

Strafford

Presenting a live 90-minute webinar with interactive Q&A

Patent Eligibility Post-Alice: Navigating the Nuances, Guidance From the Federal Circuit, the PTAB, and the USPTO

TUESDAY, SEPTEMBER 8, 2020

1pm Eastern | 12pm Central | 11am Mountain | 10am Pacific

Today's faculty features:

Michael L. Kiklis, Member, **Bass Berry & Sims**, Washington, D.C.

Stephen G. Kunin, Partner, **Maier & Maier**, Alexandria, VA

The audio portion of the conference may be accessed via the telephone or by using your computer's speakers. Please refer to the instructions emailed to registrants for additional information. If you have any questions, please contact **Customer Service at 1-800-926-7926 ext. 1.**

Tips for Optimal Quality

FOR LIVE EVENT ONLY

Sound Quality

If you are listening via your computer speakers, please note that the quality of your sound will vary depending on the speed and quality of your internet connection.

If the sound quality is not satisfactory, you may listen via the phone: dial **1-877-447-0294** and enter your **Conference ID and PIN** when prompted. Otherwise, please **send us a chat** or e-mail sound@straffordpub.com immediately so we can address the problem.

If you dialed in and have any difficulties during the call, press *0 for assistance.

Viewing Quality

To maximize your screen, press the 'Full Screen' symbol located on the bottom right of the slides. To exit full screen, press the Esc button.

Continuing Education Credits

FOR LIVE EVENT ONLY

In order for us to process your continuing education credit, you must confirm your participation in this webinar by completing and submitting the Attendance Affirmation/Evaluation after the webinar.

A link to the Attendance Affirmation/Evaluation will be in the thank you email that you will receive immediately following the program.

For additional information about continuing education, call us at 1-800-926-7926 ext. 2.

If you have not printed the conference materials for this program, please complete the following steps:

- Click on the link to the PDF of the slides for today's program, which is located to the right of the slides, just above the Q&A box.
- The PDF will open a separate tab/window. Print the slides by clicking on the printer icon.

Maier & Maier

BASS BERRY  SIMS PLC

Patent Eligibility Post-Alice: Navigating the Nuances, Guidance From the Federal Circuit, the PTAB, and the USPTO

Michael L. Kiklis
mkiklis@bassberry.com
202-827-2985

Stephen G. Kunin
sgk@maierandmaier.com
703-740-8322

Maier & Maier

BASS BERRY  SIMS PLC

AGENDA

1. **Brief overview**
2. **Fed. Cir. § 101 Software/Computer Cases**
 - a) **Federal Circuit cases finding patents eligible**
 - b) **The *Electric Power Group* line of cases**
 - c) **Recent Federal Circuit cases**
3. **Recent Fed. Cir. § 101 Life Sciences Cases**
4. **Recent Miscellaneous Fed. Cir. § 101 Cases**
5. **2019 USPTO Guidelines for Computer-Related Inventions**
6. **USPTO Guidelines in the Life Sciences**
7. ***Ex Parte* PTAB Appeals of § 101 Rejections**
8. **Conclusions**

Overview

PATENTABLE SUBJECT MATTER

- **Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title. 35 U.S.C. § 101.**
- **The term “process” means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material. 35 U.S.C. § 100(b).**
- **“Excluded from such patent protection are laws of nature, natural phenomena, and abstract ideas.” Diehr (S. Ct. 1981).**

JUDICIALLY CREATED EXCEPTIONS

- Does the claimed invention fit in one of the four statutory categories of § 101?
- If so, does the claim contain an abstract idea?
- If so, does it recite patent-eligible subject matter?
 - The mental-steps doctrine (*Gottschalk v. Benson*)
 - The point-of-novelty test (*Parker v. Flook*)
 - The machine-or-transformation test (*Bilski v. Kappos*)
 - The abstract idea test (*Bilski v. Kappos*)
 - The generic computer test (*Alice v. CLS*)

ELIGIBILITY HIGHLIGHTS

- **STEP 1: Does the claim improve functioning of the computer itself?** (*Enfish, Finjan*)
- **STEP 2: Are conventional elements arranged in a nonconventional way?** (*BASCOM*)
- **Does the claim recite a technical solution to a technical problem?** (*DDR*)
- **Is claim functional?** (*Elec. Power, Two-way Media*)
- **Is the claim preemptive?** (*Ariosa, Return mail, but see MCRO*)
- **Does the claim improve over the prior art?** (*MCRO, Finjan, but IV v. Symantec*)
- **Is the claim merely data gathering, analysis and display?** (*Elec. Pwr. Group, TDE Petroleum, Clarilogic, Univ. of Fla.*)
- **Specific implementation for specific solution?** (*Vanda Pharms, Data Engine, but see BSG Tech*)

ELIGIBILITY HIGHLIGHTS (cont'd)

- **Pre-trial motions – questions of fact! (*Berkheimer*)**
 - *Berkheimer* petition for certiorari denied
- **Business method patents do not fare well at the Fed. Cir.**
- **Step one: Lack of technical details in specification, and broad, functional, pre-emptive claim limitations shows claim “directed to” an abstract idea. *Chargepoint v. Semacconnect*.**
- **Patents have a presumption of validity in § 101 challenges (*Cellspin*)**

Supreme Court Cases

GOTTSCHALK V. BENSON (S. CT. 1972)

- The patent claimed “converting binary-coded decimal (BCD) numerals to pure binary numerals.”
 - “Here the ‘process’ claim is so abstract and sweeping as to cover both known and unknown uses of the BCD to pure binary conversion.”
- The practical effect of patenting the formula ... would be to patent an idea and “would wholly pre-empt the mathematical formula.”
- “Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.”

GOTTSCHALK V. BENSON (S. CT. 1972)(cont'd)

- ‘(w)hile a scientific truth, or the mathematical expression of it, is not patentable invention, a novel and useful structure created with the aid of knowledge of scientific truth may be.’ That statement followed the longstanding rule that ‘(a)n idea of itself is not patentable.’
- “If these programs are to be patentable...action by the Congress is needed.”

PARKER V. FLOOK (S. CT. 1978)

- “[The application] describes a method of updating alarm limits.”
- “[T]he method consists of three steps: an initial step which merely measures the present value of the process variable (e.g., the temperature); an intermediate step which uses an algorithm to calculate an updated alarm-limit value; and a final step in which the actual alarm limit is adjusted to the updated value. The only difference between the conventional methods of changing alarm limits and that described in respondent’s application rests in the second step—the mathematical algorithm or formula.”

PARKER V. FLOOK (S. CT. 1978)(cont'd)

- **Point-of-novelty test:**
 - “Respondent’s process is unpatentable under § 101, not because it contains a mathematical algorithm as one component, but because once that algorithm is assumed to be within the prior art, the application, considered as a whole, contains no patentable invention.”

DIAMOND V. DIEHR (S. CT. 1981)

- **“Process for molding raw, uncured synthetic rubber into cured precision products.”**
 - “We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula. We recognize, of course, that when a claim recites a mathematical formula (or scientific principle or phenomenon of nature), an inquiry must be made into whether the claim is seeking patent protection for that formula in the abstract.”
- **Consider claim as a whole, inappropriate to dissect:**
 - “[W]hen a claim containing a mathematical formula implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect (e.g., transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of § 101.”
- **Reject point-of-novelty test:**
 - “The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.”

BILSKI V. KAPPOS (S. CT. 2010)

- **The Machine-or-Transformation Test:**
 - “a claimed process is patent eligible if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.”
 - Not the sole test for determining “a patent eligible ‘process,’” but is “a useful and important clue, an investigative tool.”
- **Abstract Idea Analysis:**
 - “The concept of hedging . . . is an unpatentable abstract idea Allowing [Bilski] to patent risk hedging would pre-empt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea.”
 - “[L]imiting an abstract idea to one field of use or adding token post-solution components” does not make claims eligible.
- **“And nothing in today’s opinion should be read as endorsing interpretations of §101 that the [Fed. Cir.] has used in the past.”**

MAYO COLLABORATIVE SERVICES V. PROMETHEUS LABS, INC. (S. CT. 2012)

- Claims to calibrating drug dosage
- “[T]o transform an unpatentable law of nature into a patent-eligible application of such law, one must do more than simply state the law of nature while adding the words ‘apply it.’”
- Patents should not be upheld “that claim processes that too broadly preempt the use of the natural law”
- Dissecting the claim elements, the Court said:
 - “To put the matter more succinctly, the claims inform a relevant audience about certain laws of nature; any additional steps consist of well-understood, routine, conventional activity already engaged in by the scientific community”

MAYO COLLABORATIVE SERVICES V. PROMETHEUS LABS, INC. (cont'd)

- “Other cases offer further support for the view that simply appending conventional steps, specified at a high level of generality, to laws of nature, natural phenomena, and abstract ideas cannot make those laws, phenomena, and ideas patentable.”
- **Point-of-novelty test?**
 - “We recognize that, in evaluating the significance of additional steps, the § 101 patent-eligibility inquiry and, say, the §102 novelty inquiry might sometimes overlap. But that need not always be so.”
- **The M-O-T test does not supersede judicial exception for natural laws**
- **Section 101’s role:**
 - Court rejected Government’s argument that §§102, 103, and 112 can perform this “screening function” and “virtually any step beyond a ... law of nature itself should ... satisfy § 101”

ALICE V. CLS (S. CT. 2014)

- **Claims to computer-implemented process for mitigating settlement risk**
- **Preemption concern “undergirds our § 101 jurisprudence.”**
- **Courts “must distinguish between patents that claim the building blocks of human ingenuity and those that integrate the building blocks into something more.”**

ALICE V. CLS (cont'd)

■ Under the *Mayo* test:

- Step one: Court determined the claims were drawn to the “abstract idea” that is a “fundamental economic practice”
- Considered *Bilski*:
 - “Like the risk hedging in *Bilski*... intermediated settlement is a fundamental economic practice” and is “an abstract idea.”
 - “In any event, we need not labor to delimit the precise contours of the ‘abstract ideas’ category in this case. It is enough to recognize that there is no meaningful distinction between the concept of risk hedging in *Bilski* and the concept of intermediated settlement at issue here.”

ALICE V. CLS (cont'd)

- **Under the *Mayo* test (cont'd):**
 - **Step two:**
 - Courts to “consider the elements of each claim both individually and as an ordered combination to determine whether the additional elements “transform the . . . claim into a patent-eligible application”,
 - This is a “search for an inventive concept”, *i.e.*, the combined elements amount to “significantly more than a patent upon the ineligible concept itself” and were not “purely conventional.”
 - “[T]he relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea of intermediated settlement on a generic computer. They do not.”
 - “These cases demonstrate that the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.”

ALICE V. CLS (cont'd)

- **Under the *Mayo* test (cont'd):**
 - **Step two (cont'd):**
 - **Safe Harbors!** The claims did not
 - (1) **“improve the functioning of the computer itself”** or
 - (2) **“effect an improvement in any other technology or technical field.”**
 - **System and media claims**
 - **“Because petitioner’s system and media claims add nothing of substance to the underlying abstract idea, we hold that they too are patent ineligible under § 101.”**
 - **The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea.**

Federal Circuit § 101 Software/Computer Cases

Federal Circuit Cases Finding Patents Eligible

DDR HOLDINGS, LLC V. HOTELS.COM, L.P. (FED. CIR. DEC. 5, 2014)

- **Outcome:** claims valid under *Alice* step two.
- **Procedure:** district court denied motion for JMOL of invalidity under § 101
- **Step one:**
 - “[I]dentifying the precise nature of the abstract idea is not as straightforward as in *Alice* or some of our other recent abstract idea cases.”
 - Assumed claims recited an abstract idea
- **Step two:**
 - “[T]hese claims stand apart because they do not merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet. Instead, the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.”

ENFISH, LLC V. MICROSOFT CORP. (FED. CIR. MAY 12, 2016)

- **Outcome:** claims found eligible under *Alice* step one.
- **Procedure:** district court granted summary judgment, finding the claims patent eligible
- **Step one:**
 - “The district court concluded that the claims were directed to the abstract idea of ‘storing, organizing, and retrieving memory in a logical table’ or, more simply, ‘the concept of organizing information using tabular formats.’”
 - “[W]e find that the claims at issue in this appeal are not directed to an abstract idea within the meaning of *Alice*. Rather, they are directed to a specific improvement to the way computers operate, embodied in the self-referential table.”
 - “Here, the claims are not simply directed to any form of storing tabular data, but instead are specifically directed to a self-referential table for a computer database.”
 - “[T]he claims are directed to a specific implementation of a solution to a problem in the software arts.”

ENFISH, LLC V. MICROSOFT CORP.

(cont'd)

■ Step one of the *Alice* test:

- “We do not read *Alice* to broadly hold that all improvements in computer-related technology are inherently abstract and, therefore, must be considered at step two. Indeed, some improvements in computer-related technology when appropriately claimed are undoubtedly not abstract, such as a chip architecture, an LED display, and the like. Nor do we think that claims directed to software, as opposed to hardware, are inherently abstract and therefore only properly analyzed at the second step of the *Alice* analysis. Software can make non-abstract improvements to computer technology just as hardware improvements can, and sometimes the improvements can be accomplished through either route.”
- “[W]e find it relevant to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea, even at the first step of the *Alice* analysis.”
- “[T]he first step in the *Alice* inquiry in this case asks whether the focus of the claims is on the specific asserted improvement in computer capabilities (i.e., the self-referential table for a computer database) or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.”

BASCOM GLOBAL INTERNET SERVS. V. AT&T MOBILITY LLC (FED. CIR. JUNE 27, 2016)

- **Outcome:** claims eligible under *Alice* step two
- **Procedure:** district court dismissed under 12(b)(6)
- **Step one:**
 - “[T]he claims of the ’606 patent are directed to the abstract idea of filtering content. . . .”
- **Step two:**
 - “We agree with the district court that the limitations of the claims, taken individually, recite generic computer, network and Internet components, none of which is inventive by itself.”
 - “BASCOM has alleged that an inventive concept can be found in the ordered combination of claim limitations that transform the abstract idea of filtering content into a particular, practical application of that abstract idea. We find nothing on this record that refutes those allegations as a matter of law or justifies dismissal under Rule 12(b)(6).”

MCRO, INC. V. BANDAI NAMCO GAMES AMERICA (FED. CIR. SEPTEMBER 13, 2016)

- **Outcome:** claims valid under *Alice* step one
- **Procedure:** district court granted judgment on the pleadings, finding the claims ineligible under § 101.
- **Step one:**
 - “The claimed rules [speech to lip synchronization/facial expressions] here, however, are limited to rules with certain common characteristics, i.e., a genus. ... We therefore look to whether the claims in these patents focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.”

MCRO, INC. V. BANDAI NAMCO GAMES AMERICA (cont'd)

■ Step one, cont'd:

- “By incorporating the specific features of the rules as claim limitations, claim 1 is limited to a specific process for automatically animating characters using particular information and techniques and does not preempt approaches that use rules of a different structure or different techniques. When looked at as a whole, claim 1 is directed to a patentable, technological improvement over the existing, manual 3-D animation techniques. The claim uses the limited rules in a process specifically designed to achieve an improved technological result in conventional industry practice. Claim 1 . . . is not directed to an abstract idea.”

