question of whether the claims "provide an inventive concept" under step 2B of the Mayo/Alice test. But likely that analysis would have been substantially the same as finding the claims are directed to a "practical application" under Step 2A, prong 2.

Plus, the Board went on to reverse Examiner's 103 obviousness rejection, finding that "the Examiner failed to explain adequately how the disclosures of [the three cited prior art references] would have suggested a method of displaying an electronic polling request on a graphical user interface comprising providing a graphical interface including an image and laying a transparent layer over the image as required by independent claim 1."

1. A method of displaying an electronic polling request on a graphical user interface and receiving

scoring information from a user, the method comprising:  
providing a graphical interface to a user, the graphical interface including an image, a first label associated with a first dimension of the image, and a second label associated with a second dimension of the image;

determining a size of the image;

laying a transparent <div> layer over the image, a size of the div layer being based on a size of the image, the <div> layer being sufficiently transparent to allow the user to view the image therethrough, the <div> layer acting as an image map of the image;

when a user selects a location on the image by a selection action, using the image map to obtain x- and y-axis coordinates of the location selected by the user; and  
simultaneously with the user selecting the location, displaying to the user the coordinates of the selected location;

wherein the user interface allows the user to identify a two-dimensional location on the image using a single user motion, the image being updated simultaneously with the motion to provide an immediate visual numerical feedback to the user corresponding to said location on the image;

the user interface further allowing the user to select the two-dimensional location on the image using a single user selection action;

wherein the two-dimensional location selected by the user corresponds to the user's subjective evaluation in two different criteria of at least one of the image itself and something represented by the image, the two different criteria corresponding to the first label associated with the first dimension of the image and the second label associated with the second dimension of the image.

For patent practitioners that need to address a 35 U.S.C. § 101 rejection of their software related patent application, this PTAB provides a good summary of Federal Circuit cases that support current treatment of Mayo/Alice test for subject matter eligibility under 35 U.S.C. § 101 as well as adaption of the Mayo/Alice test under the USPTO 2019 SME Guidance. This Board also provides a well structured approach for stepping through the Examiner's basis for rejection and Applicant's counter argument for each step of the Mayo/Alice test in accordance with the "USPTO 2019 SME Guidance. In particular, the PTAB summarizes the USPTO 2019 SME Guidance for "limitations that are indicative of "integration into a practical application" versus limitations that are not.

<https://e-foia.uspto.gov/Foia/RetrievePdf?system=BPAl&flNm=fd2018008291-07-24-2019-0>

[1] Avery, 2018007519 (PTAB July 8, 2020).

[2] Id. at pg. 13.

Smith (author), Benoit, Bennett

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Robert B. Basham et al. (Proceeding #2019004101)**

Applicant appealed from Examiner's decision to reject claims 2-9 and 21-31 of US Pat. App. No. 14/449600 under 35 USC 101. The Board determined that the claims did not recite an abstract idea under Step 2A, Prong One and reversed the Examiner's rejection of claim 2 and its dependent claims.

Technology: Efficiently managing storage in a multi-tiered storage system

The PTAB looked to the revised guidance that was published by the USPTO after the appeal was docketed. The guidance was published in October 2019 and looks to whether a claim recites any judicial exceptions and additional elements that integrate the judicial exception into a practical application. If a claim recites a judicial exception and does not integrate the exception into a practical application, the guidance indicates that it should be determined whether the claim adds a specific limitation beyond the judicial exception or simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. [1]

The Examiner found that claim 2 was directed to an abstract idea of "storing of data in a multi-tiered storage system." Further, the Examiner indicated that claim 2 recites the steps for sorting of information by the storage device, which is an abstract idea similar to the concepts that have been identified as abstract by the courts, such as organizing information through mathematical correlations in Digitech or data recognition and storage in Content Extraction. [2]

Under Step 2A, Prong One, the Board found that claim 2 is directed to a specific implementation, including receiving a command, directed from an object, from an application, determining storage for the object in a multi-tiered storage system, and storing the object. The Board noted that these are not steps that can practically be performed mentally. In addition, the Board found that the claimed invention does not recite certain methods of organizing human activity or mathematical concepts. Thus, the Board concluded that the Examiner erred at Step 2A, Prong One in determining that the claims recite an abstract idea. The Board reversed the rejection of claim 2 and its dependent claims. [2]



2. A computer program product for efficiently managing storage in a multi-tiered storage system, the computer program product comprising a computer readable storage medium instructions executable by a processor to cause the processor to perform a method comprising: receiving, by the processor, a command from an application, wherein the command is directed to at least one object;

determining, by the processor, storage for the at least one object in a multi-tiered storage system based on the command; and

storing, by the processor, the at least one object in accordance with the determined storage, wherein the command includes at least one of collocation and anti-collocation guidance from the application for the at least one object.

[3]

If you can, explain in the specification or in a response to a rejection under 35 USC 101 why the claimed subject matter cannot practically be performed mentally.

<https://e-foia.uspto.gov/Foia/RetrievePdf?system=BPAI&flNm=fd2019000156-02-24-2020-0>

2132, Ramon A. Mercado

[1] Basham, 2019004101 at 5 (PTAB February 24, 2020).

[2] Id. at 6.

[3] Id. at 2.

Thomas, Whitehead Jr., Raevsky (author)

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Ex Parte Betancourt (Proceeding # 2018003641)**

Applicant Appeal – Decided August 30, 2019

Applicant appealed Final Office Action rejection of claims 1-6, 8-14, and 16-20 of Application No. 14/153,843 directed to a method of monitoring and authorizing wireless tags in a point-of-sale system under 35 U.S.C. 101 as directed to patent-ineligible subject matter, lacking written description support and indefinite under Section 112, and unpatentable under Section 103 in view of Betancourt and Brookner.

PTAB Holding: The PTAB upheld the rejection of claims 16-20 under Sections 101 and 112, and reversed the rejection of those claims under Section 103. The PTAB reversed rejections of the remaining claims under Sections 101 and 112.

Technology: The appealed claims are directed to a method for monitoring wireless tags in vehicles within the wireless area of a service station, including determining authorization of the wireless tags, triggering communication devices within a vehicle with the wireless tags, receiving authorization requests from the tag and wireless device, and activating fuel pumps based on the

The PTAB first found that both representative claims 1 and 16 recited ineligible concepts in reciting steps of "authorizing transactions for selling goods," which is a "commercial interaction" that "includes longstanding conduct that existed well before the advent of computers and the Internet." [2] The PTAB next turned to Prong Two.

First, for claim 1, the PTAB went limitation-by-limitation through the claim and found that while some of the limitations recited the abstract idea itself or "insignificant data gathering," two limitations integrated the abstract idea into a practical application." [3] In particular, the limitations of receiving an authorization request including an authorized amount of fuel and thereafter activating the fuel pump to distribute the requested amount of fuel correspond to an improved computer functionality to enable vehicle transactions and specific user data entry through a dynamic user interface found in the specification. [4] The PTAB found that these limitations "provide improvements to the underlying technology or technical field, namely, vehicle transaction processing systems." [5] The limitations thus sufficiently limit the abstract idea in claim 1 into a practical application. [6]

However, for claim 16, the PTAB found that the limitations did not contain such specific recitations and instead the relevant limitation was generically directed to "collecting, displaying, and manipulating data" as part of the transaction, itself an abstract idea. [7] The remaining limitations were either the abstract idea itself or insignificant post-solution activity. [9] Therefore the claim as a whole merely used the computer as a tool to perform the abstract idea. [8] Further, since the specification describes the computer and elements in generic terms, the PTAB concluded those components were conventional computer components under Alice Step 2. [10]

1. A method, comprising:

monitoring, by a tag reader of a wireless system, for detection of a wireless tag of a vehicle within a predefined wireless service area of a service station associated with the wireless system;

in response to detecting the wireless tag in the predefined wireless service area of the service station, determining, by the tag reader of the wireless system, whether the wireless tag of the vehicle is configured to request authorization through a point of sale of the service station;

in response to determining that the wireless tag is configured to request authorization through the point of sale, triggering, by the tag reader of the wireless system, a communication device within proximity of the vehicle to display a user information request on a display of the communication device, wherein the triggering comprises transmitting location information;

receiving, by the tag reader of the wireless system via the wireless tag of the vehicle, user-provided user information originating from the triggered communication device responsive to receiving the location information;

transmitting, by the tag reader of the wireless system to the point of sale, an authorization request comprising the user provided user information;

receiving, by the tag reader of the wireless system from the point of sale, an authorization indication responsive to the authorization request, wherein the authorization indication includes an authorized amount of fuel to be dispensed at a fuel pump;

activating the fuel pump to dispense the authorized amount of fuel in response to receiving authorization of user information of a user associated with the vehicle; and

transmitting, by the tag reader of the wireless system to the wireless tag of the vehicle, the authorization indication.

1) Detail within claims tying the claims to specific problems or concepts in the given technical field can help survive 101 challenges.

2) A variety of differently scoped claims can provide options on appeal or challenge.

<https://e-foia.uspto.gov/Foia/RetrievePdf?system=BPAl&flNm=fd2018003641-08-30-2019-0>

3693, Bartley

[1] Ex Parte Betancourt, 2018-003614 at 2 (PTAB Aug. 30, 2019).

[2] Id. at 17-19.

[3] Id. at 21.

[4] Id. at 22-23.

[5] Id. at 23.

[6] Id.

[7] Id. at 23-24.

[8] Id.

[9] Id. at 25.

[10] Id. at 28-29.

Bisk, Hume (Author), Dirba

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:



Panelists:

**PTAB - Ex Parte Geral Boldt, et al. (Proceeding # 2018002278)**

In this appeal of US Pat. App. No. 15/001665 from a rejection, the Examiner indicated that the claim was directed to the abstract idea of sales and marketing behavior by determining sponsors for the purpose of generating revenue. The Board disagreed, focusing on the technical aspects of the claim and considering the claim as a whole. Decided February 28, 2020.