AMDOCS V. OPENET TELECOM (FED. CIR. NOVEMBER 1, 2016)

- **Outcome:** four patents eligible under *Alice* step two.
- **Procedure:** district court granted summary judgment that the claims were invalid under § 101.
- **Step one:**
 - “For argument’s sake we accept the district court’s view of the disqualifying abstract ideas”
- **Step two:**
 - “The dissent concedes that the written description discloses a network monitoring system ‘eligible for patenting....’ We agree. Unlike the dissent, however, we find the claims at issue, understood in light of that written description, to be eligible for patenting.”
 - “[W]e construed ‘enhance’ as being dependent upon the invention’s distributed architecture.”
 - “As explained in the patent, the distributed enhancement was a critical advancement over the prior art.”

THALES VISIONIX V. UNITED STATES (FED. CIR. March 8, 2017)

- **Outcome:** claims satisfied *Alice* step one.
- **Procedure:** CFC granted judgment on the pleadings, finding claims ineligible under § 101.
- **Step one:**
 - “[T]he '159 patent claims are nearly indistinguishable from those of *Diehr*.”
 - “[T]he claims are directed to systems and methods that use inertial sensors in a non-conventional manner to reduce errors in measuring the relative position and orientation of a moving object on a moving reference frame.”
 - “That a mathematical equation is required...does not doom the claims to abstraction.”

VISUAL MEMORY LLC V. NVIDIA CORP. (FED. CIR. August 15, 2017)

- **Outcome:** claims eligible under *Alice* step one.
- **Procedure:** district court dismissed under 12(b)(6)
- **Step one:**
 - “[T]he key question is whether the focus of the claims is on the specific asserted improvement in computer capabilities...or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.”
 - The claims “are directed to a technological improvement: an enhanced computer memory system” for “[c]onfiguring the memory system based on the type of processor connected to the memory system.”
 - “The claims...do not simply require a ‘programmable operational characteristic’” but require “a memory system with a main memory and a cache memory, where the memory system is configured by a computer to store a type of data in the cache memory based on the type of processor connected to the memory system.”

FINJAN, INC. V. BLUE COAT SYS. INC. (FED. CIR. January 10, 2018)

- **Outcome:** claims passed *Alice* step one.
- **Procedure:** district court granted JMOL
- **Step one:**
 - “In cases involving software innovations, this inquiry often turns on whether the claims focus on ‘the specific asserted improvement in computer capabilities ... or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.’”
 - “The question, then, is whether this behavior-based virus scan ... constitutes an improvement to computer functionality. We think it does.”
 - The Fed Cir stated that behavior-based virus scanning was an improvement over prior art code-based approaches and enabled “a computer security system to do things it could not do before.”

CORE WIRELESS LICENSING V. LG ELECTRONICS (FED. CIR. January 25, 2018)

- **Outcome:** claims passed step one of the *Alice* test
- **Procedure:** district court denied summary judgment
- **Step one:**
 - “[T]hese claims recite a specific improvement over prior systems, resulting in an improved user interface for electronic devices.”
 - “The specification confirms that these claims disclose an improved user interface for electronic devices, particularly those with small screen.”
 - Specific claimed improvements to functionality of computer: “an application summary that can be reached directly from the menu,” “the application summary window list a limited set of data, ‘each of the data ... selectable to launch the respective application...,’” and “the summary window ‘ is displayed while the one or more applications are in an unlaunched state.’”

BERKHEIMER V. HP INC. (FED. CIR. February 8, 2018)

- **Outcome:** the proceeding was remanded for further fact-finding regarding what was routine, conventional, or well-understood.
- **Procedure:** district court granted summary judgment, finding the claims invalid under § 101.
- **Step one:**
 - “We hold that claims 1-3 and 9 are directed to the abstract idea of parsing and comparing data....”
- **Step two:**
 - “[W]hether a claim recites patent eligible subject matter is a question of law which may contain underlying facts.”
 - “[W]hether a claim element or combination of elements is well-understood, routine and conventional ... is a question of fact. Any fact, such as this one, that is pertinent to the invalidity conclusion must be proven by clear and convincing evidence.”

BERKHEIMER V. HP INC. (cont'd)

■ Step two (cont'd):

- “The mere fact that something is disclosed in a piece of prior art, for example, does not mean it was well-understood, routine, and conventional.”
- The patent specification disclosed that the claims “recite a specific method of archiving” that “improve computer functionality.”
- “The improvements in the specification, to the extent they are captured in the claims, create a factual dispute regarding whether the invention describes well-understood, routine and conventional activities....”

AATRIX SOFTWARE, INC. V. GREEN SHADES SOFTWARE, INC.

(FED. CIR. February 14, 2018)

- **Outcome:** district court decision vacated, denial of Aatrix's motion to amend complaint was abuse of discretion
- **Procedure:** Rule 12(b)(6) dismissal for ineligibility
- **Step one/Step two:**
 - “[T]he district court erred to the extent it held that claim 1...is ineligible ... because it ... denied leave to amend without claim construction and in the face of factual allegations.”
 - “[P]atent eligibility can be determined at the Rule 12(b)(6) stage ... only when there are no factual allegations, taken as true, prevent resolving the eligibility question as a matter of law.”

AATRIX SOFTWARE, INC. V. GREEN SHADES SOFTWARE, INC. (cont'd)

- **Step one/Step two (cont'd):**
 - “The proposed second amended complaint contains allegations that,...at a minimum raise factual disputes underlying the § 101 analysis...sufficient to survive an Alice/Mayo analysis at the Rule 12(b)(6) stage.”
 - The proposed amended complaint alleged the invention “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,” that avoided “the need for hand typing in the values” and “the risk of transcription error,” while also improving the efficiency of the computer’s processing of tax forms.

DATA ENGINE TECH. LLC v. GOOGLE (FED. CIR. Oct. 9, 2018)

- **Outcome:** certain claims passed *Alice* test.
- **Procedure:** district court granted judgment on the pleadings.
- **Step one ('259 patent and '551 patent):**
 - The '259 patent's claim 12 method of navigating through three-dimensional electronic spreadsheets provided a “specific solution to then-existing technological problems in computers and prior art electronic spreadsheets” by providing a “highly intuitive, user-friendly interface with familiar notebook tabs for navigating” the spreadsheet environment.
 - Therefore, “the claim recites a specific structure (i.e., notebook tabs) within a particular spreadsheet display that performs a specific function (i.e., navigating within a three-dimensional spreadsheet).”
 - “[W]hen read as a whole, in light of the specification, claim 12 is directed to more than a generic or abstract idea as it claims a particular manner of navigating three-dimensional spreadsheets, implementing an improvement in electronic spreadsheet functionality.”

DATA ENGINE TECH. LLC v. GOOGLE (cont'd)

- **Step one ('259 patent and '551 patent) (cont'd):**
 - However, “DET concedes that, unlike claim 12 of the '259 patent, claim 1 of the '551 patent is 'directed at something a bit more general'... that “generically recites ‘associating each of the cell matrices with a user-settable page identifier’ and does not recite the specific implementation of a notebook tab interface” and “covers any means for identifying electronic spreadsheet pages.”
- **Step two ('551 patent):**
 - Claim 1 does not satisfy step two because it “merely recites partitioning cells to be presented as a spreadsheet, referencing in one cell of a page a formula referencing a second page, and saving the pages such that they appear as being stored as one file. These limitations merely recite the method of implementing the abstract idea itself....”

DATA ENGINE TECH. LLC v. GOOGLE

(cont'd)

■ Step one ('146 patent):

- “At their core, these claims recite tracking changes in a spreadsheet by: (1) creating a base version of a spreadsheet, (2) creating a new version of the spreadsheet, and (3) determining which cells of data have changed by comparing the new and base versions. The concept of manually tracking modifications across multiple sheets is an abstract idea.”
- “Regardless of the field of the technology, the claims at issue here are sufficiently similar to those in *Content Extraction* for us to conclude that the claims of the '146 patent are also abstract.”

■ Step two ('146 patent):

- The claims recite the generic steps of creating a base version of a spreadsheet, creating a new version of the spreadsheet, and determining changes made to the original version.

ANCORA TECH., INC. v. HTC AMERICA, INC. (FED. CIR. Nov. 16, 2018)

- **Outcome:** Claims satisfy *Alice* step one.
- **Procedure:** district court granted motion to dismiss under § 101.
- **Step one:**
 - **“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.”**

ANCORA TECH., INC. v. HTC AMERICA, INC. (cont'd)

■ Step one (cont'd):

- **“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. In this way, the claim addresses a technological problem with computers: vulnerability of license-authorization software to hacking”**, which it **“does so by relying on specific and unique characteristics of certain aspects of the BIOS that the patent asserts.”**

Electric Power Group Line of Cases

ELECTRIC POWER GROUP, LLC V. ALSTOM S.A. (Fed. Cir., Aug. 1, 2016)

- **Outcome: claims invalid**
- **Procedure: district court granted summary judgment**
- **Step one:**
 - **“The focus of the asserted claims, as illustrated by claim 12 quoted above, is on collecting information, analyzing it, and displaying certain results of the collection and analysis. We need not define the outer limits of ‘abstract idea,’ or at this stage exclude the possibility that any particular inventive means are to be found somewhere in the claims, to conclude that these claims focus on an abstract idea—and hence require stage-two analysis under § 101.”**

ELECTRIC POWER GROUP, LLC V. ALSTOM S.A.

(cont'd)

■ Step one (cont'd):

- “Accordingly, we have treated collecting information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas.”
- “In a similar vein, we have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.”
- “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.”

ELECTRIC POWER GROUP, LLC V. ALSTOM S.A.

(cont'd)

■ Step one (cont'd):

- “Here, the claims are clearly focused on the combination of those abstract-idea processes. The advance they purport to make is a process of gathering and analyzing information of a specified content, then displaying the results, and not any particular assertedly inventive technology for performing those functions. They are therefore directed to an abstract idea.”

■ Step two:

- “More particularly, a large portion of the lengthy claims is devoted to enumerating types of information and information sources available within the power-grid environment. But merely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas.”

ELECTRIC POWER GROUP, LLC V. ALSTOM S.A. (cont'd)

▪ Step two (cont'd):

- “[T]he claims’ invocation of computers, networks, and displays does not transform the claimed subject matter into patent-eligible applications. The claims at issue do not require any nonconventional computer, network, or display components, or even a ‘non-conventional and non-generic arrangement of known, conventional pieces,’ but merely call for performance of the claimed information collection, analysis, and display functions ‘on a set of generic computer components’ and display devices.”

CASES FOLLOWING ELECTRIC POWER GROUP

- ***TDE Petroleum Data Solutions Inc. v. AKM Enterprise Inc.***
 - As we recently reiterated in *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016), claims generally reciting ‘collecting information, analyzing it, and displaying certain results of the collection and analysis’ are ‘a familiar class of claims ‘directed to’ a patent-ineligible concept.’ Claim 1 of the ‘812 patent recites all but the ‘displaying’ step. Therefore, it is evident from our precedent that claim 1 is the sort of data gathering and processing claim that is directed to an abstract idea under step one of the *Alice* analysis.

CASES FOLLOWING ELECTRIC POWER GROUP (cont'd)

- ***FairWarning IP, LLC v. Iatric Systems, Inc.***
 - “We have explained that the ‘realm of abstract ideas’ includes ‘collecting information, including when limited to particular content.’ *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir.2016) (collecting cases). We have also ‘treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.’... Here, the claims are directed to a combination of these abstract-idea categories. Specifically, the claims here are directed to collecting and analyzing information to detect misuse and notifying a user when misuse is detected.”

CASES FOLLOWING ELECTRIC POWER GROUP (cont'd)

- ***West View Research, LLC v. Audi AG (non-precedential)***
 - The Federal Circuit found a claim abstract that recited “a ‘computerized apparatus capable of interactive information exchange with a human user’ via ‘a microphone,’ ‘one or more processors,’ a ‘touch-screen input and display device,’ a ‘speech synthesis apparatus’ with ‘at least one speaker,’ an ‘input apparatus,’ and a ‘computer program’ that receives the user’s input and generates an audible or visual result” which also included a limitation “that allows the results to be wirelessly transmitted to a user’s ‘portable personal electronic device.’”
- ***Two-Way Media Ltd. v. Comcast Cable Communications, LLC***
 - The Federal Circuit found an invention abstract that streamed audio/visual data over a communications system because it was directed to “functional results” and “did not sufficiently describe how to achieve these results” by claiming “(1) sending information, (2) directing the sent information, (3) monitoring the receipt of the sent information, and (4) accumulating records about receipt of the sent information.”

VOIT TECH'S, LLC V. DEL-TON, INC., (Fed. Cir., Feb. 8, 2019) (non-precedential)

- **Outcome: claims invalid**
- **Procedure: district court granted motion to dismiss**
- **Step one:**
 - **The Asserted Claims are directed to the abstract idea of entering, transmitting, locating, compressing, storing, and displaying data (including text and image data) to facilitate the buying and selling of items. See '412 patent col. 11 ll. 5–53 (reciting, in claim 1,2 the process of, inter alia, (1) entering “text[] ... and image information” into a remote data terminal, (2) “data-compressing the image data,” (3) “receiving” the text and image data, creating multiple “unique records” before “storing,” “locating” and “transmitting” the text and image data separately, (4) “decompressing the images ... at the ... remote data terminal,” and (5) “displaying the de-compressed images along with textual information”).**

VOIT TECH'S, LLC V. DEL-TON, INC., (cont'd)

■ Step one (cont'd):

- The Court considered the claims analogous to those in *Electric Power Group v. Alstom* and *In re TLI*, because those had claims to “collect[],” “analyz[e],” and “display[]” information and to “transmit[]” digital images, respectively.
- Further, “that claims ‘purporting to improve the functioning of the computer ... might not succumb to the abstract idea exception,’ ...’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.”

VOIT TECH'S, LLC V. DEL-TON, INC., (cont'd)

■ Step Two:

- “Voit has to do more than simply restate the claim limitations and assert that the claims are directed to a technological improvement without an explanation of the nature of that improvement.”
- “General statements of ‘advanced image data compression’ or faster communications will not suffice where it is unclear how the different compression format claim limitations actually achieve the alleged improvements.”

UNIV. OF FLA. RESEARCH FOUND., INC. V. GEN. ELEC. (Fed. Cir., Feb. 26, 2019)

- **Outcome: claims invalid**
- **Procedure: district court granted motion to dismiss**
- **Step one:**
 - “At *Alice* step one, [the district court] determined the claims are directed to the abstract idea of ‘collecting, analyzing, manipulating, and displaying data.’”
 - “According to the ’251 patent, ‘[m]ost health care facilities ... acquire bedside patient information using pen and paper methodologies, such as flowsheets and patient charts... [and] [p]ortions of these flowsheets,’ it teaches, ‘can be manually entered into information systems to preserve patient information for administrative and research purposes.’”

UNIV. OF FLA. RESEARCH FOUND., INC. V. GEN. ELEC. (cont'd)

■ Step one (cont'd):

- “Accordingly, the ’251 patent proposes replacing the ‘pen and paper methodologies’ with ‘data synthesis technology’ in the form of ‘device drivers written for the various bedside machines’ that allow the bedside device to present data from the various bedside machines ‘in a configurable fashion within a single interface.’”
- “On its face, the ’251 patent seeks to automate ‘pen and paper methodologies’ to conserve human resources and minimize errors. This is a quintessential ‘do it on a computer’ patent: it acknowledges that data from bedside machines was previously collected, analyzed, manipulated, and displayed manually, and it simply proposes doing so with a computer.”

UNIV. OF FLA. RESEARCH FOUND., INC. V. GEN. ELEC. (cont'd)

■ Step one (cont'd):

- The claimed ‘receiving physiologic treatment data from at least two bedside machines’ employs ‘any serial connection ... that can convey information as a serial data stream,’ including the ‘RS-232 connector’ used in prior art bedside devices.”
- “The claimed ‘programmable action involving said machine-independent data’ can be performed using ‘[a]ny kind of computer system or other apparatus,’ including a ‘general-purpose computer system.’”
- UFRF argued the claims improved the computer’s function because the “claimed ‘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’ relies on ‘a driver for each different bedside machine’ that ‘can interpret device specific protocols for data streams of the bedside machine.’”

UNIV. OF FLA. RESEARCH FOUND., INC. V. GEN. ELEC. (cont'd)

■ Step one (cont'd):

- “Neither the '251 patent, nor its claims, explains how the drivers do the conversion that UFRF points to. That is, the drivers are described in purely functional terms”
- “The '251 patent nowhere identifies, and we cannot see in the claims, any 'specific improvement to the way computers operate.'”

■ Step two:

- “The '251 patent claims fare no better at Alice step two. UFRF argues the claims recite more than ‘well-understood, routine, conventional activit[ies]’ because the claimed ‘converting’ takes place at a location remote from the bedside machines.”
- “Here, the claims do no ‘more than simply instruct the practitioner to implement the abstract idea ... on a generic computer.’”

REESE V. SPRINT NEXTEL CORP.

(Fed. Cir., June 10, 2019) (non-precedential)

- **Outcome: claims invalid**
- **Procedure: summary judgment**
- **Technology:**
 - “[The] patent relates to ... providing call waiting and caller ID service through the central office of a telephone provider.”
- **Claim construction as a prerequisite:**
 - “Although the determination of patent eligibility requires full understanding of the basic character of the claimed subject matter, claim construction is not an inviolable prerequisite....”
 - Claim construction not necessary when “there is no claim construction issue relevant to the eligibility issue” and that was the case here because “Reese [does not] argue that any limitations, either alone or in combination, in any of the parties’ constructions were anything but ‘well-understood, routine, [and] conventional....’”

REESE V. SPRINT NEXTEL CORP. (cont'd)

■ Step one:

- “The claims are directed to the abstract idea of receiving information (a calling phone number flagged as private) and sending an indication (an audible tone) to a party already engaged in a call. The claims do not recite any particular method of receiving the information and sending the indicating tone in response.”
- “The claims here are akin to concepts of receiving and displaying (indicating) information (an incoming call from a private number) that fall into a familiar class of claims directed to abstract ideas. See Elec. Power Grp., 830 F.3d at 1353.”
- “Accordingly, claims 23 and 32 are directed to a patent-ineligible abstract idea.”

REESE V. SPRINT NEXTEL CORP. (cont'd)

■ Step two:

- **“Reese does not point to any non-generic telephone network components and instead, asserts that ‘no successful combination of caller ID and call waiting yet existed’ and that his ‘combination of known switching equipment with the steps set forth’ in the claims removes them from abstractness.”**
- **“[T]he claims ... only recite steps that the ’150 patent itself describes as prior art....”**
- **“Further, the claims recite functional language lacking ‘any requirements for *how* the desired result is achieved.”**
- **“Accordingly, the claims do not contain an inventive concept.”**

CELLSPIN SOFT V. FITBIT, et al. (Fed. Cir., June 25, 2019)

- **Outcome:** claims not invalid, vacate and remand
- **Procedure:** motion to dismiss
- **Technology:**
 - “[G]enerally relate[s] 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.”
- **Step one:**
 - “The asserted claims are drawn to the idea of capturing and transmitting data from one device to another.”
 - “[W]e have consistently held that similar claims reciting the collection, transfer, and publishing of data are directed to an abstract idea. See, *e.g.*, *Elec. Power*, 830 F.3d at 1353.”

CELLSPIN SOFT V. FITBIT (cont'd)

■ Step two:

- “While we do not read *Aatrix* to say that any allegation about inventiveness, wholly divorced from the claims or the specification, defeats a motion to dismiss, plausible and specific factual allegations that aspects of the claims are inventive are sufficient.”
- “As long as what makes the claims inventive is recited by the claims, the specification need not expressly list all the reasons why this claimed structure is unconventional. In this case, Cellspin made specific, plausible factual allegations about why aspects of its claimed inventions were not conventional, e.g., its two-step, two-device structure requiring a connection before data is transmitted. The district court erred by not accepting those allegations as true.”

CELLSPIN SOFT V. FITBIT (cont'd)

■ **Presumption of validity:**

- “According to the district court, Cellspin should have filed a ‘test case’ before asserting its patents here...But patents granted by the Patent and Trademark Office are presumptively valid...This presumption reflects the fact that the Patent and Trademark Office has already examined whether the patent satisfies ‘the prerequisites for issuance of a patent,’ including § 101.”

BOZEMAN FINANCIAL LLC V. FEDERAL RESERVE BANK OF ATLANTA (Fed. Cir., April 10, 2020)

- **Outcome: Claims invalid**
- **Procedure: PTAB found claims ineligible in CBM Review**
- **Technology:**
 - **Detecting fraud in financial transactions during payment clearing.**
- **Step one:**
 - **“Claim 1 of the ’840 patent claims a method of receiving data from two financial records, storing that data, comparing that data, and displaying the results. As the specification explains, ‘[t]he present invention relates to a Universal Positive Pay Database method, system, and/or computer useable medium to reduce check fraud and verify checks, other financial instruments and documents.’...Verifying financial documents to reduce transactional fraud is a fundamental business practice that, without more, is not eligible for patent protection.”**

BOZEMAN FINANCIAL LLC V. FEDERAL RESERVE BANK OF ATLANTA (cont'd)

■ Step one:

- “[V]erifying a transaction to avoid fraud, in particular check fraud, is a long-standing commercial practice.”
- “Moreover, the use of well-known computer components to collect, analyze, and present data, in this case to verify financial transactions, does not render these claims any less abstract. See *Elec. Power Grp.*”

■ Step two:

- “The '840 patent specification explains that methods for inhibiting check fraud and verifying financial transactions were well-known...The specification further demonstrates that the technological components recited in claim 1 of the '840 patent were conventional, off-the-shelf computer components.”

BOZEMAN FINANCIAL LLC V. FEDERAL RESERVE BANK OF ATLANTA (cont'd)

1. A computer implemented method for detecting fraud in financial transactions during a payment clearing process, said method comprising:

receiving through one of a payer bank and a third party, a first record of an electronic financial transaction from at least one of the following group: a payer, a point-of-sale terminal, an online account and a portable electronic device;

storing in a database accessible by each party to said payment clearing process of said electronic financial transaction, said first record of said electronic financial transaction, said first record comprising more than one parameter;

receiving at said database at least a second record of said electronic financial transaction from one or more of a payee bank and any other party to said payment clearing process as said transaction moves along said payment clearing process, wherein said second record comprises at least one parameter which is the same as said more than one parameter of said first record;

each of said first and second records received at said database comprise at least two of the same said more than one parameters;

determining by a computer when there is a match between at least two of said parameters of said second record of said first financial transaction received at said database and the same parameters of said first record of said financial transaction stored in said database, and wherein any party to said payment clearing process is capable of verifying said parameters at each point along said financial transaction payment clearing process;

sending a notification to said payee bank participant with authorization to process said electronic financial transaction when said parameters match; and

sending a notification to said payee bank participant to not process said electronic financial transaction when said parameters do not match.

IN RE ROSENBERG (Fed. Cir., June 4, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: PTAB affirmed Examiner's rejection**
- **Technology:**
 - A method and system to collect performance-related data about a clinical trial, analyze that data, and report on whether any adjustments should be made to the clinical trial based on the review of the collected data.
- **Step one:**
 - “We agree with the Board that Mr. Rosenberg’s claims are directed to the basic idea of deciding whether to fine-tune a given system (here, a clinical trial) based on reviewing the system’s performance data.”
 - The claims were similar to those in *Electric Power* as performing mental steps of “assessing,” “evaluating,” “monitoring,” “determining,” and “providing.”

IN RE ROSENBERG (cont'd)

■ Step two:

- “Mr. Rosenberg’s arguments that novelty of the abstract idea itself ... is the transformative inventive concept are not sufficient to meet step 2. ‘[A] claim for a *new* abstract idea is still an abstract idea.’”
- “Mr. Rosenberg argues that the claimed ‘pre-programmed computer module’ is not a generic computer component because the ‘determining’ and ‘providing instructions’ steps are ‘specific to the analysis of performance metric data.’... But Mr. Rosenberg offers no explanation, and we see none, as to why these claimed steps of his abstract process would require anything more than conventional computer functionality to perform.”

IN RE ROSENBERG (cont'd)

1. A computer-implemented method for centrally managing data in an adaptive clinical trial or other adaptive process that is conducted at a plurality of geographically remote sites according to a set of procedures or parameters, said method comprising the steps of:

- (a) collecting data in the course of conducting said clinical trial or other process at a remote site, wherein the data comprise performance metrics with respect to said clinical trial or other process;**
- (b) electronically transmitting the data from said remote site to a processing location;**
- (c) checking the transmitted data at said processing location, in automated fashion, to assess the consistency of the data with respect to other collected data, to evaluate changes in the data as compared with data collected previously, or to monitor the data for trends over time;**
- (d) electronically reporting the data to a pre-programmed computer module;**
- (e) determining, by use of said pre-programmed computer module, whether procedures or parameters utilized in conducting said clinical trial or other process require modification; and**
- (f) providing instructions, based on said determining, to follow or modify the procedures or parameters utilized in conducting said clinical trial or other process.**

TIPS

Specification

- **Draft the specification with sufficient technical details, not just functionally. See e.g., ChargePoint.**
- **Explain how the invention improves over the prior art, how it improves the functioning of the computer itself, how it addresses a technical solution to a technical problem, or how it affects an improvement in another technology or technical field.**

Claims

- **Avoid functional claiming and add specifics**
- **Be particularly careful when the invention involves data gathering, analysis, and display**

Recent Fed. Cir. § 101 Software/Computer Cases

CHARGEPOINT, INC V. SEMACONNECT, INC. (Fed. Cir., Mar. 28, 2019)

- **Outcome: claims invalid**
- **Procedure: district court dismissed under 12(b)(6)**
- **Technology:**
 - ChargePoint alleged that its “inventions enabled individual charging stations to be networked together to allow site hosts, drivers, and utility companies to communicate in real time....”
 - “[T]he patents describe the ability to locate available charging stations remotely.”
 - “[T]he availability of electricity may be based on power grid data provided by a utility company.”
 - “[D]rivers can choose to transfer power from their vehicles to the power grid....”

CHARGEPOINT, INC V. SEMACONNECT, INC. (cont'd)

■ Step one:

- “While ‘[t]he § 101 inquiry must focus on the [claim language],’ the specification may nonetheless be useful in illuminating whether the claims are ‘directed to’ the identified abstract idea.”
- “[T]he ‘directed to’ inquiry may require claim construction, which will often involve consideration of the specification.”
- “The ‘directed to’ inquiry may also involve looking to the specification to understand ‘the problem facing the inventor’ and, ultimately, what the patent describes as the invention.”

CHARGEPOINT, INC V. SEMACONNECT, INC. (cont'd)

■ Step one (cont'd):

- “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.”
- “The specification also makes clear—by what it states and what it does not—that the invention of the '715 patent is the idea of *network-controlled* charging stations. The summary of the invention states: ‘A system for network-controlled charging of electric vehicles and the network-controlled electrical outlets used in this system are described herein.’...The specification then goes on to describe a networked system in which, among other things, drivers can determine whether a charging station is available, drivers can pay to charge their vehicles, and utility companies can supply information to charging stations from a demand response system.”

CHARGEPOINT, INC V. SEMACONNECT, INC. (cont'd)

■ Step one (cont'd):

- **“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.”**
- **“In short, looking at the problem identified in the patent, as well as the way the patent describes the invention, the specification suggests that the invention of the patent is nothing more than the abstract idea of communication over a network for interacting with a device, applied to the context of electric vehicle charging stations.”**
- **“Although this is not necessarily dispositive of the ‘directed to’ inquiry, it strongly suggests that the abstract idea identified in claim 1 may indeed be the focus of that claim.”**

CHARGEPOINT, INC V. SEMACONNECT, INC. (cont'd)

■ Step one (cont'd):

- “[C]laim 1 would preempt the use of any networked charging stations.”
- “The breadth of the claim language here illustrates why any reliance on the specification in the § 101 analysis must always yield to the claim language.”
- “As we explained in *Interval Licensing LLC v. AOL, Inc.*, in *Morse and Wyeth*, each inventor ‘lost a claim that encompassed all solutions for achieving a desired result’ because those claims ‘were drafted in such a result-oriented way that they amounted to encompassing the ‘principle in the abstract’ no matter how implemented.”
- In short, the inventors here had the good idea to add networking capabilities to existing charging stations to facilitate various business interactions. But that is where they stopped, and that is all they patented.”

CHARGEPOINT, INC V. SEMACONNECT, INC. (cont'd)

■ Step one (cont'd):

- “As to dependent claim 2, the additional limitation of an ‘electrical coupler to make a connection with an electric vehicle’ does not alter our step one analysis. The character of claim 2, as a whole, remains directed to the abstract idea of communication over a network to interact with a device, applied in the context of charging stations.”
- “Claim 1 of the '131 patent is almost identical to claim 1 of the '715 patent. The key differences are that the apparatus in claim 1 of the '131 patent does not make requests for charge transfer (it only receives them) and that the electricity supply is modified ‘based on the communications received as part of the demand response system.’ '131 patent claim 1. Because of the similarity to claim 1 of the '715 patent, we incorporate our analysis of that claim...”

CHARGEPOINT, INC V. SEMACONNECT, INC. (cont'd)

■ Step one (cont'd):

- The Court was not persuaded that “claims 1 and 8 of the '131 patent teach ‘a charging station with improved technical features that enable it to adjust the amount of electricity delivered to cars based on demand-response communications with utilities’” because “nothing in the specification explains from a technical perspective how that modification occurs. And the fact that the electricity flow is modified based on demand response principles does nothing to make this claim directed to something other than the abstract idea. Demand response is itself an abstract concept—a familiar business choice to alter terms of dealing to help match supply and demand.”
- The Court also held that demand response “merely refers to the content of the communications received by the charging station.”