The invention related to PDF print jobs and dynamically splitting such print jobs into independent segments to facilitate printing of large PDF files. The examiner found the claim directed to a computer algorithm/mathematical formula for dividing data into various segments applying predetermined rules, constituting a mental process or method of organizing human activity and that all was conventional. The Board disagreed. The guidelines were published after the briefs were filed, and the guidelines were applied by the Board. The Board found that the claim was not directed to an abstract idea, citing the hardware elements and that the formula was integrated into a practical application. [1]

1. A system comprising:  
a print server comprising:  
an interface configured to receive a Portable Document Format (PDF) print job comprising logical pages; and

a job controller configured to divide the PDF print job into segments by:  
determining a memory footprint indicative of an expected size of each of the logical pages, based on a determined size of at least two of the logical pages;

determining a segment size comprising a number of the logical pages to include in each segment based on the memory footprint for the logical pages, generating multiple segments, populating each of the segments with logical pages from the  
PDF print job based on the segment size, and populating each of the segments with a PDF page tree;

wherein the job controller is configured to transmit the segments to an assigned printer for processing.

Just another example of using technology to solve a technical problem. The application set forth the technical problem and technical solution very clearly. This is also an example of how the guidelines are very helpful in overcoming rejections in the PTO.

<https://e-foia.uspto.gov/Foia/RetrievePdf?system=BPAI&flNm=fd2018002278-02-28-2020-0>

2674, Zhang

[1] Boldt, 2018-002278 at 7 (PTAB February 28, 2020).

Huges, McCartney, and Bain (author)

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**PTAB - Ex Parte Bulleit and Stanley K. Yeatts (Proceeding # 2018005562)**

In this appeal of US Pat. App. No. 13/570420 from a rejection, the Examiner indicated that the claim was directed to the abstract idea of sales and marketing behavior by determining sponsors for the purpose of generating revenue. The Board disagreed, focusing on the technical aspects of the claim and considering the claim as a whole. The Board also added a 112 rejection. Decided: March 9, 2020

This is a good example of adding technology to change the characterization of the claims from a fundamental economic practice of sales and marketing to an improvement to computer functionality with regard to a proactive search engine. The Board focused on the non-conventional use of a proactive search engine[i], ignoring many of the elements that are typically associated with a business method, such as "links to a plurality of sponsored websites"[2] and navigating to the sponsored websites. Here's a representative quote from the decision supporting the conclusion that the claims were not directed to an abstract idea: "In this case, it is the characterization the Appellant has put forward, supra, which is the more accurate characterization. In our view, the claim as a whole reflects a specific asserted improvement in technology, rooted in computer technology, over that which was available in the prior art. Accordingly, we find the Appellant's arguments that the claimed subject matter is not directed to sales and marketing but a technical improvement persuasive, given the present record. It should be noted that we have addressed purported specific asserted improvements in technology under step one of the Alice framework. Additionally, we determine that there is an integration into a practical application." [3]

1. A network communication method comprising: [(a)] switching from a standard quality of service Internet connection to a higher, relative to the standard quality of service, quality of service Internet connection, in response to user selection of the higher quality of service Internet connection via a persistent browser interface, at a user device, that persists as the user device navigates the Internet to a plurality of Web pages;

[(b)] displaying on the user device a series of links to a plurality of sponsored Web sites of a plurality of sponsors that subsidize the higher quality of service Internet connection in the persistent browser interface at the user device as the user device navigates the Internet to the plurality of Web pages and that supercede indicia of sponsorship that are associated with the plurality of Web pages, in response to the user selection of the higher quality of service Internet connection at the user device, the series of links being provided to the user device by a proactive search engine that is configured to search the Web independent of user key word input as the user device navigates the Internet to the plurality of Web pages; and

[(c)] linking the user device to one of the sponsored Web sites of one of the plurality of sponsors of the higher quality of service Internet connection in response to user selection of a corresponding link at the user device, wherein a plurality of Internet connection options are displayed in the persistent browser interface at the user device as the user device navigates the Internet to the plurality of Web pages, and wherein the plurality of Internet connection options displayed in the persistent browser interface comprises: a first option that selects the standard quality of service Internet connection; and a second option that selects the higher quality of service Internet connection.

Add technology to your business method in order to have a chance to get it allowed. Use unconventional names, such a "proactive search engine" to make it harder to assert that the elements are conventional.

<https://e-foia.uspto.gov/Foia/RetrievePdf?system=BPAl&flNm=fd2018005562-03-09-2020-0>

3681, Sorkowitz

[1] Bulleit, 2018-005562 at 8 (PTAB March 9, 2020).

[2] Id.

[3] Id. at 9.

Lorin, Fetting, and Astorino (author)

Overview:

Discussion:



Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

## **Ex Parte Bush (Proceeding #2018005583)**

Applicant Appeal - March 10, 2020

Applicant appealed from a 101 rejection of claims 1, 3-9 and 11-14 of US Patent App. No. 13/792,995. The Board reversed the Examiner's rejection of claims 1, 3-7 and 14 finding that the claim limitations (that the Examiner ruled were merely collecting, analyzing, and displaying the results) integrates the otherwise abstract mental process into a practical application for method of customizing names of insulin delivery profiles for improved patient safety. The Board affirmed the Examiner's rejection of claims 8, 9 and 11-13 because these claims are directed to a computer readable medium, which broadly recites a signal and as such is not one of the four categories of patent-eligible subject matter under 35 U.S.C. § 101.

Technology: The claims are directed to insulin pump configuration software and, more particularly, to customizing names of insulin delivery profiles using the pump configuration software. [1]

Under Step 2A, prong 1 of the Mayo/Alice test as augmented by the USPTO 2019 Revised Patent Subject Matter Eligibility Guidance (the "USPTO 2019 SME Guidance"), the Board found that the claims are directed to an abstract process because "[e]ach of the independent claims recite limitations directed to receiving a string of characters and prompting a user to enter a change to a string of characters (data gathering or observation steps), and comparing normalize characters with names of profiles (data analysis or evaluation steps) may be a "mental process" steps. [2]

However, under Step 2A, prong 2, the Board found that several of the claim limitations integrates the abstract mental process into a practical application. In particular, the Board stated that the claims "recite limitations directed to downloading a pump configuration file to the insulin pump and delivering insulin by the insulin pump in accordance with a parameter selected from the downloaded pump configuration file", which integrate the otherwise abstract claim into a practical application that is "an improvement to the operation of the insulin pump (an improvement to a technology)..." [3]

Since the Board found that the claims are subject matter eligible under Step 2A, prong 2, the Board did not reach the question of whether the claims "provide an inventive concept" under step 2B of the Mayo/Alice test. But likely that analysis would have been substantially the same as finding the claims are directed to a "practical application" under Step 2A, prong 2.

The Board affirmed the Examiner's rejection of claims 8, 9 and 11-13, not because they are directed to an abstract idea under the *Alice* test, but because these claims are directed to a computer readable medium that broadly covers a propagation signal that is not one of the four categories of patent-eligible subject matter under 35 U.S.C. § 101. The Board further confirmed that the Appellant's Specification did not preclude a propagation signal from the definition computer readable medium covered by claims 8, 9 and 11-13. [4]

1. A computer-implemented method for customizing names of insulin delivery profiles for improved patient safety, comprising:

receiving, by a configuration device, a string of characters to serve as a name for a given insulin delivery profile, where the insulin delivery profile includes at least one parameter pertaining to insulin delivery by an insulin pump and is one of a plurality of insulin delivery profiles associated with a given patient;

normalizing, by the configuration device, the string of characters by changing one or more of the characters in the string of characters in accordance with a rule set;

comparing, by the configuration device, the normalized string of characters with names for each of the plurality of insulin delivery profiles;

prompting, by the configuration device, a user to change the normalized string of characters by displaying a message on the display of the configuration device, the prompting being performed in response to a match between the normalized string of characters and at least one of the names of the plurality of insulin delivery profiles;

updating, by the configuration device, the name of the given insulin delivery profile in a pump configuration file residing on the configuration device with the normalized string of characters, wherein the name of the given insulin delivery profile differs from name of the pump configuration file and updating occurs when the normalized string of characters is unique in relation to the names of the plurality of insulin delivery profiles and in response to the comparison step, the steps of normalizing, comparing, prompting and updating being performed solely by computer executable instructions being executed by a computer processor in the configuration device;

downloading the pump configuration file from the configuration device to an insulin pump; and

delivering insulin, by the insulin pump, to the given patient in accordance with a parameter from a selected one of the plurality of insulin delivery profiles in the pump configuration file. [5]

For patent practitioners, this PTAB decision provides further guidance on providing "specific features" in your patent claims that transform the claims from an ineligible abstract mental process of "collecting data, analyzing the data, and displaying results of the data" (i.e., in accordance with the Federal Circuit decision in *Electrical Power Group* ) under Alice test step 2A prong 1 to an eligible "practical application" under Alice step 2A prong 2 . Patent practitioners should also include support in their Specification for each of their "specific features" individually or in combination as being an "improvement to a technology", which is what the PTAB in Ex parte Bush found was the basis for reversing the Examiner's § 101 rejection and finding that such "specific features" (i.e., the recited limitations of "downloading the pump configuration files and using them to deliver insulin") are not "insignificant post-solution activity" but an improvement to the operation of an insulin pump.

3626, Robert W. Morgan

[1] Ex parte Bush, 2018-005583 at 2 (PTAB March 10, 2020).

[2] Id. at 9-10.

[3] Id.

[4] Id. at 8-9.

[5] Id. at 2.

Nappi (author), Droesch, Repko

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

### **Ex Parte Campbell (Proceeding #2019001768)**

Applicant appealed Final Office Action rejection of claims 1-20 of Application No. 15/097,704 directed to filling out forms in advance based on known information under 35 U.S.C. 101 as directed to patent-ineligible subject matter.

PTAB Holding: The PTAB affirmed in part the Examiner's 101 rejection. Claims 1-7 were held to be ineligible while claims 8-20 were held to be eligible. For the eligible claims, the PTAB found that the claims integrated the abstract idea of a mental process into a practical application with the additional limitation that the computing device would enter data into a form. [1]

Technology: The claims are directed to a computer program configured to fill out forms in advance based on known information.