CHARGEPOINT, INC V. SEMACONNECT, INC. (cont'd)

■ Step one (cont'd):

- With regard to method claims 1 and 2 of the '967 patent, the Court concluded these claims were “similar to those discussed above” and “the patent never discusses any technical details regarding how to modify electricity flow, and the fact that any modifications are made in response to demand response policy merely adds one abstract concept to another.”
- Regarding claims 31 and 32 of the '570 patent, “the specification does not suggest that the inventors' discovery was the particular arrangement of components claimed.”
 - Although those claims included “improvements like the ‘current measuring device’ and ‘communication device’ to connect a ‘mobile wireless communication device,’there is no indication that the invention of the '570 patent was intended to improve those particular components or that the inventors viewed the combination of those components as their invention. The only improvement alleged is use of the concept of network communication to interact with the particular devices.”

CHARGEPOINT, INC V. SEMACONNECT, INC. (cont'd)

■ Step one (cont'd):

- “In short, while the eight claims on appeal vary in some respects, they are all directed to the abstract idea of communicating over a network for device interaction. Communication over a network for that purpose has been and continues to be a ‘building block of the modern economy.’”

CHARGEPOINT, INC V. SEMACONNECT, INC. (cont'd)

■ Step two:

- ChargePoint argued that it alleged sufficient factual allegations to preclude dismissal under 12(b)(6), and that its “patents represent an unconventional solution to technological problems in the field, and thus contain an inventive concept.”
 - “The problems in the art identified by ChargePoint are, generally: the sparse availability of charging stations and the need for more widespread stations; the need for a communication network that facilitates finding an available charging station, controlling the station, and paying for electricity; and the need for real time communication to effectively implement demand response and vehicle-to-grid transfer.”
- **“ChargePoint contends that it solved these problems in an unconventional way through: (a) the ability to turn electric supply on based on communications from a remote server; (b) a ‘network-controlled’ charging system; and (c) a charging station that receives communication from a remote server, including communications made to implement a demand response policy.”**

CHARGEPOINT, INC V. SEMACONNECT, INC. (cont'd)

■ Step two (cont'd):

- “In essence, the alleged ‘inventive concept’ that solves problems identified in the field is that the charging stations are network-controlled. But network control is the abstract idea itself, and ‘a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.’”
- “In addition to the general arguments above, ChargePoint highlights certain aspects of each asserted claim. We address each argument in turn. First, with respect to claims 1 and 2 of the '715 patent, as well as claims 31 and 32 of the '570 patent, ChargePoint points to the ability to operate charging stations remotely as solving a problem in the field... This, again, merely mirrors the abstract idea itself and thus cannot supply an inventive concept.”

CHARGEPOINT, INC V. SEMACONNECT, INC. (cont'd)

■ Step two (cont'd):

- “Turning to claims 1 and 8 of the '131 patent, as well as claims 1 and 2 of the '967 patent, ChargePoint contends that these claims capture technical improvements related to demand response....ChargePoint disputes the district court's conclusion that ‘the combination of connecting generic networking equipment to a charging device to carry out a demand response plan already existed and was well-understood, routine, and conventional.’...But, as the district court pointed out, the ‘Background of the Invention’ section of the specification demonstrates that demand response has been in use in other consumer services, such as with air conditioning and lighting, which may be reduced during periods of high demand....Indeed, demand response is simply a familiar business choice of terms of dealing to help match supply and demand. This cannot supply an inventive concept in this case.”

CHARGEPOINT, INC V. SEMACONNECT, INC. (cont'd)

■ Step two (cont'd):

- “Here, the claims do nothing to improve how charging stations function....This is simply an ‘abstract-idea-based solution implemented with generic technical components.’”
- “[T]he only possible inventive concept in the eight asserted claims is the abstract idea itself.”

■ Miscellaneous:

- ChargePoint argued that the district court erred by refusing to consider ChargePoint’s submitted declarations, which it alleged “would have aided the district court in analyzing step two.” The Court saw no error because the district court is not “required to consider such materials under these circumstances.”
- ChargePoint also argued the district court erred by dismissing with prejudice, precluding it from amending its complaint. But it “never requested that its complaint be dismissed without prejudice nor did [it] seek leave from the district court to amend its complaint.”

TRADING TECHS. INT'L, INC. V. IBG LLC (Fed. Cir., Apr. 18, 2019)

- **Outcome: claims invalid**
- **Procedure: CBM**
- **Step one:**
 - The patents are related to a graphical user interface (“GUI”) for electronic trading.
 - “The Board determined claim 1 [of the ’999 patent and claim 1 of the ’056 patent] is directed to ‘the abstract idea of graphing (or displaying) bids and offers to assist a trader to make an order.’...We agree.”
 - “Claim 1 also recites sending an order by ‘selecting’ and ‘moving’ an order icon to a location along the price axis. This does not change our determination that the claims are directed to an abstract idea.”

TRADING TECHS. INT'L, INC. V. IBG LLC (cont'd)

■ Step one (cont'd):

- **“The fact that this is a “computer-based method” does not render the claims non-abstract. The specification indicates the claimed GUI is displayed on any computing device.”**
- **“The claims ... do not improve the functioning of the computer, make it operate more efficiently, or solve any technological problem. Instead, they recite a purportedly new arrangement of generic information that assists traders in processing information more quickly.”**
- **“We see no meaningful difference between [the '056 patent's] limitations and the similar limitations of claim 1 in the '999 patent....”**
- **“We agree with the Board that claim 1 [of the '374 patent] is directed to the abstract idea of receiving a user input to send a trade order.”**

TRADING TECHS. INT'L, INC. V. IBG LLC (cont'd)

■ Step two:

- '999 patent: “The Board held that the claims do not contain an inventive concept. It determined that receiving market information is simply routine data gathering, and displaying information as indicators along a scaled price axis is well-understood, routine, conventional activity that does not add something significantly more to the abstract idea...It likewise determined that selecting and moving an icon is well-understood, routine, conventional activity...We agree.”
- The claims of the '999 patent do not contain an improvement to computer functionality because the “specification makes clear that this invention helps the trader process information more quickly. This is not an improvement to computer functionality.”

TRADING TECHS. INT'L, INC. V. IBG LLC (cont'd)

▪ Step two (cont'd):

- '056 patent: “At step two, the Board held the elements, both individually and as an ordered combination, do not recite an inventive concept. TT argues the claims improve computer functionality by improving on the intuitiveness and efficiency of prior GUI tools. The specification makes clear that this invention helps the trader process information more quickly. This is not an improvement to computer functionality, as alleged by TT.”
- '374 patent: “At step two, the Board held the elements of claim 1, individually or as an ordered combination, do not add an inventive concept. It noted that the specification discloses that the invention can be implemented ‘on any existing or future terminal or device’ and describes the programming as insignificant...as previously explained, claim 1 does not solve any purported technological problem.”

TRADING TECHS. INT'L, INC. V. IBG LLC (Fed. Cir., Apr. 30, 2019)

- **Outcome: claims invalid**
- **Procedure: CBM**
- **Step one:**
 - “The claims considered in light of the specification make clear that ‘the focus of the claimed advance over the prior art’ is providing a trader with additional financial information to facilitate market trades, an abstract idea.”
 - “Information, whether displayed in the form of price values or [profit and loss] values, is abstract.”

TRADING TECHS. INT'L, INC. V. IBG LLC (cont'd)

■ Step one (cont'd):

- “Likewise, the claimed steps for calculating the [profit and loss] values—‘identifying a long or short position taken by a user’ and ‘computing by the computing device a plurality of values’ representing ‘a profit or loss if the long or short position is closed at a price level’—is nothing more than ‘mere automation of manual processes using generic computers,’ which ‘does not constitute a patentable improvement in computer technology.’”

TRADING TECHS. INT'L, INC. V. IBG LLC (cont'd)

■ Step one (cont'd):

- “The claims are focused on providing information to traders in a way that helps them process information more quickly, ... not on improving computers or technology.”
- “While the fact that an invention is run on a generic computer does not, by itself, ‘doom the claims,’ the claims here fail because arranging information along an axis does not improve the functioning of the computer, make it operate more efficiently, or solve any technological problem.”
- “We thus conclude that the claims are directed to an abstract idea.”

TRADING TECHS. INT'L, INC. V. IBG LLC (cont'd)

■ Step two:

- “The claimed trading screen simply takes the prior art trading screen of Figure 2 and adds P&L values along the axis.”
- “The specification acknowledges that ‘there are numerous ways to calculate P&L and one of ordinary skill in the art would recognize the many different possibilities.’”
- “Even if no trading screen had previously displayed P&L values, ‘a claimed invention's use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.’”

IN RE GITLIN

(Fed. Cir., June 13, 2019) (non-precedential)

- **Outcome: claims invalid**
- **Procedure: PTAB affirmed rejection of patent application**
- **Technology:**
 - Multi-dimensional interpolation, which allows “someone to estimate an unknown value between two values in a sequence.”
- **Step one:**
 - “The Government cites an encyclopedia to show that interpretation is a mathematical concept.”
 - “The Supreme Court has established that a mathematical concept without more does not constitute patent-eligible subject matter.” (citing *Parker v. Flook*)

IN RE GITLIN (cont'd)

- **Step two:**
 - “[M]erely calling for a mathematical concept to be performed more efficiently or with a particular input does not amount to an application of the mathematical concept that is patent-eligible.”
 - “Nor would the claims be eligible if the interpolation was merely implemented on a computer, as the specification indicates, without improving the functioning of the computer or system.”

SRI INTERNATIONAL, INC. V. CISCO SYSTEMS, INC. (Fed. Cir., July 12, 2019)

- **Outcome:** claims valid at step one
- **Procedure:** denied motion for summary judgment
- **Technology:**
 - A method for automated detection of hacker intrusion in a network.
- **Step one:**
 - “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.”

SRI INTERNATIONAL, INC. V. CISCO SYSTEMS, INC. (cont'd)

■ Step one (cont'd):

- “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...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.’”
- “Here, the claims actually prevent the normal, expected operation of a conventional computer network. Like the claims in *DDR*, the claimed technology ‘overrides the routine and conventional sequence of events’ by detecting suspicious network activity, generating reports of suspicious activity, and receiving and integrating the reports using one or more hierarchical monitors.”

SRI INTERNATIONAL, INC. V. CISCO SYSTEMS, INC. (cont'd)

■ Step one (cont'd):

- “[T]he claims here are not directed to using a computer as a tool—that is, automating a conventional idea on a computer. Rather, the representative claim improves the technical functioning of the computer and computer networks by reciting a specific technique for improving computer network security.”
- “This is not the type of human activity that § 101 is meant to exclude. Indeed, we tend to agree with SRI that the human mind is not equipped to detect suspicious activity by using network monitors and analyzing network packets as recited by the claims.”

SOLUTRAN, INC. V. ELAVON, INC. (Fed. Cir., July 30, 2019)

- **Outcome:** overruled district court and claims invalid
- **Procedure:** denied motion for summary judgment
- **Technology:**
 - System and method for processing paper checks.
- **Step one:**
 - “We conclude that the claims are directed to the abstract idea of crediting a merchant’s account as early as possible while electronically processing a check.”

SOLUTRAN, INC. V. ELAVON, INC. (cont'd)

■ Step one (cont'd):

- “[T]he claims simply recite conventional actions in a generic way (e.g., capture data for a file, scan check, move check to a second location, such as a back room) and do not purport to improve any underlying technology.”
- “The claims on their face are broad enough to allow the transaction data to be captured at the merchant’s point of purchase and the checks to be scanned and compared in the merchant’s back office. The location of the scanning and comparison—whether it occurs down the hallway, down the street, or across the city—does not detract from the conclusion that these claims are, at bottom, directed to getting the merchant’s account credited from a customer’s purchase as soon as possible, which is an abstract idea.”

SOLUTRAN, INC. V. ELAVON, INC. (cont'd)

■ Step two:

- “[T]he background of the ’945 patent describes each individual step in claim 1 as being conventional. Reordering the steps so that account crediting occurs before check scanning (as opposed to the other way around) represents the abstract idea in the claim, making it insufficient to constitute an inventive concept...Any remaining elements in the claims, including use of a scanner and computer and ‘routine data-gathering steps’ (i.e., receipt of the data file), have been deemed insufficient by this court in the past to constitute an inventive concept.”
- “While the Supreme Court has explained that the machine-or-transformation test can provide a ‘useful clue’ in the second step of *Alice*, passing the test alone is insufficient to overcome Solutran’s above-described failings under step two...In any respect, we disagree with Solutran that the claims pass the test.”

MYMAIL, LTD. V. OOVOO, LLC (Fed. Cir., Aug. 16, 2019)

- **Outcome:** district court erred by resolving eligibility prior to claim construction
- **Procedure:** granted motion for judgment on the pleadings for ineligibility
- **Technology:**
 - A method for modifying a toolbar.
- **Eligibility:**
 - The parties disputed the construction of the term “toolbar.”
 - In a related case, “toolbar” had been construed based on “‘definitional’ language in the specification that describes ‘the [t]oolbar of the present invention’ as capable of being ‘dynamically changed or updated via a Pinger process or a MOT script.’” “Toolbar” was thus found not to be a “generic toolbar.”

MYMAIL, LTD. V. OOVOO, LLC (cont'd)

■ Eligibility (cont'd):

- “Ultimately, the [other] court construed ‘toolbar’ to mean a ‘button bar that can be dynamically changed or updated via a Pinger process or a MOT script.’”
- The district court below, in this case, did not construe toolbar and did not address the parties’ claim construction dispute.
- The alleged infringers “contend that this error is ‘readily dismissed’ because the [prior] construction of ‘toolbar’ is ‘redundant of other elements that already are present in the representative claims.’...We disagree. While ooVoo and IAC contend that ‘the pinger’s functionality is merely redundant,’...and thus ‘adoption of MyMail’s construction would have no impact on the claims’ scope and, by extension, no impact on an *Alice* analysis,’...we decline to construe ‘toolbar’ and the MyMail patent claims in the first instance.”

MYMAIL, LTD. V. OOVOO, LLC (cont'd)

■ Eligibility (cont'd):

- “Likewise, to the extent ooVoo and IAC ask us to determine in the first instance patent eligibility of the MyMail patent claims under MyMail’s proposed construction, we decline to do so. The determination of patent eligibility may involve subsidiary fact questions, including whether ‘the claim elements or the claimed combination are well-understood, routine, [or] conventional.’”

KONINKLIJKE KPN N.V. V. GEMALTO M2M GMBH (Fed. Cir., Nov. 15, 2019)

- **Outcome:** Claims valid at step one
- **Procedure:** District court judgment on the pleadings claims were ineligible
- **Technology:**
 - A data transmission error detection system to detect a specific type of error
- **Step one:**
 - “In cases involving software innovations, [the step one] inquiry often turns on whether the claims focus on ‘the specific asserted improvement in computer capabilities ... or, instead, on a process that qualifies as an abstract idea for which computers are invoked merely as a tool.’”