For claims 8-20, the PTAB reversed the Examiner's rejection at step 2A, Prong 2, finding that the additional limitation of causing a computer program to enter data into a form to be sufficient to integrate the abstract idea of a mental process into a practical application. The PTAB considered this to be the technological improvement as described in the specification. Therefore, not including this limitation (as seen in claims 1-7) could not overcome the claims being directed to an abstract idea. There was also a 103 rejection that was reversed and a new ground of rejection under 102, but these did not affect the 101 analysis.

1. A non-transitory computer-readable medium embodying a program that, when executed by at least one computing device, causes the at least one computing device to at least: receive a plurality of standardized data items from a network service corresponding to a data provider, the plurality of standardized data items corresponding to standardized data types promulgated by a metadata central authority;

determine that a network page including a web form has been requested by a data consumer, the web form requesting a plurality of requested data items;

receive metadata from a network data service, the metadata including a mapping defining a correspondence between the plurality of requested data items requested and the plurality of standardized data items;

generate a subset of the plurality of requested data items requested by the web form based at least in part on the metadata and the plurality of standardized data items; and

execute a service call to the data consumer including the subset of the plurality of requested data items.

It is a good idea to include multiple independent claims and dependent claims in the appeal as backups in case the PTAB is not persuaded by the broader claim set but is okay with the narrower one.

<https://developer.uspto.gov/ptab-web/#/search/documents?proceedingNumber=2019001768>



2158, Ruiz

[1] Ex parte Campbell, 2019-001738 (PTAB February 3, 2020).

Smith (author), Jefferson, and Hagy

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Ex Parte Eronen (Proceeding #2018008595)**

Applicant appealed Final Office Action rejection of claims 21-40 of Application No. 15/030,457 directed to displaying images on touch sensitive displays under 35 U.S.C. 101 as directed to patent-ineligible subject matter.

PTAB Holding: The PTAB reversed the Examiner's 101 rejection at step 2A, Prong 1. The PTAB found that the claims were directed to collecting displaying images on touch sensitive displays in a particular manner which did not fit into any of the three groupings identified as abstract ideas. [1]

Technology: The claims are directed to rendering visual representations of content items segments on a display apparatus.

The PTAB found that the claims were directed to collecting displaying images on touch sensitive displays in a particular manner which did not fit into any of the three groupings identified as abstract ideas. Therefore, the PTAB determined that the claims were directed to patent-eligible subject matter. The PTAB also concluded that the claims were obvious over a combination of two references, but that analysis did not seem to affect the 101 analysis.

21. An apparatus, comprising:

at least one processor; and at least one memory including computer program code, the memory and the computer program code configured to, working with the processor, cause the apparatus to perform at least the following:

receive information associated with a content item;

designate a first bead apparatus to be associated with a first content item segment of the content item, the first content item segment being identified by a first content item segment identifier;

cause display of a visual representation of the first content item segment identifier by the first bead apparatus;

designate a second bead apparatus to be associated with a second content item segment of the content item, the second content item segment being identified by a second content item segment identifier;

cause display of a visual representation of the second content item segment identifier by the second bead apparatus;

detect, via one or more sensors of the second bead apparatus, information indicative of a selection input of the second bead apparatus; and

in response to detecting the information indicative of the selection input of the second bead apparatus, cause rendering of the second content item segment based, at least in part, on the selection input, wherein causation of rendering comprises causing information indicative of the second content item segment to be transmitted to a separate apparatus so as to cause to display on the separate apparatus the visual representation of the second content item segment identifier concurrent with presentation of the visual representation of the second content item segment identifier by the second bead apparatus.

Always worth making a brief argument that the claims do not fit into any of the three groupings considered abstract ideas as the PTAB may end up persuaded by this and avoiding the more difficult arguments related to whether the abstract idea is integrated into a practical application or contains a limitation that is not routine or conventional.

<https://developer.uspto.gov/ptab-web/#/search/documents?proceedingNumber=2018008595>

2622, Patel

[1] Ex parte Eronen, 2018-008595 (PTAB February 24, 2020).

Dixon, Kumar, McNeil (author)

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Ex Parte Fautz (Proceeding #2019000106)**

Applicant Appeal – Decided May 15, 2019

Applicant appealed Final Office Action rejection of claims 1-9 of Application No. 14/326,661 directed to magnetic resonance (MR) tomography apparatus under 35 U.S.C. 101 as directed to patent-ineligible subject matter.

PTAB Holding: The PTAB reversed the Examiner's 101 rejection. The PTAB relied on the 2019 Revised Guidance on patent subject matter eligibility and found that the claims were not "directed to" an abstract idea under Prong Two, Step 2A of the Guidance.

Technology: The appealed claims are directed to "a magnetic resonance (MR) tomography apparatus" configured to acquire data from RF coils, reduce the signal-to-noise ratio from the reception coils, and reconstruct image data of an examination subject on that basis. [1]

The PTAB found that the claims recited three mathematical concepts used by the processor to establish reception-sensitivity profiles, determine Fourier-transformed signals, sum corrected signals for image reconstruction. The claims thus recited an abstract idea under Prong One of the Guidance. [2]

The PTAB next found that the "additional elements" of the claims "reflect an improvement to a technology, and thus the independent claims integrate the mathematical concept into a practical application." [3] The PTAB relied on *Thales Visionix, Inc. v. United States* [4] in finding that the "independent claims solve a technical problem" and the "MR tomography device in the claimed solution is neither a token addition nor an abstract concept." [5] "Appellant is concerned with solving the technical problem of improving sensitivity correction in MR tomography devices" and "overcomes the limitations of existing approaches." [6]

The PTAB found that the claimed mathematical calculations are a consequence of the arrangement of the "device's coils and how they receive signals during the scan" and are "the claimed invention uses the recited mathematical equations to improve the imaging system." [7] On this basis, the PTAB found that the claims were not "directed to" an abstract idea and reversed the rejection and therefore did not analyze the claims under the "inventive concept" analysis under the Guidance. [8]

8. A magnetic resonance (MR) tomography apparatus comprising:

an MR data acquisition unit comprising a radio frequency (RF) transmission system comprising a number  $n$  of single RF coils  $E_i$  with which reception signals  $t_i$  are respectively acquired, with  $i = 1, \dots, n$ ;



a processor provided with or configured to determine, for each single coil  $E_i$ , an individual reception sensitivity profile in the spatial domain  $r$ :  $B_{li}(r) = |a_i(r)| \cdot e^{i \cdot \phi_i(r)}$  with amplitude  $a_i(r)$  and phase  $\phi_i(r)$ ;

said processor being configured to operate the MR tomography apparatus to scan an examination subject introduced into the MR tomography apparatus to acquire reception signals  $l_i(k)$  in the frequency domain with wave number  $k$  via the  $n$  reception coils  $E_i$ ;

said processor being configured to determine Fourier-transformed signals  $I_{Fi}(r)$  from the reception signals  $l_i(k)$ , wherein:

$I_{Fi}(r) = p(r) \cdot e^{i \cdot \phi_i(r)} \cdot B_{li}(r) + N$  with  $N :=$  noise term,  $p(r) \cdot e^{i \cdot \phi_i(r)} :=$  proton density;

said processor being configured to determine complexly corrected signals  $I_{Fi}(r)$  on the basis of the signals  $I_{Fi}(r)$  and the individual reception sensitivity profiles  $B_{li}(r)$ ;

said processor being configured to determine a sum signal  $MR(r)$  via complex addition of the corrected signals  $I_{Fi}(r)$ :  $MR(r) = \sum I_{Fi}(r)$ ; and

said processor being configured to reconstruct image data of the examination subject on the basis of the sum signal  $MR(r)$ , and to make the image data available at an output of the processor as an electronic data file.

1) When drafting claims using or reciting mathematical concepts or equations, ensure the claims make clear how those concepts are integrated into a device or other practical application and used to improve that device or otherwise solve a problem in the field.

2) Avoid bare recitations of mathematical concepts without tying them to systems or specific implementations.

<https://www.uspto.gov/sites/default/files/documents/Ex%20Parte%20Fautz.pdf>

2865, Michael J Dalbo

[1] Fautz, 2019-000106 at 2 (PTAB May 15, 2019).

[2] Id at 7.

[3] Id at 8.

[4] Thales Visionix, Inc. v. United States, 850 F.3d 1343, 1349 (Fed. Cir. 2017), cited in MPEP 2106.05(a)(II)(vii).

[5] Fautz at 9.

[6] Id at 10.

[7] Id at 11.

[8] Id.

Haapala, MacDonald, Repko (author)

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Ex Parte Hannun (Proceeding #2018003323)**

Applicant Appeal – Designated Informative 12/11/19

Applicant appealed Final Office Action rejection of claims 11-20 of Application No. 14/735,002 directed to systems and methods for improving transcription of speech to text under 35 U.S.C. 101 as directed to patent-ineligible subject matter and 35 U.S.C. 103 as unpatentable over Sompolinsky (US 2011/0035215A1) and Talwar (US 2011/0282663A1).

PTAB Holding: The PTAB reversed the Examiner’s 101 rejection. The PTAB relied on the 2019 Revised Guidance on patent subject matter eligibility and found that: (1) the claims did not recite an ineligible concept under Step 2A, Prong One of the Revised Guidance; (2) any alleged abstract idea is integrated into a practical application under Step 2A, Prong Two; and (3) the Examiner did not provide factual support for the conclusion that the claims do not contain significantly more than the ineligible concept under Step 2B. The PTAB also reversed the Examiner’s 103 rejection based on differences between the prior art and the claims.

Technology: The appealed claims are directed to “a computer-implemented method for transcribing speech” including normalizing audio, generating jitter set of audio files, and decoding a transcription of the input audio using predicted character probabilities and a trained neural network.[1]

The PTAB found that the claims did not recite a patent-ineligible concept. The PTAB disagreed with the Examiner that the claims recited a method of organizing human activity or mental process, because “the claims are directed to a specific implementation” including multiple computerized steps. [2] According to the PTAB these steps “cannot be performed mentally,” do not organize human activity, and do not recite any fundamental economic practices or other prohibited concepts. [3] The PTAB next found that the disclosure in the Specification of a mathematical algorithm to obtain “predicted character probabilities” is not recited in the claims, and thus under the Guidance the claims do not recite a mathematical concept. [4]

The PTAB alternatively found that even if there were a mathematical concept in the claims present in the character probability generation, that judicial exception “is integrated into a practical application” under Step 2A, Prong Two. [5] The PTAB relied on the Applicant’s assertion and the specification’s recitation of “specific features that were specifically designed to achieve an improved technological result” including a trained neural network that “achieves higher performance than traditional methods.” [6]

Finally, the PTAB found that the Examiner failed to sufficiently support a finding of no inventive concept under Step 2B. The PTAB relied on *Berkheimer v. HP, Inc.*, in concluding that the Examiner’s assertion of there being no “additional elements” in the claims lacked necessary factual support. [7] The PTAB therefore reversed the Examiner’s Section 101 rejection.

11. A computer-implemented method for transcribing speech comprising:  
receiving an input audio from a user;

normalizing the input audio to make a total power of the input audio consistent with a set of training samples used to train a trained neural network model;

generating a jitter set of audio files from the normalized input audio by translating the normalized input audio by one or more time values;

for each audio file from the jitter set of audio files, which includes the normalized input audio:  
generating a set of spectrogram frames for each audio file;

inputting the audio file along with a context of spectrogram frames into a trained neural network;

obtaining predicted character probabilities outputs from the trained neural network; and

decoding a transcription of the input audio using the predicted character probabilities outputs from the trained neural network constrained by a language model that interprets a string of characters from the predicted character probabilities outputs as a word or words.

1) Identify “specific features” in your claims that support a “practical application” of what may be viewed as an abstract mental process, mathematical concept or organizing human activity.

2) In your Specification, explain how the claimed features are an improvement over conventional, routine or traditional systems/methods in the industry.

For example, the PTAB in this case cited the Specification for support the claimed method provided “higher performance than traditional methods on hard speech recognition tasks while also being much simpler.”

3) During prosecution, force Examiners to identify specific alleged ineligible concepts present in the claims under both prongs of Step 2A of the Guidance, to clarify and potentially resolve rejections and help with potential appeal.

4) Relying on *Berkheimer*, Applicants can push back on rejections under Step 2B of the Guidance where unsupported by specific recited evidence.

<https://www.uspto.gov/sites/default/files/documents/Ex%20parte%20Hannun%202018-003323.pdf>

2600, Sarpong

[1] Hannun, 2018-003323 at 2-3 (PTAB Dec. 11, 2019).

[2] Id. at 9-10.

[3] Id.

[4] Id.

[5] Id. at 10-11.

[6] Id.

[7] Id at 11 (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018)).

Kumar, McKeown (author), Shiang

Overview:

Discussion:



Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Ex Parte Hsu (Proceeding #2018007803)**

Applicant Appeal – Decided September 26, 2019

Applicant appealed the rejection of claims 1, 5, 9, 10, 14, and 18-32 of Application No. 13/782,653 directed to a method of presenting search results under 35 U.S.C. 101 as directed to patent-ineligible subject matter and 35 U.S.C. 103 as unpatentable over Kraft, Dong, Inagaki, Riley, and Jockish.

PTAB Holding: The PTAB reversed the Examiner's 103 rejection for a failure to compare the art to the claims properly. The PTAB upheld the rejection of claims 1, 5, 10, 14, 19, and 21-32 under Section 101, but reversed the rejection of claims 9, 18, and 20 as patent-eligible for improving web-query technology.

Technology: The appealed claims are directed to "a method of presenting search results" using a processor to determine popular search results during different time periods, and to determine and order search results based on the time of day for a query. [1]

The PTAB first found that the Examiner did not properly compare the prior art to the specific recited language of the claims, and therefore reversed all 103 obviousness rejections on that basis. [2]

The PTAB next reviewed the Examiner's rejection under Section, made first as an alternative ground in the Examiner's Answer. The PTAB specifically compared representative claim 1 to the categories of abstract ideas in the Revised Guidance and found that each matched a specified category in the Guidance, either mental processes, mathematical concepts, or insignificant data-gathering or extra-solution activity. [3] On this basis the PTAB determined that the claims recited judicial exceptions under Step 2A Prong One. [4]

The PTAB then proceeded to the practical application step in Prong Two. The PTAB addressed Applicant's argument that the time of day impacted the meaning of search terms and therefore provided more accurate search results, finding that the specification disclosed one basis and solution for disambiguating differently timed queries and providing more accurate results - based on Jaccard Distance and Kullback-Lieber divergence scores for those queries. [5] However, the PTAB found that only three dependent claims - 9, 18, and 20 - contained a recitation of those specific solutions. [6]

Based on this, the PTAB found that claims 9, 18, and 20 were a practical application in being directed to improving web search technology through the solution recited in the specification. [7] However, the PTAB found that the remaining claims that failed recite those specific limitations were not patent eligible as they just recited the abstract idea(s) instead of a practical application, and limitations not found in the claims may not be imported into them. [8]

1. A method of presenting search results in response to search query submitted by users and including a search term, the method comprising:

using a processor device performing steps of:

for respective search results that are identified by the search term, determining a popularity among users of the search result for respective time ranges within a day, wherein a first popularity of the search result for the search term during a first time range is higher than a second popularity of the search result during a second time range; and

responsive to receiving from a user a search query including the search term:

identifying a search results set comprising the search results that are identified by the search term;

identifying a time range of the day within which the user submitted the search query;

for respective search results of the search result set, identifying the popularity of the search result during the query time range of the day;

ordering the search results set according to the popularity of the respective search results during the selected time range of the day, wherein a first search result is presented before a second result having a lower popularity for the search term during the query time range of the day than the first search result; and

1) Frame inventions more generally as improving the functioning of a computer, as opposed to tying such improvement to specific implementations.

2) To the extent specific applications or embodiments are professed to improve the functioning of the computer, ensure those specific embodiments are captured in the claims so that some claims are more likely to survive review.

<https://e-foia.uspto.gov/Foia/RetrievePdf?system=BPAI&flNm=fd2018007803-09-26-2019-0>

2163, Thai

[1] Ex Parte Hsu, 2018-007803 at 2 (PTAB Sept. 26, 2019).

[2] Id. at 4-6.

[3] Id. at 15-17.

[4] Id.

[5] Id. at 18.

[6] Id.

[7] Id. at 19.

[8] Id.

Saadat, Evans (Author), Chung

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

### **Ex Parte Kavis (Proceeding #2018001562)**

Applicant appealed from a 101 rejection of claims 24-35 and 37-62 of US Patent Application No. 13/630,989. The Board reversed the Examiner's rejection because the Examiner did not explain which abstract idea the claims were directed to and entered its own 101 rejection.

Technology: The claims are directed to a system for detecting fraudulent coupons during a purchase transaction. [1]

Step 2A, prong 1: The Board held that the claimed limitations recite the mental process of comparing coupon data because the claims include an observation, an evaluation, and judgment by receiving data, sending the data, and comparing the data to determine whether the coupon is fraudulent. The Board also held that the claims are directed to a method of organizing human behavior because the claims recite commercial or legal interactions.

Step 2A, prong 2: Citing in part *Electric Pwr Grp*, the Board noted that "the claimed concepts of obtaining, comparing, sending, and generating an alert reflect the types of extra-solution activity (i.e., in addition to the judicial exception) the courts have determined insufficient to transform judicially excepted subject matter into a patent-eligible application." The Board held that the claimed computer limitations are that of a general purpose computer and were therefore insufficient to integrate the judicial exception into a practical application because the claims were simply using the computer-related limitations to implement the abstract idea. Also, the computer-related limitations were merely performing calculations that could practically be performed in the mind.

Step 2B: The Board held that the computer-related limitations were described at a high level of generality and were well-understood, routine, and conventional.

24. A fraudulent coupon detection system comprising:

a fraudulent coupon detection server remote from a retail location and comprising a fraudulent coupon detection processor and a fraudulent coupon memory coupled thereto;

a communications network; and

a point-of-sale (POS) device associated with the retail location and coupled to said fraudulent coupon detection server via said communications network and comprising a POS processor, a POS memory coupled to said POS processor, a display coupled to said POS processor, and an input device coupled to said POS processor, said POS processor configured to, during a purchase transaction and in near real time, receive a product identifier code via said input device, and send the product identifier code to said fraudulent coupon server via said communications network;

said fraudulent coupon detection processor configured to, during the purchase transaction and in near real time, compare the received product identifier code to a plurality of fraudulent coupon identifiers in said fraudulent coupon memory, the plurality of fraudulent coupon identifiers being associated with a plurality of fraudulent coupons for the product identifier code, and send at least one fraudulent coupon code corresponding to respective ones of the plurality of

fraudulent coupons to the POS device via said communications network based upon a match between the product code and a given one of the plurality of fraudulent coupon identifiers;

said POS processor further configured to, during the purchase transaction, generate an alert on said display based upon receipt of the at least one fraudulent coupon code.

This case is interesting because it relies on *Electric Pwr Grp* , and does so at step 2A, prong 2. Also, the Board considered whether the computer limitations were generic at step 2A, prong 2. This case shows that it is very panel dependent whether the Board will rely on the *Electric Pwr Grp* line of cases.

<https://e-foia.uspto.gov/Foia/RetrievePdf?system=BPAI&flNm=fd2018001562-12-02-2019-0>

3621, Michael J. Cross

[1] Ex Parte Kavis, No. APPEAL 2018-001562 (P.T.A.B. Dec. 2, 2019)

Turner (author), Pinkerton, Silverman

Overview:

Discussion:

Representative claim:



Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Ex Parte Kim (Proceeding #2018008291)**

Applicant Appeal – Decided July 24, 2019

Applicant appealed Final Office Action rejection of claims 1-19 and 21-30 of Application No. 14/712,849 directed to a method of decoding audio data under 35 U.S.C. 101 as directed to patent-ineligible subject matter.