KONINKLIJKE KPN N.V. V. GEMALTO M2M GMBH (cont'd)

■ Step one (cont'd):

- “Since *Alice*, we have found software inventions to be patent-eligible where they have made non-abstract improvements to existing technological processes and computer technology.”
- “An improved result, without more stated in the claim, is not enough to confer eligibility to an otherwise abstract idea.”
- “To be patent-eligible, the claims must recite a specific means or method that solves a problem in an existing technological process.”

KONINKLIJKE KPN N.V. V. GEMALTO M2M GMBH (cont'd)

■ Step one (cont'd):

- “[W]e conclude that appealed claims 2–4 of the ’662 patent are patent-eligible because they are directed to a non-abstract improvement in an existing technological process (i.e., error checking in data transmissions). By requiring that the permutation applied to original data be modified ‘in time,’ ...which is incorporated into all appealed claims, 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.”
- “This claimed technological improvement is akin to the type of non-abstract improvement we found to be patent-eligible in Finjan...Here, as in Finjan, the claimed invention is also directed to a non-abstract improvement because it employs a new way of generating check data that enables the detection of persistent systematic errors in data transmissions that prior art systems were previously not equipped to detect.”

KONINKLIJKE KPN N.V. V. GEMALTO M2M GMBH (cont'd)

■ Step one (cont'd):

- **“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.”**
- **“Importantly, the claims do not simply recite, without more, the mere desired result of catching previously undetectable systematic errors, but rather recite a specific solution for accomplishing that goal—i.e., by varying the way check data is generated by modifying the permutation applied to different data block.”**

KONINKLIJKE KPN N.V. V. GEMALTO M2M GMBH (cont'd)

■ Step one (cont'd):

- “[A]ssuming that the law required the specification to discuss a technological benefit of the purported invention, as Appellees suggest, Appellees’ argument still fails because it does not account for the specification as a whole. The specification states that ‘a variable checking function,’ as opposed to a ‘normal (fixed) checking function,’ ‘can almost always prevent the non-detection of repetitive errors.’”
- The Federal Circuit contrasted these claims from those in cases like *Electrical Power Group*, *Digitech*, and *Two-Way Media*, explaining those cases were ineligible (unlike here) because “[w]hile the patents in these cases may have claimed an improved result in a technical field, the claims failed to recite a specific enough solution to make the asserted technological improvement concrete.”

KONINKLIJKE KPN N.V. V. GEMALTO M2M GMBH (cont'd)

- 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.**

CUSTOMEDIA TECHS., LLC V. DISH NETWORK CORP. (Fed. Cir., March 6, 2020)

- **Outcome: Claims invalid**
- **Procedure: FWD in CBM found claims ineligible**
- **Technology:**
 - A data delivery system for providing automatic delivery of specifically identified advertising data.
- **Step one:**
 - “To be a patent-eligible improvement to computer functionality, we have required the claims to be directed to an improvement in the functionality of the computer or network platform itself.”
 - “We have held that it is not enough, however, to merely improve a fundamental practice or abstract process by invoking a computer merely as a tool.”

CUSTOMEDIA TECHS., LLC V. DISH NETWORK CORP. (cont'd)

■ Step one (cont'd):

- “We have also held that improving a user’s experience while using a computer application is not, without more, sufficient to render the claims directed to an improvement in computer functionality.”
- “In sum, ‘software can make non-abstract improvements to computer technology just as hardware improvements can.’”
- “The claims ... 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... The only improvements identified in the specification are generic speed and efficient improvements inherent in applying the use of a computer to any task.”

CUSTOMEDIA TECHS., LLC V. DISH NETWORK CORP. (cont'd)

■ Step two:

- “At step two, the Board held that the elements of the claims, considered individually and as an ordered combination, fail to recite an inventive concept. We agree. 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.”
- “Customedia argues that the claims are eligible under *Alice* step two because the use of a programmable receiver to dedicate a section of storage for storing only ‘specifically identified advertising data’ was innovative over prior art approaches. However, the invocation of ‘already-available computers that are not themselves plausibly asserted to be an advance ... amounts to a recitation of what is well-understood, routine, and conventional.’”

CUSTOMEDIA TECHS., LLC V. DISH NETWORK CORP. (cont'd)

■ Step two:

- “The specification acknowledges that the storage device ‘may be any storage device for audio/video information known in the art’ and the receiver unit may include ‘any digital or analog signal receiver and/or transmitter capable of accepting a signal transmitting any kind of digital or broadcast information.’ Such generic and functional hardware is insufficient to render eligible claims directed to an abstract idea.”

CUSTOMEDIA TECHS., LLC V. DISH NETWORK CORP. (cont'd)

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.

WHITSERVE LLC V DONUTS INC. (Fed. Cir., April 10, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: District court found claims invalid on 12(b)(6)**
- **Technology:**
 - Software for notifying clients of approaching deadlines and receives their authorization via the internet.
- **Step one:**
 - “The district court concluded that the claims are directed to ‘the abstract idea of preparing, sending, and receiving responses to due-date reminders for clients of professional-service [providers].’”
 - “The focus of the claims is simply to use computers and a familiar network as a tool to perform a fundamental economic practice involving simple information exchange. Carrying out fundamental economic practices involving simple information exchange is an abstract idea.”

WHITSERVE LLC V DONUTS INC. (cont'd)

■ Step two:

- **“WhitServe’s claims require only generic components—’a computer,’ ‘a database,’ ‘software executing on said computer,’ and ‘a communication link between said computer and the Internet’—to perform their routine and conventional functions.”**
- **“The district court noted what the patent itself teaches about the routine use of docketing systems by professionals and the conventionality of the various claimed components, including the Internet and web pages, at the time of invention...The [specification’s] description of ‘already-available computers that are not themselves plausibly asserted to be an advance ... amounts to a recitation of what is ‘well-understood, routine, [and] conventional.’ ”**

WHITSERVE LLC V DONUTS INC. (cont'd)

- 1. A device for automatically delivering professional services to a client comprising:**
 - a computer;**
 - a database containing a plurality of client reminders, each of the client reminders comprising a date field having a value attributed thereto;**
 - software executing on said computer for automatically querying said database by the values attributed to each client reminder date field to retrieve a client reminder;**
 - software executing on said computer for automatically generating a client response form based on the retrieved client reminder;**
 - a communication link between said computer and the Internet;**
 - software executing on said computer for automatically transmitting the client response form to the client through said communication link; and,**
 - software executing on said computer for automatically receiving a reply to the response form from the client through said communication link.**

IN RE MORSA (Fed. Cir., April 10, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: PTAB affirmed Examiner's rejection**
- **Technology:**
 - The application “relates generally to the field of advertising, and in particular to the field of matching advertisers with entities via computer networks.”
- **Step one:**
 - The PTAB held the claims were directed to an abstract idea: “independent claim 2 is ‘directed to the concepts of targeting advertisements for a user, and using a bidding system to determine how the advertisements will be displayed[,]’ which are both directed to the ‘fundamental economic practices long prevalent in our system of commerce.’”

IN RE MORSA (cont'd)

■ Step one (cont'd):

- “Independent claim 2 is directed to the abstract idea and fundamental practice of organizing human activity. For example, independent claim 2 recites a ‘process’ that ‘transmit[s]’ a ‘request for demographic and/or psychographic user information’ to the use and then ‘sav[es]’ the ‘user information’ on the system to match the user to a specific advertiser.”
- “Here, the claim recites both targeted advertising and bidding to display the advertising, which are both abstract ideas relating to customizing information based on the user and matching them to the advertiser.”

IN RE MORSA (cont'd)

■ Step two:

- The Court affirmed the PTAB's finding of ineligibility under step two because “the specification ‘describes using generic computer components such as network PC’s, minicomputers, mainframe computers, cell phones, servers, match, engines, local area networks[,] and wide area networks in a conventional manner for the known functions.’”
- “Although Mr. Morsa alleges that the Proposed Claims are ‘directed to improving an existing technological process in the technical field of advertising over the Internet/computer networks[,]’...we have recognized that similar claims directed to advertising do not ‘transform[] the abstract idea into a patent-eligible invention.’”

IN RE MORSA (cont'd)

A technical field improving technological process comprising:

transmitting by a computer system over a network for display to a user a request for demographic and/or psychographic user information;

receiving at the computer system over the network from the user the user information; saving by the computer system the user information;

receiving at the computer system over the network from a first advertiser an association between (i) one or more first criteria comprising demographic and/or psychographic criteria and a first ad and (ii) a first bid, the bid being the highest amount the advertiser is willing to, but may not have to, pay, and the first ad;

receiving at the computer system over the network from a second advertiser an association between (i) one or more second criteria comprising demographic and/or psychographic criteria and a second ad and (ii) a second bid, the bid being the highest amount the advertiser is willing, but may not have, to pay, and the second ad;

determining by the computer system that a first match exists between the first criteria and the user information;

determining by the computer system that a second match exists between the second criteria and the user information;

in the event of both a first match and a second match, determining by the computer system placement of at least one of the first and second ads based on one or more ad placement factors comprising the first and second bids;

transmitting by the computer system at least one of the first and second ads over the network to the user.

IN RE GOPALAN (Fed. Cir., April 13, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: PTAB affirmed Examiner's rejection**
- **Technology:**
 - **Methods and systems for designing measurement strategies, such as from fluorescent probes for detecting gene transcripts.**
- **Step one:**
 - **“Reading the claims in light of the specification, the Board agreed with the examiner that the claims at issue ‘are directed to the abstract idea of using algorithms or mathematical relationships to devise a measurement strategy for spectrally based measurements.’”**

IN RE GOPALAN (cont'd)

■ Step one:

- “[T]he Board correctly found, the claims are recited at a ‘high level of generality [that] does not limit the claims to rules with specific characteristics.’”
- “[T]he claims do not ‘embody a concrete solution to a problem’ because they lack ‘the specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it.’”
- “Indeed, the claims provide result-oriented limitations like others we have held to be directed to abstract ideas.”

■ Step two:

- “Gopalan concedes that implementing the measurement strategy was well known....”

IN RE GOPALAN (cont'd)

1. A computer implemented method for-devising spectrally based measurements, wherein a signal is measured at different point along a spectrum, the method comprising the steps of:

[1] selecting a number of measurements along the spectrum, constituting at least one data set;

[2] selecting a metric for determining substantially optimal combination of true positives and false positives in said at least one data set;

[3] applying an optimization technique; and

[4] obtaining, from the results of the optimization technique, a value for at least one optimization parameter, said value for at least one optimization parameter resulting in substantially optimal combination of true positives and false positives; wherein the obtaining at least one optimization parameter comprises obtaining a value of a number of independent measures; wherein obtaining a value of a number of independent measures comprises obtaining at least one combination of a value of a number of independent measures and a value for a confidence measure; said independent measures comprising measures of a parameter of spectral property being measured obtained using different measurement cri-teria;

[5] implementing a measurement strategy by placement of sensors or design of components that allow design of measurement by sensors to implement the number of independent measures; wherein the measurement strategy for the spectrally based measurements results from the number of independent measures;

[6] wherein a number of true positives and false positives are a function of at least one combination of the number of independent measures and the confidence measure; and

[7] wherein the steps of selecting a metric, applying an optimization technique, and obtaining, from the results of the optimization technique, a value are performed by means of a non-transitory computer usable medium having computer readable code that causes a processor to perform the steps;

[8] whereby such measurement are used in systems used in applications including nucleic acid sequencing, high spatial density measurement of spectrally based measurement, including fluorescence, based signals using scanners and cameras including for nucleic acid and protein measurements.

ERICSSON INC. V. TCL COMMS. TECH. HOLDINGS LTD. (Fed. Cir., April 14, 2020)

- **Outcome: Claims invalid**
- **Procedure: District court denied SMJ that claims were ineligible**
- **Technology:**
 - A method and system for limiting and controlling access to resources in a telecommunications system.
- **Step one:**
 - “Based on the claim language, we conclude that claims 1 and 5 are directed to the abstract idea of controlling access to, or limiting permission to, resources. Although written in technical jargon, a close analysis of the claims reveals that they require nothing more than this abstract idea.”

ERICSSON INC. V. TCL COMMS. TECH. HOLDINGS LTD. (cont'd)

■ Step one (cont'd):

- “The first limitation recites ‘a platform having a software services component and an interface component,’ for the ultimate goal of ‘enabling application domain software to be installed, loaded, and run in the platform.’...This recitation of functional computer components does not specify how the claim ‘control[s] access to a platform,’ nor does it direct the claim to anything other than that abstract idea.”
- “Controlling access to resources is exactly the sort of process that ‘can be performed in the human mind, or by a human using a pen and paper.’”

ERICSSON INC. V. TCL COMMS. TECH. HOLDINGS LTD. (cont'd)

■ Step two:

- **“Because the architecture identified by Ericsson as inventive does not appear in claims 1 or 5 of the ’510 patent, we conclude at step two that claims 1 and 5 do not provide a sufficient inventive concept to render them patent eligible. The most specific elements actually recited in the claim are ‘an access controller for controlling access,’ ‘an interception module for receiving a request,’ and ‘a decision entity for determining if the request should be granted.’...None of these elements are sufficient to turn the claim into anything more than a generic computer for performing the abstract idea of controlling access to resources.”**

ERICSSON INC. V. TCL COMMS. TECH. HOLDINGS LTD. (cont'd)

1. A system for controlling access to a platform, the system comprising:

a platform having a software services component and an interface component, the interface component having at least one interface for providing access to the software services component for enabling application domain software to be installed, loaded, and run in the platform;

an access controller for controlling access to the software services component by a requesting application domain software via the at least one interface, the access controller comprising:

an interception module for receiving a request from the requesting application domain software to access the software services component;

and a decision entity for determining if the request should be granted wherein the decision entity is a security access manager, the security access manager holding access and permission policies; and

wherein the requesting application domain software is granted access to the software services component via the at least one interface if the request is granted.

CARDIONET, LLC V. INFOBIONIC, INC (Fed. Cir., April 17, 2020)

- **Outcome: Claims valid**
- **Procedure: District court granted MTD**
- **Technology:**
 - Cardiac monitoring systems and techniques for detecting and distinguishing atrial fibrillation and atrial flutter from other various forms of cardiac arrhythmia.
- **Step one:**
 - Claim 1 “is directed to an improved cardiac monitoring device and not to an abstract idea.”
 - The invention “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.”