PTAB Holding: The PTAB partially reversed and partially upheld the Examiner's 101 rejection. The PTAB relied on the 2019 Revised Guidance on patent subject matter eligibility and found that method claims 1-9, 27, and 29 were directed to a patent-ineligible abstract idea, while the apparatus claims 10-19, 21-26, 28, and 30 recite an improved device configured to perform those functions that properly integrates the abstract idea into a practical application under Step 2A, prong two.

Technology: The appealed claims are directed to "method of decoding audio data" using vector dequantization and selected "codebooks" to improve the sound quality. [1]

The PTAB found that the claims recited "mathematical concepts and mathematical relationships" in reciting and performing "vector dequantization" in its method and device claims. [2] The claims also recited "selection" of a codebook, which the board concluded could be performed in the human mind or with pen and paper, and thus constituted an abstract mental process. [3] The board concluded the "processor," "memory" and output steps did not change the basic character of the claims. [4] The claims thus recited an abstract idea under Prong One of the Guidance. [5]

Turning to prong two, the PTAB found first with respect to the method claims that they did not integrate the abstract ideas into a practical application because the recitation of a generic "processor" performing the claimed steps was insufficient. [6] However, with respect to the device claims, the board was persuaded that the devices "configured to" perform the steps were "special-purpose improved machines" and thus more than a generic computer. [7]

The PTAB rejected appellants argument that *McRO* required a different outcome for the method claims, because the claims did not improve the operation of a "physical display" (as in *McRO*) or the "operation of any other computer component." [8] Similarly, the board rejected appellants reliance on *Enfish* because the method claims did not improve the operation of the computer in the way *Enfish*'s self-referential database improved how the computer stored and retrieved data. [9]

Lastly, the PTAB found under Step 2B that the *Berkheimer* memorandum was inapplicable to the Examiner's finding as it post-dated the Final Office Action. [10] The PTAB did not address the method claims in detail, but appeared to concluded there was no inventive concept in sustaining the Examiner's rejection on those claims. [11]

1. A method of decoding audio data comprising a vector quantized spatial component of a sound

field, the method comprising:

selecting, by a processor, one of a plurality of codebooks to use when performing vector dequantization with respect to the vector quantized spatial component, the vector quantized spatial component defined in a spherical harmonic domain, and obtained through application of a decomposition to a plurality of higher order ambisonic coefficients;

performing, by the processor, vector dequantization with respect to the vector quantized spatial component using the selected one of the plurality of codebooks to obtain a vector dequantized spatial component of the soundfield;

rendering, by the processor and based on the vector dequantized spatial component, speaker feeds.

1) Ensure a variety of method and device claims to allow the best chances of some claims surviving a 101 rejection.

2) Emphasize in applications and reflect in claims improvement to a computer or computer component. Arguably a different formulation or description of the claimed devices could have framed the method claims as closer to *McRO* or *Enfish* .

<https://e-foia.uspto.gov/Foia/RetrievePdf?system=BPAI&fINm=fd2018008291-07-24-2019-0>

2677, Shah

[1] Ex Parte Kim, 2018-008291 at 2 (PTAB July 24, 2019).

[2] *Id.* at 9-10.

[3] *Id.* at 10.

[4] *Id.* at 10-11.

[5] *Id.* at 11.

[6] *Id.* at 12.

[7] *Id.* at 13.

[8] *Id.* at 13-15.

[9] *Id.* at 15.

[10] *Id.* at 17-18

Courtenay (author), Hume, Bennett







E

Overview:

Discussion:



Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Ex Parte Kimizuka (Proceeding #2018001081)**

Applicant Appeal – Decided May 15, 2019

Applicant appealed Final Office Action rejection of claims 7, 8, and 13 of Application No. 13/871,055 directed to a golf club fitting method under 35 U.S.C. 101 as directed to patent-ineligible subject matter.

PTAB Holding: The PTAB sustained the Examiner's 101 rejection. The PTAB found that the claimed method recited an ineligible mental process of evaluating and recommending golf clubs to a customer. The PTAB further found that the claimed invention lacked a technical solution to a technical problem and was directed to the patent-ineligible mental process, as opposed to being integrated into a practical application of the abstract idea. The PTAB finally found that the additional elements of the claim did not provide an inventive concept. The PTAB likewise found that claim 13 directed to the actual selection of the golf club was similarly ineligible.

Technology: The appealed claims are directed to "a fitting method of a golf club" including creating a hit ball database based on certain hit ball parameters, measuring a subject's golf swing parameters, using a processor to determine a suitable dynamic loft for the subject based on several considerations, and recommending a loft angle based on the determined dynamic loft difference. [1]

The PTAB found that the claims recited a patent-ineligible concept under the revised Guidance. The PTAB evaluated each of the "determining" steps of the claim used to select a recommended golf club and found that "under the broadest reasonable interpretation of claim 7, the recited determinations can be practically performed in the mind" which therefore caused them to fall "within the Guidance's mental-process grouping." [2] The PTAB walked through each of the "determining" steps and analyzed the data reviewed and determination made, analogizing the steps to those that could be performed by a human or "with the assistance of pen and paper", including looking up values in a table and performing simple subtraction and addition of those values. [3]

The PTAB next found that the claim was "directed to" that patent-ineligible concept and failed to integrate that concept into a practical application. [4] The PTAB pointed to the specification's disclosure of a non-technical invention of "help[ing] a user select a club that fits the player's needs" as opposed to an improvement of "how the measurements are taken" or "how the golf club is manufactured," distinguishing cases such as *Enfish* or *McRO*. [5] The "mere presence of a database or a processor here does not necessarily indicate a technical solution." [6] The PTAB then considered that database and processor and determined those "additional elements" were

insufficient token elements. [7] The processor was “merely used to perform calculations” that could be performed in the human mind, [8], the database merely “stores the results” of the data gathering steps, [9], and the “measuring” steps broadly recited data collection of the needed values. [10]. The PTAB further reviewed the additional “indicia of integration” including “transformation and reduction of an article” and concluded none of them were present. [11]

The PTAB finally considered the “inventive concept” prong of the Guidance, reevaluating the same “processor” and “database” limitations. [12] For similar reasons to the “practical application” prong, the PTAB concluded that those limitations did not provide anything more than well-understood, routine, and conventional additions to the claim to perform the claimed steps, and the claim as a whole was “simply an ‘abstract-idea-based solution implemented with generic technical components in a conventional way.’” [13] The PTAB therefore found that the claims were patent-ineligible under the revised Guidance.

7. A fitting method of a golf club, comprising the following steps of:

creating a hit ball result database based on ball initial velocity prediction data, launch angle prediction data, and back spin prediction data, the ball initial velocity prediction data being data capable of predicting a ball initial velocity based on the dynamic loft and the blow angle, the launch angle prediction data being data capable of predicting a launch angle based on the dynamic loft and the blow angle, and the backspin prediction data being data capable of predicting a backspin based on the dynamic loft and the blow angle, wherein the hit ball result database is obtained by actual measurement and/or a simulation;

measuring a subject's head speed, dynamic loft, and blow angle using a reference club;

determining, by a processor, a suitable dynamic loft based on only the measured head speed, the measured dynamic loft, and the measured blow angle, the suitable dynamic loft being defined as a dynamic loft achieving a predetermined hit ball result, wherein the hit ball result database is used for determining the suitable dynamic loft, the hit ball result database includes correlation data between the dynamic loft and the blow angle which are created for each head speed, and the hit ball results in the dynamic lofts in the measured blow angle are compared using the hit ball result database;

determining a dynamic loft difference from the suitable dynamic loft and the measured dynamic loft; and

determining a recommended loft angle based on a loft angle of the reference club and the dynamic loft difference,

wherein the hit ball result includes a flight distance.

Note: Post Appeal, Applicant amended the claims to add structural limitations and specific method limitations directed towards an improvement to golf fitting technology, which led to a subsequent allowance by the Examiner. In the Examiner's statement of reasons for allowance, the Examiner found that "Applicant has added structural limitations to take an abstract idea [a method of fitting golf clubs] and further integrating it into a practical application." See, Notice of Allowance dated August 4, 2020 for Application No. 13/871,055, pg. 2.

1) Claims directed towards a process that can be performed in the human mind will likely not be found patent eligible by PTAB (as well as Federal Circuit) unless Applicant adds specific elements directed to the improvement in computer technology, or the particular technology field or process. See, MPEP 2106.05(a) for USPTO Guidance on "Improvements to the Functioning of a Computer or To Any Other Technology or Technical Field".

2) Claims focused on "determining" or other data-analysis steps should emphasize and claim specific elements that support the inability to perform those steps manually or in the human mind; such specific elements should be supported in the Specification to emphasize the unique advantages of performing the steps through software for the particular technology field or technological process (i.e., golf club fitting technology),

3) Applicants should emphasize and highlight any technical innovations in the invention, both in the specification and the claims (i.e., prepare Specification and claims to support technical solution to a technical problem).

4) The "directed to" and "inventive concept" prongs of the Guidance can be overlapping in analysis, even if considered separately by the Examiner or the PTAB.

<https://www.uspto.gov/sites/default/files/documents/Ex%20Parte%20Kimizuka.pdf>

3711, Stanczak

[1] Kimizuka, 2018-001081 at 2-3 (PTAB May 15, 2019).

[2] Id. at 8.

[3] Id at 8-10.

[4] Id at 10.

[5] Id. at 11.

[6] Id.

[7] Id at 12-15.

[8] Id.

[9] Id.

[10] Id.

[11] Id at 15.

[12] Id at 16-19.

[13] Id at 20-21.

Tierney, Repko (Author), Cygan

Overview:

Discussion:

Representative claim:



Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

### **Ex Parte Lundgren**

USPTO Request for rehearing from Applicant Appeal – Decided April 20, 2004

US Pat. App. No. 08/093516

The USPTO appealed a reversal of an examiner's Final Office Action rejection of the claims as not directed to the technological arts.

PTAB Holding: The PTAB reversed the Examiner's 101 rejection solely based on the use of an improper test for eligibility. A dissent would have found the claims ineligible "because the process as claimed is not tied to any known science or technology." A 70+ page concurrence also believes the claims are not eligible, reviewing relevant cases as of 2004.

Technology: The appealed claims are directed to "determining how to compensate a manager"

This precedential decision indicates that there is no technological arts test and reversed the examiner solely on the ground that the incorrect test was used.[1] If you want a nice summary of the 101 law prior to 2004, there is a long concurrence.[2] Since this is pre-Alice, there may not be much help in this case other than the knowledge that there is no technological arts test. There is some reference to the useful concrete and tangible test being indicative of eligibility, for whatever that is worth. Note also that it appears the panel was stacked to arrive at the desired opinion. I have now lost track of all the different eligibility tests used since I have been practicing.

1. A method of compensating a manager who exercises administrative control over operations of a privately owned primary firm for the purpose of reducing the degree to which prices exceed marginal costs in an industry, reducing incentives for industry collusion between the primary firm and a set of comparison firms in said industry, or reducing incentives for coordinated special interest industry lobbying, said set of comparison firms including at least one firm, said primary firm having the manager who exercises administrative control over said primary firm's operations

during a sampling period, wherein privately owned means not wholly government owned, the method comprising the steps of:

a) choosing an absolute performance standard from a set of absolute performance standards;

b) measuring an absolute performance of said primary firm with respect to said chosen absolute performance standard for said sampling period;

c) measuring an absolute performance of each firm of said set of comparison firms with respect to said chosen absolute performance standard for said sampling period, said measurement of performance for each firm of said set of comparison firms forming a set of comparison firm absolute performance measures;

d) determining a performance comparison base based on said set of comparison firm absolute performance measures by calculating a weighted average of said set of comparison firm absolute performance measures;

e) comparing said measurement of absolute performance of said primary firm with said performance comparison base;

f) determining a relative performance measure for said primary firm based on said comparison of said primary firm measurement of absolute performance and said performance comparison base;

g) determining the managerial compensation amount derived from said relative performance measure according to a monotonic managerial compensation amount transformation; and

h) transferring compensation to said manager, said transferred compensation having a value related to said managerial compensation amount.

None

<https://www.uspto.gov/sites/default/files/ip/boards/bpai/decisions/prec/2003-2088.pdf>

3623

[1] Lundgren, 2003-2088 at 9 (PTAB April 20, 2004).

[2] Id. at 10

FLEMING, Chief Administrative Patent Judge, HARKCOM, Vice Chief Administrative Patent Judge, and HAIRSTON, JERRY SMITH, and BARRETT.

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

### **Ex Parte Martin (Proceeding #2018000850)**

Applicant appealed from a rejection of US Patent Application No. 12/132,227 claims 6-10 and 15-19 based on 101. The Board reversed the Examiner because the claims are not directed to an abstract idea and entered new grounds.

Technology: The claims are directed to "method and apparatus embodiments that use communications between document processing devices to automatically provide results of lab tests in a format that is the most appropriate for the office that prescribed the lab tests." [1]

The Board found that the claims were not directed to an abstract idea because the claims include, for example, "scanning a document . . . using a second document processing device," "identifying, using said second document processing device, said lab test . . . based only on said machine readable code" and various other actions using the second document processing device. The Board also mentioned that the specification discloses using a second processing device that performs some automated processing of a scanned image to identify the lab test to be performed on a patient. The Board never mentions, however, that the technologies used were anything other than generic.

6. A method comprising:

scanning a document printed by a first document processing device using a second document processing device separate from said first document processing device, said document comprising machine readable code, said machine readable code comprising information of a patient, information of at least one lab test to be performed, and delivery method information;

identifying, using said second document processing device, said lab test to be performed on said patient based only on said machine readable code, and by reading said lab test to be performed from said machine readable code;

delivering to a lab technician, using said second document processing device, an identification of said patient and an identification of said lab test to be performed;

after said lab test has been performed on said patient using lab testing equipment operatively connected to said second document processing device, formatting lab test results according to a format required by said first document processing device to create formatted lab test results, using said second document processing device, said formatting being performed based only on said delivery method information from said machine readable code, and by reading said delivery method information from said machine readable code; and

delivering said formatted lab test results from said second document processing device to said first document processing device based only on said delivery method information.

This case seems like it could have fit into the abstract ideas found in the *Electrical Pwr Grp* line of Fed Cir cases. This case may serve as an example where the PTAB would find a claim patent eligible that the Federal Circuit would not.

<https://e-foia.uspto.gov/Foia/RetrievePdf?system=BPAI&flNm=fd2018000850-12-09-2019-0>

3686, Linh Giang Le

[1] Ex Parte Martin, No. APPEAL 2018-000850 (P.T.A.B. Dec. 9, 2019)

Ren (author), Hanlon, Wilson

Overview:

Discussion:

Representative claim:



Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

### **Ex Parte Milne (Proceeding #2018001757)**

Applicant appealed from a non-final rejection of US Patent Application No. 15/066,792 claims 1-7 and 17-20, including a 101 rejection of claims 17-20. The Board affirmed the 101 rejection of claims 17-20 and entered a new 101 rejection for claims 1-7.

Technology: Sharing video content among customers in a video network. [1]

The Board summarized the claim limitations other than the generic technology as steps taken by two or more persons sharing content: (1) make a request for content; (ii) search for the content; (iii) enable access to the content; (iv) provide a message regarding agreement to share content; (iv) provide a message regarding agreement to share content; (v) select to receive the content; or (vi) select to not receive the content.

Step 2A, prong 1: The Board held that sharing content among two or more persons fits into the abstract idea category of "managing personal behavior or relationships or interactions between people."

Step 2A, prong 2: The Board found that the abstract idea is carried out using generic technology, and therefore does not integrate the judicial exception into a practical application. Also, the claimed subject matter did not improve the technology and was not limited to a particular machine. The Board held that the claim does not transform matter, at best it transforms information. Additionally, the Board addressed preemption, relying on *Ariosa* by stating "the absence of complete preemption does not demonstrate patent eligibility."

Step 2B: The Board found that other than generic technology, there were only improvements to the abstract idea itself.

17. A method comprising:

receiving at a first digital video recorder (DVR) a request for content;

accessing a multiple systems operator (MSO) community network to search for the content;

responsive to locating the content on a second DVR in the MSO community network remote from the first DVR, enabling access to the content by the first DVR;

presenting a message to inform that by accessing content on the MSO community network, a user agrees to share content on first DVR with other members of the MSO community network;

streaming the content from the second DVR to the first DVR responsive to selection of a first selector presented to a user of the first DVR adjacent the message; and

not streaming the content from the second DVR to the first DVR responsive to selection of a second selector presented to a user of the first DVR.

This case demonstrates the importance of showing an improvement to technology, particularly where human interactions are involved. Also, transformation of information will not be enough, which used to be a question practitioners had in the 1990s based on *Arrhythmia Research* (Fed. Cir. 1992).

<https://e-foia.uspto.gov/Foia/RetrievePdf?system=BP&fileNm=fd2018001757-12-09-2019-0>

2426, An Son Phi Huynh

[1] Ex Parte Milne, No. APPEAL 2018-001757 (P.T.A.B. Dec. 9, 2019)

Beamer (author), Fram, and Shaw

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Ex Parte Olson (Proceeding #2017006489)**

Applicant Appeal – March 25, 2019

Applicant appealed Non-Final Office Action rejection of claims 7-13, 40, and 41 of Application No. 11/715,923 directed to a method for a locally deformable registration of a catheter navigation system under 35 U.S.C. 101 as directed to patent-ineligible subject matter.

PTAB Holding: The PTAB reversed the Examiner's 101 rejection. The PTAB found that while the claims recite mathematic concepts and algorithms to register the catheter navigation system to a three-dimensional image, they also recite additional elements that apply the mathematical algorithms to improve the registration of the catheter navigation system and reduce errors found in the prior art and apply those mathematical concepts with a particular machine. The PTAB concluded each of these demonstrate that the algorithms were integrated in a practical application under Step 2A, Prong 2 of the USPTO 2019 Subject Matter Eligibility Guidance.

Technology: The appealed claims are directed to a method of registering a catheter navigation system to a three dimensional image including obtaining a three-dimensional image of the heart including position information on the heart surface, placing a tool onto a surface location, measuring the tool position information to a different coordinate frame, and associating the position information of the tool onto the three dimensional image using mathematical mapping functions and error functions. [1]

The PTAB found that under the first step in the Guidance, the claims did recite a mapping function that transforms coordinate points using “the mathematical relationships between coordinate frames X and Y, the mathematical formula for the error function  $f(X_i) - Y_i = 0$ , and the mathematical calculation using a thin plate splines algorithm to generate the mapping function by summing a fixed number of weighted basis functions.” [2] Therefore, the PTAB concluded that Appellants claimed the “use of mathematical equations to register a catheter navigation system to a three-dimensional image,” which is a “judicial exception of a mathematical concept.” [3]

The PTAB next found that there are “additional elements” that integrate the claimed judicial exception of a mathematical concept into a practical application under Step 2A, Prong 2. [4] In particular, the claims recite specific steps of placing the tool onto the surface of the heart and associating the position information with the three-dimensional image, which apply the algorithms “recited in the claims in a meaningful way, such that it is more than a drafting effort designed to monopolize the mathematical concepts exception.” [5] The claims use the algorithms to “improve registration of a catheter navigation system” and “reduce errors in the localization field” found in the prior art. [6] The PTAB analogized this to claims upheld in Diehr and Thales which found eligible applications of mathematical concepts to improve particular

technology. [7]

The PTAB finally also applied the mathematical concepts with a “particular machine” similar to the GPS receiver in SiRF, and that the catheter navigation system is “integral to the claims.” [8] This further supported the PTAB’s conclusion that the claims were an eligible practical application under Step 2A, Prong 2. The PTAB did not address the “inventive concept” under step 2B of the Guidance.