CARDIONET, LLC V. INFOBIONIC, INC (cont'd)

■ Step one (cont'd):

- **“[T]he 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.’”**
- **The patent’s “written description identifies a number of advantages gained by the elements recited in the claimed cardiac monitoring device...We accept those statements as true and consider them important in our determination that the claims are drawn to a technological improvement.”**
- **Appellee argued the claims were directed to “automating known techniques” but “nothing in the record supports the district court’s fact finding (and InfoBionic’s assertion) that doctors long used the claimed diagnostic processes.”**

CARDIONET, LLC V. INFOBIONIC, INC (cont'd)

■ Step one (cont'd):

- **“Generalizing the asserted claims as being directed to collecting, analyzing, and reporting data is inconsistent with our instruction that courts ‘be careful to avoid oversimplifying the claims’ by looking at them generally and failing to account for the specific requirements of the claims.”**

■ Extrinsic evidence at step one motion to dismiss:

- **“[W]e do not hold today that it is impermissible for courts to ‘look[] outside the intrinsic evidence’ as part of their Alice step one inquiry...or that all evidence presented by the parties that doctors have long used the claimed techniques would be irrelevant to the inquiry in this case. It is within the trial court’s discretion whether to take judicial notice of a longstanding practice where there is no evidence of such practice in the intrinsic record.”**

CARDIONET, LLC V. INFOBIONIC, INC (cont'd)

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.

UNILOC USA, INC. V. LG ELECTRONICS USA, INC. (Fed. Cir., April 30, 2020)

- **Outcome: Claims valid**
- **Procedure: District court granted MTD**
- **Technology:**
 - A primary station (e.g., a base station) and a secondary station (e.g., a computer mouse or keyboard) where the primary station can simultaneously poll secondary stations and send inquiries to secondary stations so that a permanently active communication link is not needed.
- **Step one:**
 - “[W]e hold the claims at issue are directed to a patent-eligible improvement to computer functionality, namely the reduction of latency experienced by parked secondary stations in communication systems.”
 - The invention’s primary station that could simultaneously send inquiry messages and poll parked devices “eliminates or reduces the delay present in conventional systems where the primary station alternates between polling and sending inquiry messages.”

UNILOC USA, INC. V. LG ELECTRONICS USA, INC. (cont'd)

■ Step one (cont'd):

- The invention “changes the normal operation of the communication system itself to ‘overcome a problem specifically arising in the realm of computer networks.’”
- “The claims at issue do not merely recite generalized steps to be performed on a computer using conventional computer activity. Instead, they are directed to ‘adding to each inquiry message prior to transmission an additional data field for polling at least one secondary station.’”
- “We conclude that the claims at issue are not directed to the abstract idea of performing additional polling in wireless communication systems or performing additional polling using inquiry messages. These claims are directed to a specific asserted improvement to the functionality of the communication system itself.”

UNILOC USA, INC. V. LG ELECTRONICS USA, INC. (cont'd)

2. A primary station for use in a communications system comprising at least one secondary station, wherein means are provided for broadcasting a series of inquiry messages, each in the form of a plurality of predetermined data fields arranged according to a first communications protocol, and for adding to each inquiry message prior to transmission an additional data field for polling at least one secondary station.

IN RE JOBIN (Fed. Cir., May 8, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: PTAB affirmed Examiner rejection**
- **Technology:**
 - “Methods and systems for developing ‘products, advertisements, games, and other creative realizations,’ through reliance on participants who, by contributing, obtain stakes in the developed products.”
- **Step one:**
 - “[The invention] is, at bottom, directed to the collection, organization, grouping, and storage of data using techniques such as conducting a survey or crowdsourcing.... a method of organizing human activity....”
- **Step two:**
 - “[T]he ‘online system,’ ‘server,’ ‘data structure,’ and ‘user device’ elements recite generic technology for implementing the claimed abstract idea.”

CISCO SYSTEMS, INC. V. UNILOC 2017 (Fed. Cir., May 13, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: District Court granted judgment on the pleadings.**
- **Technology:**
 - A “radio communication system comprising a plurality of stations capable of forming an ad-hoc network.”
- **Step one:**
 - The Federal Circuit agreed with the District Court that “the claims were directed to the abstract idea of ‘ranking stations based on antenna performance characteristics and selecting the station with the highest rank to act as master in a network.’”
 - Unlike cases where the claims were not abstract, the patent “broadly claims solving the problem of master stations potentially having inefficient antennas by choosing the station with the best antenna. The claim does not specify any particular metric or method for ranking.”

CISCO SYSTEMS, INC. V. UNILOC 2017 LLC (cont'd)

■ Step one (cont'd):

- Uniloc argued that the invention “involves dynamically analyzing relative rankings of antenna performance characteristics based on environmental variables” and “effectuat[ing] a hand-off of the master station in order to increase network efficiency” but the claims did not recite these aspects.

■ Step two:

- Uniloc argued that the claims’ and specification’s use of well-understood, routine and conventional elements were used in a “new and improved way...[but] Uniloc’s only alleged inventive concept is coincident with the abstract idea itself. Thus, there are not ‘additional elements,’ which ‘transform the nature of the claim’ into a patent-eligible application.”

CISCO SYSTEMS, INC. V. UNILOC 2017 LLC (cont'd)

6. A method of operating an ad-hoc radio communication system having a plurality of stations formed into at least one network, the method comprising the step of:

determining a master/slave rank of each station in the network representative of the station's suitability for acting as master in the network using antenna performance characteristics of each station in view of the antenna's local environment; and

enabling a station with the highest rank to be master.

ELECTRONIC COMM'N TECHS., LLC V. SHOPPERSCHOICE.COM, LLC (Fed. Cir., May 14, 2020)

- **Outcome: Claims invalid**
- **Procedure: District Court granted judgment on the pleadings**
- **Technology:**
 - Secure notification messaging system
- **Step one:**
 - The patent “is directed to the abstract idea of ‘providing advance notification of the pickup or delivery of a mobile thing.’”
 - Two of the six claim “functions—monitoring the location of a mobile thing and notifying a party in advance of arrival of that mobile thing—amount to nothing more than the fundamental business practice of providing advance notification of the pickup or delivery of a mobile thing.”

ELECTRONIC COMM'N TECHS., LLC V. SHOPPERSCHOICE.COM, LLC (cont'd)

■ Step one:

- The other claim features that increase security were also abstract because “the patent specification explains, the ‘authentication information’ can be essentially any information recognizable to the party being contacted...”

■ Step two:

- The claim failed step two because it is “specified at a high level of generality, is specified in functional terms, and merely invokes well-understood, routine, conventional components and activity to apply the abstract idea identified previously.”

ELECTRONIC COMM'N TECHS., LLC V. SHOPPERSCHOICE.COM, LLC (cont'd)

11. An automated notification system, comprising:

one or more transceivers designed to communicate data;

one or more memories;

one or more processors; and

**computer program code stored in the one or more memories and executed by the one or more processors,
the computer program code comprising:**

**code that enables a first party associated with a personal communication device (PCD) to input
or select authentication information for use in connection with a subsequent notification communication
session involving advance notice of a delivery or pickup of a good or service at a stop location by a mobile
thing (MT);**

code that causes storage of the authentication information;

code that monitors location or travel information in connection with the MT;

**code that causes initiation of the notification communication session to the PCD with the one
or more transceivers, in advance of arrival of the MT at the stop location, based at least in part upon the
location or travel information associated with the MT;**

**code that, during the notification communication session, provides the authentication
information to the PCD that indicates to the first party that the notification communication session was
initiated by an authorized source; and**

**code that, during the notification communication session, enables the first party to select
whether or not to engage in a communication session with a second party having access to particulars of
the pickup or delivery.**

BRITISH TELECOMS. PLC V. IAC/INTERACTIVE CORP. (Fed. Cir., June 3, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: District Court MTD**
- **Technology:**
 - Method of tracking a user's location, generating a "shortlist" of information sources relevant to the user's location, and transmitting that shortlist to the user's terminal
- **Step one:**
 - The claims are directed to the abstract idea of "providing lists of location-specific information sources to users based on their location. We have previously held that tailoring ... information to a user's characteristics, such as location, is an abstract idea."
- **Step two:**
 - The claims included only generic computer hardware.

BRITISH TELECOMS. PLC V. IAC/INTERACTIVE CORP. (cont'd)

- 1. A method of selecting information sources from which information is provided to users via a telecommunications system, said method comprising:
 - tracking the location of a user in the system by receipt of tracking information for said user;**
 - accessing location data indicating localities in which information from the respective sources is deemed to be relevant;**
 - generating a shortlist of information sources for said user on the basis of said tracking information and said location data; and**
 - transmitting said shortlist to a terminal associated with said user so as to allow said user to select an information source of interest and thereby to access information from said source.****

UBISOFT ENTERTAINMENT, S.A V YOUSICIAN OY (Fed. Cir., June 4, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: District Court granted MTD**
- **Technology:**
 - An interactive game designed for learning to play guitar.
- **Step one:**
 - The claims “do not recite a particular way of programing or designing software—they merely claim an abstract process in five steps: (i) ‘presenting’ notations; (ii) ‘receiving’ input; (iii) ‘assessing’ performance; (iv) ‘determining’ weaknesses; and (v) ‘changing’ the difficulty level or ‘generating’ mini-games.”
 - “The specification describes these steps in functional terms and not by what process or machinery is required to achieve those functions.”
 - “The specification states that ‘the processes presented herein are not inherently related to any particular computer, processing device, article, or other apparatus.’”

UBISOFT ENTERTAINMENT, S.A V YOUSICIAN OY (cont'd)

■ Step two:

- “[T]he patent itself makes clear that the claimed invention involves merely the application of conventional computer technology to common guitar instruction techniques. This cannot transform the nature of the asserted claims into patent-eligible applications of the abstract idea.”

UBISOFT ENTERTAINMENT, S.A V YOUSICIAN OY (cont'd)

1. A non-transitory computer readable storage medium with a computer program stored thereon, wherein the computer program is operable to present an interactive game for playing a song on a guitar, wherein the computer program instructs one or more processors to perform the steps of:

presenting, on a display device, a plurality of fingering notations corresponding to the song to be played by a user;

receiving, from a guitar input device, an analog or digital audio signal when the guitar is played by the user, wherein the received signal corresponds to the song played by the user;

assessing a performance of the songs played by the user, based on the assessed performance, determining a portion of the performance that should be improved;

based on the assessed performance and the determined portion of the performance that should be improved, selectively changing a difficulty level of at least a portion of the presented plurality of fingering notations corresponding to the song; and generating at least one mini-game different from the game for the song being played targeted to improving the user's skills associated with the performance of the determined portion.

DROPBOX, INC. V. SYNCHRONOSS TECHS., INC. (Fed. Cir., June 19, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: District Court granted MTD**
- **Technology – the '505 Patent:**
 - Data security and secure delivery of information in a network.
- **Step one – the '505 Patent:**
 - The Federal Circuit agreed with the District Court's finding that the claim "was directed to '(1) associating a security level with a data resource, (2) associating a security level with a mode of identification of a user, and then (3) ensuring that the user's security level is sufficiently high to meet the security level of the data resource to access the data resource.'"
 - "Such a focus constituted an abstract idea because 'the claim does not provide any limits that curb how the apparatus performs these functions' and 'invokes computers merely as tools to execute fundamental data access control principles,' 'fall[ing] squarely within the [abstract] category of controlling access to data.'"

DROPBOX, INC. V. SYNCHRONOSS TECHS., INC. (cont'd)

- **Step one – the '505 Patent (cont'd):**
 - The claimed “access checker” feature did not render the patent eligible because the “technical aspects of the access filter, where present [in the specification], are discussed only in terms of non-limiting embodiments. This is not enough to modify the focus of the claims.”
 - The specification “largely treats the ‘access filter’ as a black box.”
 - The dependent claim’s “additional elements of a ‘path in a network,’ a ‘path trust level,’ and an ‘encryption trust level’ redirect the focus of the claims towards a technological problem. But the claims still recite no technological solution.”
 - “Dropbox makes much of passages in the specification asserting that the '505 patent solved a technological problem. But that is not enough. The patent has to describe how to solve the problem in a manner that encompasses something more than the ‘principle in the abstract.’”

DROPBOX, INC. V. SYNCHRONOSS TECHS., INC.

(cont'd)

■ Step two – the '505 Patent:

- The “elements of ‘path trust level’ and ‘encryption trust level’...merely provide additional criteria for the ‘access checker’ to consider.”
- “When implemented, these elements may well provide a more ‘economically secure way to transmit data to a user over a network.’”
- “Our cases have consistently held that an ‘inventive concept’ exists when a claim ‘recite[s] a specific, discrete implementation of the abstract idea’ where the ‘particular arrangement of elements is a technical improvement over [the] prior art.’...This focus on specificity dovetails with concerns about preemption.”
- “We therefore affirm the district court’s decision holding the ’505 patent invalid....”

DROPBOX, INC. V. SYNCHRONOSS TECHS., INC. (cont'd)

- **Technology – the '399 Patent:**
 - A system to combine the user interface of an interactive connection (e.g., website) with a file upload connection (e.g. FTP).
- **Step one – the '399 Patent:**
 - The Federal Circuit agreed with the District Court's finding that claimed invention was “‘simple’ and directed to ‘the abstract idea of exchanging data using a computer,’ in part because” the claim “recites elements in only ‘very broad, functional terms.’”
 - “[T]he patent’s claimed advance—generating a single session ID linking the interactive connection and the data transfer connection—‘is simply a label by which the connections are identified[,] ... hardly a specific improvement on computer functionality or a nongeneralized computer activity’ but ‘the well-known and abstract concept of data recognition.’”

DROPBOX, INC. V. SYNCHRONOSS TECHS., INC. (cont'd)

- **Step one – the '399 Patent (cont'd):**
 - “To claim a technological solution to a technological problem, the patent must actually *claim the technological solution*. Neither a single session ID associating between the two connections nor a synchronizer synchronizing the operation amount to a *non-abstract* improvement—that is, a technological solution. ‘The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.’”
- **Step two – the '399 Patent:**
 - Dropbox argued the patent resulted in an “unconventional hybrid creation: one that combined the advantages of prior-art technologies without their disadvantages” but this purported inventive concept simply applied the abstract idea to otherwise routine and conventional technology.

DROPBOX, INC. V. SYNCHRONOSS TECHS., INC.

(cont'd)

- **Technology – the '541 Patent:**
 - A system for uploading and downloading data from a mobile device to server.
- **Step one – the '541 Patent:**
 - The Federal Circuit agreed with the District Court's finding the claims was "abstract because it recited essentially the same process as a person manually transferring data from one mobile device to another, with the person herself acting as the 'server.'"
 - "The nature of the 'claimed advance' of the patent—which Dropbox asserts to be 'a unified tag and data structure,' including transmitting data with an accompanying user ID and 'remote server synchronization for wirelessly backing up data,'...reveals an abstract idea at the heart of claim 1."
- **Step two – the '541 Patent:**
 - The Federal Circuit was again unconvinced that the combined elements conferred an inventive concept.

DROPBOX, INC. V. SYNCHRONOSS TECHS., INC.