7. A method of registering a catheter navigation system to a three-dimensional image, comprising:

- a) obtaining a three-dimensional image of at least a portion of a heart, the three-dimensional image including position information for a plurality of location points on a surface of the heart measured relative to a coordinate frame Y;
- b) placing a tool on a surface location X of the heart;
- c) measuring position information for the surface location X relative to a coordinate frame X;
- d) identifying a corresponding location  $Y_i$  on the three-dimensional image;
- e) associating the position information for the surface location X as measured by the catheter navigation system relative to coordinate frame X with position information for the corresponding location  $Y_i$  on the three-dimensional image relative to coordinate frame Y as a fiducial pair  $(X_u, Y_i)$ ; and
- f) using at least two fiducial pairs  $(X_i, Y_i)$  to generate a mapping function  $f$  that transforms points within coordinate frame X to coordinate frame Y such that, for each fiducial pair  $(X, Y_i)$ , an error function  $f(X_i) - Y_i = 0$ , wherein the step of using at least two fiducial pairs to generate a mapping function comprises:
  - using a thin plate splines algorithm to generate the mapping function,
  - wherein the thin plate splines algorithm comprises summing a fixed number of weighted basis functions,
  - wherein the fixed number of weighted basis functions is the same as a number of fiducial pairs that were associated, and
  - wherein the mapping function compensates for inhomogeneities in the catheter navigation system such that, for each fiducial pair  $(X, Y_i)$ , the error function  $f(X_i) - Y_i = 0$ .



1) Claims that incorporate mathematical concepts should recite the surrounding technology and implementation details of the algorithm to ensure it is viewed as a “practical application” of those concepts.

2) Specifications should likewise highlight the benefits to the technology and specific uses of any mathematical concepts within the technology.

3) Proper incorporation of technology into claims can render the claims a “practical application” and avoid getting into a debate over whether that technology is “well-understood” as part of the inventive concept step.

<https://www.uspto.gov/sites/default/files/documents/Ex%20Parte%20Olson.pdf>

3793, Nguyen

[1] Olson, 2017-006489 at 2-3 (PTAB March 25, 2019).

[2] Id. at 10.

[3] Id.

[4] Id at 11.

[5] Id.

[6] Id at 11-12.

[7] Id at 12.

[8] Id at 12-13.

Fredman, Paulraj (Author), Worth

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**PTAB - Ex Parte Thomas J. Rogers (Proceeding # 2018008284)**

US Patent App. No. 13/920736, Filed June 18, 2013

Appealed 101 and 103 rejections. The 101 rejection was reversed. The 103 rejection was reversed, but new grounds for a 103 rejection were set forth.

The claims are directed to storing data more efficiently by having multiple file entries in a file allocation table index the same clusters on a storage medium.

The examiner found the following:

Alice Step 1: the claims are directed to the “general concept of collecting data, normalizing the data, and releasing the data” and to an abstract idea because they recite “steps [which] describe the general concept of collecting data, normalizing the data, and releasing the data which correspond to concept identified as abstract ideas by the courts, such as the Federal Circuit decision in the case [Electric Power Group, LLC v. Alstom S.A., 830 F.3d 1350 (Fed. Cir. 2016)].” [1]

Alice Step 2: “the additional elements when considered both individually and as an ordered combination do not amount to significantly more than the abstract idea” because the “limitations relate[] to generic computer components and amount to mere instruction to implement the abstract idea on a computer.” [1]

The Appellant argued says that the claims are not directed to an abstract idea but rather “technical improvements in a memory of a storage server.” [1]

The PTAB first determined whether any judicial exception was recited. They determined that the claims recite the following limitations, none of which fall within mathematical concepts, organizing human activity, or mental process.

- (1) “a storage server comprising a memory,”
  - (2) “a control circuit operable with the memory,”
  - (3) “the storage server in communication across a network with one or more client devices,”
  - (4) “the control circuit to”
  - (5) “create a file allocation table to organize clusters of a computer readable medium,”
  - (6) “the file allocation table comprising a plurality of distinguishable file entries,”
  - (7) “each of the distinguishable file entries indexing clusters of the computer readable medium,”
- and
- (8) “at least two of the plurality of distinguishable file entries indexing selfsame clusters of the computer readable medium.” [1]

Accordingly, the PTAB reversed the examiner's rejection under 101.

1. A system, comprising:

a storage server comprising a memory and a control circuit operable with the memory, the storage server in communication across a network with one or more client devices, the control circuit to:

create a file allocation table to organize clusters of a computer readable medium;

the file allocation table comprising a plurality of distinguishable file entries,  
each of the distinguishable file entries indexing clusters of the computer readable medium;

at least two of the plurality of distinguishable file entries indexing selfsame clusters of the computer readable medium.

The "directed to" arguments from the examiner and appellant were quite different where the appellant provide more detailed arguments routed in the physical structure and technical improvements to which the claims were directed. Consider integrating the physical structure and technical improvements into arguments.

<https://e-foia.uspto.gov/Foia/RetrievePdf?system=BPAI&flNm=fd2018008284-08-23-2019-0>

2161, Monica M Pyo

[1] Ex Parte Rogers, 2018-008284

Courtenay III, Hume, Bennett

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Ex Parte Sakahashi (Proceeding #2018006176)**

Applicant Appeal - April 23, 2020

Applicant appealed from a § 101 rejection of claims 1-12, 14 and 16 of US Patent App. No. 15/058,106 and a double patenting rejection of claims 1-9, 11-12, 14 and 16 of the same Application. The Board reversed the Examiner's § 101 rejection of the claims finding that "claim 1 recites a specific improvement in a practical application" such that "the claimed system permits the combination of a 2D barcode with an image without impacting the utility of the 2D barcode." The Board affirmed the Examiner's non-statutory double patenting rejection.

Technology: The claims are directed to "system for the production, creation, generation, management, and utilization of two-dimensional ("2D") barcodes featuring embedded images". [1]

Under Step 2A, prong 1 of the *Alice* test as augmented by the USPTO 2019 Revised Patent Subject Matter Eligibility Guidance (the "USPTO 2019 SME Guidance"), the Board found that the claims are directed to an abstract idea because the claims recite the following limitations that "can be thought of as mathematical manipulation of data (i.e., mathematical concepts)":

"(1) obtaining character string information to be encoded for a 2D code and an image to be encoded in a 2D code;

(2) reducing the obtained character string information;

(3) generating the 2D code having cells by encoding the reduced character string information; and

(4) processing the image to obtain the image with pixels of a same size as each cell of the 2D code." [2]

However, under Step 2A, prong 2, the Board found that claim 1 includes additional limitations that integrates the abstract mathematical concepts of claim 1 into a practical application. [3] In particular, finding the analysis of claim 1 in this case to analysis of in the Federal Circuits opinions in *McRO* and *Diehr*, the Board stated that claim 1 includes the following additional elements:

"(1) a processor that produces the 2D code with an embedded image; and

(2) a step of embedding the image of a predetermined size and aligning it in a predetermined location on the 2D code so that the 2D code can be decoded properly." [4]

According to the Board, these additional claim elements represent a technological improvement such that the "claimed system permits the combination of a 2D barcode with an image without impacting the utility of the 2D barcode", resulting in a "practical object" that "can be used in real world applications." [5]

Since the Appellant did not argue the non-statutory double patenting rejection of the claims, the Board affirmed this rejection of the claims.

1. A system for producing a 2D (2-Dimensional) code with an



embedded image for an automated machine generated process, comprising a processor that produces the 2D code with an embedded image by:

i) obtaining character string information to be encoded for a 2D code and an image to be embedded in the 2D code;

ii) reducing the obtained character string information;

iii) generating the 2D code having cells by encoding the reduced character string information;

iv) processing the image to obtain the image with pixels of a same size as each cell of the 2D code; and

v) embedding the image of a predetermined size and optionally aligning at a predetermined location on the 2D code, wherein the image is of a size and alignment that allows for the code to be decoded properly; wherein the 2D Code is a QR Code. [5]

Patent practitioners should anticipate that any claimed invention based on a improved algorithm or formula may be viewed by an Examiner, PTAB or court as a "mathematical manipulation of data" that falls within a category of abstract ideas. This PTAB decision provides further guidance on providing "specific features" in your patent claims that transform such claims from an ineligible abstract idea directed to mathematical concepts to an eligible "practical application" under Alice step 2A prong 2 . Patent practitioners should also include support in their Specification for each of their "specific features" that explains how such features (alone or in combination) reflect an improvement to the applicable technology and an improvement over other conventional systems/methods.

<https://developer.uspto.gov/ptab-web/#/search/documents?proceedingNumber=2018006176>

2876, Suez Y. Ellis

[1] Ex parte Sakahashi, 2018-006176 at 2 (PTAB April 23, 2020).

[2] Id. at 6.

[3] Id. at 7-8

[4] Id.

[5] Id. at 2-3.

Wilson (author), Range, Ren

Overview:

Discussion:

Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

## Ex Parte Savescu (Proceeding #2018003174)

Applicant Appeal – April 1, 2019

Applicant appealed Final Office Action rejection of claims 1-14 and 20-25 of Application No. 12/468,616 directed to a creation of a life cycle workflow for a project under 35 U.S.C. 101 as directed to patent-ineligible subject matter.

**PTAB Holding:** The PTAB upheld the Examiner's 101 rejection. The PTAB found that the claims recited steps that correspond to how people perform project tasks and the claims recite an abstract idea that falls within the Guidance's subject-matter grouping of methods of organizing human activity, and that abstract idea was not integrated into a practical application. The PTAB also found that the claims lacked an inventive concept, as supported by specification statements regarding usage of existing technology for well-known purposes. The PTAB finally found that separate claim 20 was similarly abstract, even though narrowed, as the narrowing did not integrate the abstract idea into a practical application.