(cont'd)

The '505 Patent:

- 1. Apparatus that provides an information resource in response to a request from a user, the request including an identification of the user according to a mode of identification and the apparatus comprising:
 - access control information including**
 - a sensitivity level associated with the resource and**
 - a trust level associated with the mode of identification; and**
 - an access checker which permits the apparatus to provide the resource only if the trust level for the mode of identification is sufficient for the sensitivity level of the resource.****

- 8. The apparatus set forth in any one of claims 1 through 4 wherein:
 - the access request is transferred via a path in a network; and**
 - the access control information further includes**
 - a path trust level associated with the path and**
 - an encryption trust level associated with an encryption method,**
 - the access checker further permitting the apparatus to provide the resource only if**
 - either the path trust level is sufficient for the sensitivity level or the access request has**
 - been encrypted with an encryption method whose encryption trust level is sufficient for**
 - the sensitivity level.****

DROPBOX, INC. V. SYNCHRONOSS TECHS., INC.

(cont'd)

The '399 Patent:

- 1. A method of synchronizing an interactive connection and a non-interactive data transfer connection between a client and a service provider, comprising:
 - creating an interactive connection;**
 - creating a data transfer connection; and**
 - generating a single session ID for the two connections, which ID associates between the two connections.****

The '541 Patent:

- 1. A method for backing up data stored on a mobile customer premises equipment comprising the steps of:
 - storing data at the mobile customer premises equipment;**
 - formatting the data stored at the mobile customer premises equipment into fields by determining data fields, identifying which portions of said data correspond to a respective data field, and tagging said data[;]**
 - transmitting the data with a user ID from the mobile customer premises equipment across a mobile network to a server for storage;**
 - retrieving said data from said server across a mobile network in response to one of an expiration of time and request from said mobile customer premises equipment by transmitting said data to said mobile customer premises equipment; and**
 - transmitting said data to said mobile customer premises equipment by transmitting the data in more than one information signal and sequentially numbering each of said information signals.****

CARDIONET, LLC V. INFOBIONIC, INC. (Fed. Cir., July 1, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: District Court granted renewed judgment on the pleadings**
- **Technology:**
 - Mobile cardiac telemetry devices.
- **Step one:**
 - The Federal Circuit found that the claims followed the *Electric Power Group* case law, whereby the claims are directed to “collecting, analyzing, and displaying cardiac data.”
 - “The specifications explain that a monitoring system ‘monitors and reports physiological data,’ which can be analyzed and ‘arrhythmia events can be identified based on predetermined criteria.’...The identified events are ‘correlated’ with events identified by a parallel human assessment to determine whether the events are valid.”

CARDIONET, LLC V. INFOBIONIC, INC. (cont'd)

■ Step one (cont'd):

- “CardioNet argues that the display of heart rate data and atrial fibrillation burden on a ‘common time scale’ is an improvement over prior art cardiac monitoring systems because the graph ‘can be used for asymptomatic AF detection, drug therapy (rate, rhythm, anti-coagulants), pre/post ablation monitoring, and CHF (congestive heart failure) decompensation.’...
However, displaying data, including displaying two data series on the same time axis, is not the sort of ‘improvement[] to existing technological processes and computer technology’ capable of establishing the eligibility of computer-implemented method claims...”

■ Step two:

- “While some claims are cast as systems and articles, they are implemented on generic ‘monitoring systems,’ ‘monitoring stations,’ and ‘processing systems’...”

CARDIONET, LLC V. INFOBIONIC, INC. (cont'd)

31. A system for reporting information related to arrhythmia events comprising:

a monitoring system configured to process and report physiological data, including heart rate data, for a living being and configured to identify arrhythmia events from the physiological data;

a monitoring station for receiving the physiological data from the monitoring system;

a processing system configured to receive arrhythmia information from the monitoring system and configured to receive human-assessed arrhythmia information from the monitoring station wherein the human-assessed arrhythmia information derives from at least a portion of the physiological data and wherein the processing system is capable of pictographically presenting, using a common time scale, information regarding the heart rate data during a defined time period and regarding duration of arrhythmia event activity, according to the identified arrhythmia events, during the defined time period such that heart rate trend is presented with arrhythmia event burden.

BRAEMAR MANUFACTURING, LLC V. THE SCOTTCARE CORPORATION (Fed. Cir., July 1, 2020) (non-precedential)

- **Outcome:** One patent invalid, one remanded, and two invalid consistent with *CardioNet, LLC v. Infobionic, Inc.*
- **Procedure:** District Court granted judgment on the pleadings
- **Technology:**
 - Mobile cardiac telemetry devices.
- **Step one:**
 - “Here, the purported improvement is the abstract idea of classification and filtering of data, not an improvement in the functioning of computer capabilities. On their face, the claims are directed to collecting (‘receiving a cardiac biological signal’), classifying (‘classifying the events’), and filtering data into groups based on identifying characteristics (‘determining a measure of merit,’ ‘comparing the measure of merit’), and transmitting the data for review.”

BRAEMAR MANUFACTURING, LLC V. THE SCOTTCARE CORPORATION (cont'd)

- **Step two:**
 - **Beyond the abstract idea, “the remaining claim limitations recite only routine data manipulation, which can be performed by a generic computing device.”**

BRAEMAR MANUFACTURING, LLC V. THE SCOTTCARE CORPORATION (cont'd)

37. An article comprising one or more machine-readable media storing instructions operable to cause one or more machines to perform operations for monitoring a cardiac biological signal using electrocardiographic monitoring instrumentation, the operations comprising:

receiving a cardiac biological signal that includes information describing events, wherein events comprise periods in time when an information content of the cardiac biological signal is of increased relevance to a particular purpose and the events are demarcated by periods of time that are not of increased relevance to the particular purpose;

determining a measure of merit of information describing each event, wherein the measure of merit embodies both the severity of the cardiac condition indicated by the information describing the event and an amount of noise in the information describing the event;

comparing the measure of merit of information describing the event with a merit criterion; transmitting, for medical purposes, information describing a first proper subset of the events that have measures of merit meeting the merit criterion to a remote medical receiver; and

discarding information describing a second proper subset of the events that have measures of merit that fail to meet the merit criterion.

DATA SCAPE LTD. V. WESTERN DIGITAL CORP. (Fed. Cir., July 1, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: District Court granted MTD**
- **Technology:**
 - Method for transferring music from one device onto another device.
- **Step one:**
 - The Federal Circuit agreed the claims were “directed to the abstract idea of selective data storage, transfer, and processing.”
- **Step two:**
 - The claim “generically recites editing information, detecting the connection of one apparatus to another, comparing data on the two devices, and transmitting selected data from one apparatus to another.”
 - “Similar to previous cases, nothing in the claims ‘requires anything other than conventional computer and network components operating according to their ordinary functions.’”

DATA SCAPE LTD. V. WESTERN DIGITAL CORP.

(cont'd)

19. A communication method, comprising the steps of:

editing management information of data to be transferred from an apparatus to an external apparatus by selecting certain data to be transferred, said management information stored in a storage medium of the apparatus, without regard to the connection of said apparatus and said external apparatus;

detecting, at the apparatus, whether said apparatus and said external apparatus are connected;

comparing at the apparatus, said edited management information with management information of data stored in said external apparatus; and

transmitting the selected data from said apparatus to said external apparatus based on said management information and a result of the comparison when said detection indicates that said apparatus and said external apparatus are connected.

PACKET INTELLIGENCE LLC V. NETSCOUT SYSTEMS, INC. (Fed. Cir., July 14, 2020)

- **Outcome: Claims valid**
- **Procedure: District Court denied JMOL**
- **Technology:**
 - Method for monitoring packets exchanged over a computer network.
- **Step one:**
 - “[T]he [district] court rejected NetScout’s argument that claim 19 is directed to the collection, comparison, and classification of information. The court instead held that the claim was directed to ‘solving a discrete technical problem: relating disjointed connection flows to each other.’...The court determined that the claim was directed to ‘specific technological solutions, such as identifying and refining a conversational flow so that different connection flows can be associated with each other and ultimately an underlying application or protocol.’”

PACKET INTELLIGENCE LLC V. NETSCOUT SYSTEMS, INC. (Cont'd)

■ Step one (cont'd):

- **“The claim solves a technological problem by identifying and refining a conversational flow such that different connection flows can be associated with each other and ultimately with an underlying application or protocol. ...The claimed ‘parser subsystem’ extracts information from the packet. This packet information is checked against ‘flow-entry memory’ by the claimed ‘lookup engine.’ The flow insertion engine coupled to the memory and the lookup engine determines whether the packet matches an entry in the flow-entry database. If there is a match, the flow insertion engine updates the matching entry with data from the new packet. If there is no match, the engine creates a new entry.”**
- **“The specifications explain that known network monitors were unable to identify disjointed connection flows to each other, and the focus of the claims is a specific improvement in computer technology: a more granular, nuanced, and useful classification of network traffic.”**

PACKET INTELLIGENCE LLC V. NETSCOUT SYSTEMS, INC. (Cont'd)

19. A packet monitor for examining packets passing through a connection point on a computer network, each packet[] 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 information for future packets to be identified with the new flow-entry,

wherein the operation of the parser subsystem depends on one or more of the protocols to which the packet conforms.

WESTERN EXPRESS BANCSHARES, LLC V. GREEN DOT CORP. (Fed. Cir., July 14, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: District Court granted judgment on the pleadings**
- **Technology:**
 - A method of funds transfer.
- **Step one:**
 - “The first three steps [of the claim] describe the basic concept of a payment card, and the last step merely describes the ability to adjust the financial relationship between the purchaser and the card provider from one conventional form to other conventional forms through a communication providing personal information. We agree with the district court that under the first step of *Alice*, claim 1 is thus directed to a ‘method of funds transfer’ using a payment card.”

WESTERN EXPRESS BANCSHARES, LLC V. GREEN DOT CORP. (Cont'd)

■ Step one (cont'd):

- “Western Express first argues that the '932 patent claims solve several problems associated with prior art money account cards: creating a bank account without an approval process, allowing the immediate purchase of goods, and allowing the purchaser to alter the functionality of the card after the card is already connected to a bank account. The first two of these ‘advantages’ are just the conventional benefits of a payment card. The ability to alter a financial relationship through communication between the parties is a fundamental characteristic of financial relationships.”

WESTERN EXPRESS BANCSHARES, LLC V. GREEN DOT CORP. (Cont'd)

■ Step two:

- **“The patent itself describes the recited component parts as present in the prior art: credit cards with preset credit limits...authorization mechanisms ...and communications mechanisms by which the relationship may be changed....The '932 patent does not describe any new money transfer techniques, and Western Express does not argue that by the May 2002 priority date, payment cards and or money transfers were in any way unconventional. Indeed, Western Express does not identify any components that were not conventional by the priority date.”**

WESTERN EXPRESS BANCSHARES, LLC V. GREEN DOT CORP. (Cont'd)

A method of funds transfer comprising the steps of:

- a. distributing at least one of a plurality of money account cards having specified capabilities to a retailer, each money account card having information associated with a predetermined account with one or more financial institutions, the retailer distributing the money account card to a purchaser thereof;**
- b. receiving funds for allocation to the predetermined account, said funds being received from the purchaser of said money account card from the retailer;**
- c. distributing at least a portion of the funds received into said predetermined account to a holder of the at least [sic] one money account card; and**
- d. permitting the customer to furnish personal information of the holder other than a PIN, by communicating with the holder through an ATM, Internet connection or telephone call, and in response, activating or altering a previously dormant capability of the at least [sic] one money account card apart from withdrawal of funds.**

Recent Fed. Cir. § 101 Life Sciences Cases

ATHENA DIAGNOSTICS, INC. V. MAYO COLLABORATIVE SERVS., LLC (Fed. Cir., Feb. 6, 2019)

- **Outcome: claims invalid**
- **Procedure: district court granted motion to dismiss, finding claims directed to a natural law**
- **Step one:**
 - “As an initial matter, we must identify what the relevant natural law is. Here, it is the correlation between the presence of naturally-occurring MuSK autoantibodies in bodily fluid and MuSK-related neurological diseases like MG. This correlation exists in nature apart from any human action. There can thus be no dispute that it is an ineligible natural law.”
 - “To determine whether a claim is directed to an ineligible concept, we have frequently considered whether the claimed advance improves upon a technological process or merely an ineligible concept, based on both the written description and the claims.”

ATHENA DIAGNOSTICS, INC. V. MAYO COLLABORATIVE SERVS., LLC (cont'd)

■ Step one (cont'd):

- “As in *Cleveland Clinic* and *Ariosa*, we conclude that claims 7–9 are directed to a natural law because the claimed advance was only in the discovery of a natural law, and that the additional recited steps only apply conventional techniques to detect that natural law.”
- “The specification of the '820 patent highlights the discovery of the natural law, explaining that “[t]he present inventors surprisingly found that many of the 20% of MG patients [who] do not exhibit any autoantibodies to [the acetylcholine receptor], instead have ... antibodies directed against the extracellular [amino]-terminal domains of MuSK.”

ATHENA DIAGNOSTICS, INC. V. MAYO COLLABORATIVE SERVS., LLC (cont'd)

■ Step one (cont'd):

- “Although we agree that claim 9 leaves open to the public other ways of interrogating the correlation between MuSK autoantibodies and MuSK-related disorders without practicing the claim's concrete steps, that does not disturb our conclusion at step one. Preemption is sufficient to render a claim ineligible under § 101, but it is not necessary.”
- “Athena argues that the claims at issue differ from prior diagnostic claims we have held ineligible under § 101 because they require labeling MuSK with a man-made substance. We disagree. As Mayo argues, the use of a man-made molecule is not decisive if it amounts to only a routine step in a conventional method for observing a natural law.”

ATHENA DIAGNOSTICS, INC. V. MAYO COLLABORATIVE SERVS., LLC (cont'd)

■ Step one (cont'd):

- “Claiming a natural cause of an ailment and well-known means of observing it is not eligible for patent because such a claim in effect only encompasses the natural law itself. But claiming a new treatment for an ailment, albeit using a natural law, is not claiming the natural law.”

■ Step two:

- We agree with Mayo that the steps of the claims not drawn to ineligible subject matter, whether viewed individually or as an ordered combination, only require standard techniques to be applied in a standard way [because] the specification of the '820 patent plainly states that ‘[t]he actual steps of detecting autoantibodies in a sample of bodily fluids may be performed in accordance with immunological assay techniques known per se in the art,’ such as radioimmunoassays.”

ATHENA DIAGNOSTICS, INC. V. MAYO COLLABORATIVE SERVS., LLC (cont'd)

■ Step two (cont'd):

- “Athena also argues that the claimed steps were unconventional because they had not been applied to detect MuSK autoantibodies prior to Athena's discovery of the correlation between MuSK autoantibodies and MG. Even accepting that fact, we cannot hold that performing standard techniques in a standard way to observe a newly discovered natural law provides an inventive concept. This is because ‘[t]he inventive concept necessary at step two ... cannot be furnished by the unpatentable law of nature ... itself.’”