**Technology:** The claims are directed to a method and systems for creating a life cycle workflow for a project. The claims recite creating "workflow stages" on a server corresponding to a specific sequence of workflow activities, creating "workflow phases" on the server corresponding to the stages, creating project detail pages on web pages, and associating the creating workflow stages with the created phases and web pages. [1]

The PTAB first found that the steps of the claimed method, including the creation of "workflow stages" and "workflow phases" recite "steps that a person would perform when working on a project" and thus "recites a concept related to managing relationships or transactions between people." [2] The PTAB relied on specification statements regarding the meaning and creation of those terms in making this determination. [3] From this, the PTAB concluded that the claims recited an abstract idea that falls within the "organizing human activity" grouping in the Guidance. The PTAB disagreed with Applicant that the "workflow-stage identifiers" used to track the stages made these steps any less abstract, given that the identifiers are "analogous to the nontechnical human activity of labeling or cross-referencing." [4]

The PTAB next looked to the "additional elements" of the claims and concluded they did not integrate the abstract idea into a practical application. In particular, the PTAB found that the "server" used to store the elements and the additional step of creating a web page with project details corresponding to each stage "merely add generic computer activity to deliver web pages and store data, which is insufficient." [5] The PTAB stated that the claim does not recite technical improvements as to how the web pages are created. [6]

The PTAB disagreed that the "ordered combination" of the steps of the claims and the improvement of creating a project workflow rendered them eligible, given that a person could similarly create such a workflow and the server/webpage "merely links the abstract idea to a computer environment." [7] The PTAB also disagreed that the server's involvement created a

computer environment. [7] The PTAB also disagreed that the server's involvement created a practical application, as "beyond storing the data and creating the web pages, the recited server contributes only nominally and insignificantly to the recited method, which indicates an absence of integration." [8] The PTAB also distinguished from Federal Circuit cases which provided a "technological solution to a technological problem" as the computers involved are used as a tool to automate the process. [9] The PTAB found no evidence of improved efficiency or reduced operating costs for creating virtual workflows, and thus no evidence of improving computer function. [10]

From this, the PTAB likewise concluded there was no "inventive concept" as the "server" and "web page" steps were "well-understood, routine, and conventional" features, relying on Federal Circuit precedent in Interval Licensing and the recitations in the specification regarding the server being generic. [11]

1. A method for creating a life cycle workflow for a project comprising:

creating one or more identifiable workflow stages for the project on a server computer, each of the one or more workflow stages corresponding to a specific sequence of workflow activities, wherein the creating further comprises using a workflow stage identifier as a property of the specific sequence of workflow activities for each of the one or more workflow stages;

creating one or more identifiable workflow phases for the project on the server computer, each workflow phase includes one or more corresponding workflow stages;

creating one or more project detail pages on the server computer, each project detail page being a web page that is made visible during a corresponding workflow stage;

when a workflow stage is created, associating a workflow phase with the workflow stage, the workflow phase being selected from the one or more workflow phases on the server computer; and

when the workflow stage is created, associating one or more project detail pages for the workflow stage.

1) The "practical application" step may again overlap with the "inventive concept" step.

2) Specifications and claims should carefully integrate technology into the invention and the claims in as specific way as possible to avoid arguments that the technology is too generic or too minimal to become a practical application.

3) Specifications should make clear technological benefits of the invention, as opposed to just economic efficiencies, to provide counter-arguments and support for being a practical application and technological in nature.

<https://www.uspto.gov/sites/default/files/documents/Ex%20Parte%20Savescu.pdf>

3623, Cruz

[1] Savescu, 2018-003174 at 2-3 (PTAB April 1, 2019).

[2] Id. at 7-8.

[3] Id.

[4] Id at 9.

[5] Id at 9-10.

[6] Id at 10.

[7] Id at 10.

[8] Id at 11.

[9] Id.

[10] Id at 12.

[11] Id at 12-14.

Dixon, Courtenay III, Repko (Author)

Overview:

Discussion:



Representative claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Ex Parte Smith (Proceeding #2018000064)**

Applicant Appeal – February 1, 2019

Applicant appealed Final Office Action rejection of claims 1-6 of Application No. 13/715,476 directed to a method of trading derivatives in a hybrid exchange system under 35 U.S.C. 101 as directed to patent-ineligible subject matter.

PTAB Holding: The PTAB reversed the Examiner's 101 rejection. The PTAB found that the claims contained a fundamental economic practice of trading derivatives. The PTAB also found that, while the computer-related limitations were insufficient, the limitations that addressed problems arising from a hybrid electronic/paper derivatives system did integrate the abstract idea into a practical application.

Technology: The claims are directed to a method for trading derivatives in a hybrid exchange system, including collecting orders via a network, identifying quotes matching the orders, and using a timer to delay execution of the order, and then receiving additional quotes matching the order and dividing the order between the different participants upon expiration of the timer. [1]

The PTAB first found under the Guidance that the claims contain various limitations regarding collecting and executing orders for derivatives, which "recite the fundamental economic practice of derivative trading because the limitations all recite the operations that would ordinarily take place in a derivatives trading environment." [2] The PTAB found that the limitations of collecting orders, identifying quotes, and fulfilling trades are basic concepts of derivatives markets and akin to the "intermediated settlement" concept found abstract in *Bilski*. [3]

The PTAB then turned to the "practical application" analysis under the Guidance and first found that the "computer-related limitations" including a "hybrid exchange system," "communications network and order-routing system," an "electronic trade engine," an "electronic book database," and an "electronic reporting statement" were insufficient. While the limitations were not "wholly generic in nature and are specific to electronic derivatives trading, they are described at a high level in the Specification without any meaningful detail about their structure and integration." [4]

However, with respect to the remaining limitations, the PTAB found that "additional limitations which focus on addressing problems arising in the context of a hybrid derivatives trading system" did "integrate the recited judicial exception of derivative trading into a practical application." [5] In particular, these limitations including delaying automatic execution of orders using a timer.

in particular, these limitations including delaying automatic execution of orders using a timer, receiving additional matching quotes, and allocating orders between the two quotes. The PTAB found these limitations “limit the conventional practice of automatically executing matching market orders by reciting a specific timing mechanism” that then “allows for other matching orders to be received.” [6]

The PTAB also relied on the specifications description of the purpose and advantage of such a system in encouraging new quotes and removal of communication advantage among market participants as providing a technological improvement over prior systems. [7] The majority disputed a dissent’s claim that this improvement was non-technological by emphasizing that the timer is implemented in the specific hybrid trading environment and solves a problem arising in those markets. [8] Based on the claim being a practical application of the idea, the PTAB reversed the rejection.

The dissent to the decision disagreed that the timing mechanism rendered the claims a practical application under Prong Two, finding that delay between matching and placing market orders is present in any market, electronic ordering is already well-known, and the timer does not present a technological solution to a technical problem. [9]

1. A method of trading derivatives in a hybrid exchange system comprising:

collecting orders, via a communication network and order routing system, for derivatives and placing them in an electronic book database;

identifying at an electronic trade engine a new quote from a first in-crowd market participant,

wherein one of a bid or an offer price in the new quote matches a respective price in an order in the electronic book database from a public customer;

removing at least a portion of the order in the electronic book database, delaying automatic execution of the new quote and the order, and starting a timer;

reporting, via the communication network and an electronic reporting system, a market quote indicative of execution of the at least a portion of the order while delaying automatic execution;

receiving at the electronic trade engine a second quote from a second in-crowd market participant after receiving the new quote from the first in-crowd market participant and before an expiration of the timer, wherein the second quote matches the respective price of the public customer order in the electronic book database; and

allocating the order between the first and second in-crowd market participants at the electronic trade engine, wherein the order is not executed until expiration of the timer.

1) The “practical application” step can obviate the need to deal with any “well-known technology” concerns under Step 2 of Alice.

2) Include multiple “specific features” in your claims that focus on the “problems” of the system or environment that your claim is directed, which can help support a “practical application” finding.

3) Recitations of advantage over the prior art, including tying those advantages to technology and to the claims, are key in finding a practical application. In *Ex parte Smith*, the PTAB found certain features routine but other additional specific features were sufficient to support a “practical application” finding.

<https://www.uspto.gov/sites/default/files/documents/fd2018-000064.pdf>

3696, Nguyen

[1] *Smith*, 2018-000064 at 2 (PTAB February 1, 2019).

[2] *Id.* at 7-8.

[3] *Id.*

[4] *Id.* at 8.

[5] *Id.* at 8-9.

[6] *Id.*

[7] *Id.* at 9.

[8] *Id.* at 9-10.

[9] *Id.* at 15.

Bui (Dissent), Barry, Bennet (Author)

Overview:

Discussion:



Representative  
claim:

Practice tips and  
takeaways:

Case link:

Art Unit, Examiner:

Citations:

Panelists:

**Ex Parte Tetyana Vdovina et al. (Proceeding # 2018008880)**

US Patent App. No. 14/922276, Filed October 26, 2015

Appealed 101 rejection over claims 1 and 3-16. The 101 rejection over claims 1 and 3-14 were affirmed, while the 101 rejection over claims 15 and 16 was reversed.

The claims are directed to seismic data containing multiple reflections and generating a multiple free data set for use with conventional seismic processing. [1]

The Appellant presented arguments to claims 1, 11, 15, and 16.

Regarding claim 1, the examiner stated that the steps of the claim constitute mathematical concepts. The PTAB agreed, with a detailed analysis of each claimed step, that each step is a mathematical concept or mental process. The PTAB analysis relies heavily on the description of each step in the specification and the use of mathematical formulas to describe how to achieve each step. At Step 2A, the Examiner and PTAB agree that the steps detailed in Step 1 of the analysis are performed with a computer and generic processor. At Step 2B, the Examiner and PTAB agree that no additional limitations are in claim 1 that would go beyond the mathematical concepts and mental process. [1]

Claim 11 is dependent from claim 1 and adds a limitation directed to the details of the characteristics of the data resulting from the data analysis. The Examiner and PTAB agree that this includes no further additional elements that are significantly more than the previously detailed mathematical concepts and mental process. [1]

Claims 15 depends from claim 1. Claim 15 adds the active step of "forming and displaying, with a computer, a seismic image of the subsurface region, wherein the seismic image identifies a location of structure in earth's subsurface that returned seismic waves to receivers that recorded the input seismic data." [1] Claim 16 depends from claim 15 and recites "causing a well to be drilled based on the seismic image." [1] The Examiner believes that these limitations are insignificant extra-solution activity, such as outputting and applying the result of the claimed algorithm, to perform an activity which is well-known in the art, recited at a high level of generality and/or in a well-understood, routine, and conventional way. However, the PTAB states that the elements of claims 15 and 16 impose a meaningful limit on the mathematical concepts and mental process (abstract ideas) of claim 1 in a manner that integrates the mathematical concepts and mental process into a particular practical application. Therefore, the 101 rejection over claims 15 and 16 were reversed. [1]