ATHENA DIAGNOSTICS, INC. V. MAYO COLLABORATIVE SERVS., LLC (cont'd)

- **Claim 7 (Claim 1 not on appeal):**
 - **1. A method for diagnosing neurotransmission or developmental disorders related to [MuSK] in a mammal comprising the step of detecting in a bodily fluid of said mammal autoantibodies to an epitope of [MuSK].**

 - **7. A method according to claim 1, comprising contacting MuSK or an epitope or antigenic determinant thereof having a suitable label thereon, with said bodily fluid, immunoprecipitating any antibody/MuSK complex or antibody/MuSK epitope or antigenic determinant complex from said bodily fluid and monitoring for said label on any of said antibody/MuSK complex or antibody/MuSK epitope or antigen determinant complex, wherein the presence of said label is indicative of said mammal is suffering from said neurotransmission or developmental disorder related to [MuSK].**

NATURAL ALTERNATIVES INT'L, INC. V. CREATIVE COMPOUNDS, LLC, (Fed. Cir., Mar. 15, 2019)

- **Outcome: claims valid**
- **Procedure: district court granted judgment on the pleadings**
- **Step one (method of treatment claims):**
 - “[B]oth the *Vanda* claims and the Method Claims specify a compound to be administered to achieve the claimed result. Claim 1 of the ’596 patent achieves the result through the administration of the specific compound beta-alanine, and claim 1 of the ’865 patent requires use of one of the three specified forms of beta-alanine. The claims in *Vanda* further specified the dosages of the compound to be administered. The Method Claims likewise contain a dosage limitation by virtue of the “effective” limitation....This goes far beyond merely stating a law of nature, and instead sets forth a particular method of treatment.”

NATURAL ALTERNATIVES INT'L, INC. V. CREATIVE COMPOUNDS, LLC (cont'd)

- **Step one (method of treatment claims) (Cont'd):**
 - “As we explained in *Vanda Pharmaceuticals* ..., claims that are directed to particular methods of treatment are patent eligible.”
 - “The Method Claims at issue are treatment claims. They cover using a natural product in unnatural quantities to alter a patient’s natural state, to treat a patient with specific dosages outlined in the patents.”
 - The Court noted that the parties disputed the applicability of the USPTO’s Guidance (particularly Example 3 of the Life Science Examples and the updated Guidance in view of *Vanda*), but determined that “this is not a case in which *Skidmore* deference would affect the outcome.”

NATURAL ALTERNATIVES INT'L, INC. V. CREATIVE COMPOUNDS, LLC (cont'd)

- **Step two (method of treatment claims):**
 - “While a fact-finder may ultimately determine that the dietary supplement limitation was well-understood, routine, and conventional, absent a clear statement to that effect in the specification, complaint, or other material properly before the court, when disputed such a determination may not be made on a motion for judgment on the pleadings.”

NATURAL ALTERNATIVES INT'L, INC. V. CREATIVE COMPOUNDS, LLC (cont'd)

- **Step one (product claims):**
 - “Although beta-alanine is a natural product, the Product Claims are not directed to beta-alanine. A claim to a manufacture or composition of matter made from a natural product is not directed to the natural product where it has different characteristics and ‘the potential for significant utility.’...Just as the Method Claims are directed to specific methods of treatment that employ a natural law, the Product Claims are directed to specific treatment formulations that incorporate natural products, but they have different characteristics and can be used in a manner that beta-alanine as it appears in nature cannot.”

NATURAL ALTERNATIVES INT'L, INC. V. CREATIVE COMPOUNDS, LLC (cont'd)

■ Step one (product claims):

- “[T]he quantity of beta-alanine must be sufficient to ‘effectively increase[] athletic performance,’ and the specification provides a method for determining such an amount. Similarly, the ‘dietary supplement’ in claim 1 of the ’084 patent uses the product beta-alanine at a dosage of ‘between about 0.4 grams to 16 grams’ to ‘effectively increase[] athletic performance.’ In each case, the natural products have been isolated and then incorporated into a dosage form with particular characteristics.”

■ Step two (product claims):

- “[E]ven if the Product Claims were directed to ineligible subject matter, judgment on the pleadings would still be inappropriate under step two.”

NATURAL ALTERNATIVES INT'L, INC. V. CREATIVE COMPOUNDS, LLC (cont'd)

- **Step one (method of manufacture claims):**
 - **“The Manufacturing Claims are not directed to the natural law or product of nature, but instead are an application of the law and new use of that product. Claim 1 of the '610 patent is even further removed from the natural law and product of nature at issue in the Method Claims and Product Claims, respectively. It is directed to the manufacture of a human dietary supplement with certain characteristics. The supplement is not a product of nature and the use of the supplement to achieve a given result is not directed to a law of nature. We do not see, therefore, how a claim to the manufacture of a non-natural supplement would be directed to the law of nature or natural product.”**

NATURAL ALTERNATIVES INT'L, INC. V. CREATIVE COMPOUNDS, LLC (cont'd)

- **Claim 34 of the '947 patent:**
 - **34. A human dietary supplement for increasing human muscle tissue strength comprising a mixture of creatine, a carbohydrate and free amino acid beta-alanine that is not part of a dipeptide, polypeptide or an oligopeptide, wherein the human dietary supplement does not contain a free amino acid L-histidine, wherein the free amino acid betaalanine is in an amount that is from 0.4 g to 16.0 g per daily dose, wherein the amount increases the muscle tissue strength in the human, and wherein the human dietary supplement is formulated for one or more doses per day for at least 14 days.**

NATURAL ALTERNATIVES INT'L, INC. V. CREATIVE COMPOUNDS, LLC (cont'd)

■ Claim 1 of the '865 patent:

1. A method of increasing anaerobic working capacity in a human subject, the method comprising:
 - a) providing to the human subject an amount of an amino acid to blood or blood plasma effective to increase beta-alanylhistidine dipeptide synthesis in the tissue, wherein said amino acid is at least one of:
 - i) beta-alanine that is not part of a dipeptide, polypeptide or oligopeptide;
 - ii) an ester of beta-alanine that is not part of a dipeptide, polypeptide or oligopeptide; or
 - iii) an amide of beta-alanine that is not part of a dipeptide, polypeptide or oligopeptide; and
 - b) exposing the tissue to the blood or blood plasma, whereby the concentration of beta-alanylhistidine is increased in the tissue, wherein the amino acid is provided through a dietary supplement.

NATURAL ALTERNATIVES INT'L, INC. V. CREATIVE COMPOUNDS, LLC (cont'd)

- **Claim 1 of the '610 patent:**

- **1. Use of beta-alanine in manufacturing a human dietary supplement for oral consumption;
supplying the beta-alanine, which is not part of a dipeptide, polypeptide or oligopeptide, as a single ingredient in a manufacturing step of the human dietary supplement or
mixing the beta-alanine, which is not part of a dipeptide, polypeptide or oligopeptide, in combination with at least one other ingredient for the manufacture of the human dietary supplement,
whereby the manufactured human dietary supplement is for oral consumption of the human dietary supplement in doses over a period of time increases beta-alanyl histidine levels in muscle tissue sufficient to delay the onset of fatigue in the human.**

ENDO PHARMACEUTICALS INC. V. TEVA PHARMACEUTICALS, INC. (Fed. Cir., Mar. 28, 2019)

- **Outcome:** claims eligible at step one
- **Procedure:** district court granted motion to dismiss
- **Step one:**
 - The patent covers a method of using oxymorphone to treat pain in patients with impaired kidney function. That method “allowed renally impaired patients to be treated safely and effectively notwithstanding their impaired kidney function.”
 - Here, “the inventor found that there was a statistically significant correlation between plasma AUC1 for oxymorphone and a patient’s degree of renal impairment, as indicated by their creatinine clearance rate.”
 - Below, the “magistrate judge first analyzed step 1 of the Alice/Mayo test, reasoning that the claims are directed to the natural law that the bioavailability of oxymorphone is increased in people with severe renal impairment.”

ENDO PHARMACEUTICALS INC. V. TEVA PHARMACEUTICALS, INC. (cont'd)

■ Step one (cont'd):

- Contrary to the lower court's finding, “the claims are directed to a patent-eligible method of using oxymorphone or a pharmaceutically acceptable salt thereof to treat pain in a renally impaired patient.”
- Claim 1 requires specific steps: “(a) providing a pharmaceutical (5–80 mg of oral controlled-release oxymorphone or one of its pharmaceutically acceptable salts), (b) testing the patient for a disease state (reduced kidney function based on creatinine clearance rate), and then (c) administering the pharmaceutical (a lower dose of oxymorphone) based on the creatinine clearance rate to achieve an average AUC of oxymorphone over a 12-hour period of less than 21 ng·hr/mL.”
- The claims were considered “legally indistinguishable” from those in *Vanda*. “Both claims recite a method for treating a patient.”
- “Like the claims in Vanda, the claims here ‘are directed to a specific method of treatment for specific patients using a specific compound at specific doses to achieve a specific outcome.’”

ENDO PHARMACEUTICALS INC. V. TEVA PHARMACEUTICALS, INC. (cont'd)

■ Claim 1 of the '737 patent:

- 1. A method of treating pain in a renally impaired patient, comprising the steps of:
 - a. providing a solid oral controlled release dosage form, comprising:
 - i. about 5 mg to about 80 mg of oxymorphone or a pharmaceutically acceptable *1351 salt thereof as the sole active ingredient; and
 - ii. a controlled release matrix;
 - b. measuring a creatinine clearance rate of the patient and determining it to be
 - (a) less than about 30 ml/min,
 - (b) about 30 mL/min to about 50 mL/min,
 - (c) about 51 mL/min to about 80 mL/min, or
 - (d) above about 80 mL/min; and
 - c. orally administering to said patient, in dependence on which creatinine clearance rate is found, a lower dosage of the dosage form to provide pain relief; wherein after said administration to said patient, the average AUC of oxymorphone over a 12-hour period is less than about 21 ng·hr/mL.

CLEVELAND CLINIC FOUND. V. TRUE HEALTH DIAGNOSTICS LLC, (Fed. Cir., Apr. 1, 2019)

- **Outcome: claims invalid**
- **Procedure: district court granted motion to dismiss**
- **Step one:**
 - **The patents concerned “diagnostic test[s] which can be used to determine whether an individual ... is at a lower risk or higher risk of developing or having cardiovascular disease” and those tests are “based on the discovery that patients with coronary artery disease (CAD) have significantly greater levels of leukocyte and blood myeloperoxidase (MPO) levels.”**
 - **Notably, the Federal Circuit had found the parent patent ineligible in a prior proceeding.**
 - **The Court agreed “that the claims are directed to the natural law that blood MPO levels correlate with atherosclerotic CVD.”**

CLEVELAND CLINIC FOUND. V. TRUE HEALTH DIAGNOSTICS LLC (cont'd)

■ Step one (cont'd):

- The claims “only recite applying known methods to detect MPO levels in plasma, comparing them to standard MPO levels, and reaching a conclusion: that the patient’s blood MPO levels are elevated in comparison to a control group. This conclusion is simply another articulation of the natural law that blood MPO levels correlate with atherosclerotic CVD.”
- “Nor is the fact that blood MPO levels correlate with atherosclerotic CVD any less a natural law because it can only be observed by use of certain techniques. Many scientific techniques will not reveal a correlation between blood MPO levels and atherosclerotic CVD.”

CLEVELAND CLINIC FOUND. V. TRUE HEALTH DIAGNOSTICS LLC (cont'd)

■ Step two:

- “Neither the specification nor the record discloses any technical impediment to using an immunoassay in a standard way to measure MPO levels in blood. The patents disclose that an immunoassay was a known technique for measuring protein mass and never suggest that any significant adjustments needed to be made to accommodate its use for measuring blood MPO levels.”
- “Furthermore, the specification and prosecution history plainly concede that each of the process steps was well-known in the art.”
- “Cleveland Clinic also argues that remand is warranted because the district court improperly resolved factual disputes against it at the pleadings stage. In view of our conclusion that the specification and prosecution history are clear that the claimed method uses a known technique in a standard way to observe a natural law, we decline to do so.”

CLEVELAND CLINIC FOUND. V. TRUE HEALTH DIAGNOSTICS LLC (cont'd)

■ Claim 1 of the '597 patent:

- 1. A method for identifying an elevated myeloperoxidase (MPO) concentration in a plasma sample from a human subject with atherosclerotic cardiovascular disease comprising:
 - a) contacting a sample with an anti-MPO antibody, wherein said sample is a plasma sample from a human subject having atherosclerotic cardiovascular disease;
 - b) spectrophotometrically detecting MPO levels in said plasma sample;
 - c) comparing said MPO levels in said plasma sample to a standard curve generated with known amounts of MPO to determine the MPO concentration in said sample; and
 - d) comparing said MPO concentration in said plasma sample from said human subject to a control MPO concentration from apparently healthy human subjects, and identifying said MPO concentration in said plasma sample from said human subject as being elevated compared to said control MPO concentration.

GENETIC VETERINARY SCIS., INC. V. LABOKLIN GMBH & CO. KG (Fed. Cir., Aug. 9, 2019)

- **Outcome: Claims invalid**
- **Procedure: District court granted JMOL**
- **Technology:**
 - In vitro methods for genotyping Labrador Retrievers, to discover whether the dog might be a genetic carrier of the disease Hereditary Nasal Parakeratosis (“HNPK”).
- **Step One:**
 - “[T]he Asserted Claims are not directed to a new and useful method for discovery because they begin and end with the point discovery of the HNPK mutation in the SUV39H2 gene...The parties do not dispute that the mutation itself is a naturally occurring phenomenon.”

GENETIC VETERINARY SCIS., INC. V. LABOKLIN GMBH & CO. KG (Cont'd)

■ Step One (cont'd):

- Based on expert testimony, the court concluded claim 1 breaks down to three parts:
 - ❑ Step (a) “‘obtaining a biological sample’ requires a sample of DNA from a dog, which both parties’ experts testified usually requires obtaining a blood sample or cheek swab from the dog”;
 - ❑ Step (b) “‘genotyping a SUV39H2 gene encoding the polypeptide of SEQ ID NO: 1,’ identifies the location of the genetic mutation”
 - ❑ Step (c) “‘detect[ing] the presence of a replacement of a nucleotide’ at a specific base pair position identifies the location of the equivalent normal gene”
- “In other words, claim 1 simply states that the search for the mutation involves the laboratory examination of Labrador Retriever DNA, which resulted in the revelation of the mutation.”
- “Taken together, the plain language of claim 1 demonstrates that it is directed to nothing more than “observing or identifying” the natural phenomenon of a mutation in the SUV39H2 gene.”

GENETIC VETERINARY SCIS., INC. V. LABOKLIN GMBH & CO. KG (Cont'd)

■ Step Two:

- “Nothing in claim 1’s language suggests the invention of a new *method* for genotyping. See ’114 patent col. 15 l. 16 (claiming ‘genotyping’ but not explaining specific steps of *how* to genotype). Rather, instructive to our analysis is that LABOKLIN’s expert agreed that the genotyping method in claim 1 uses conventional or known laboratory techniques to observe the newly discovered mutation in the SUV39H2 at position 972.”
- Dependent claims that included “genotyping achieved by PCR, [and] real-time PCR,” ... “are well-understood, routine, conventional activities in the life sciences when they are claimed in a merely generic manner (e.g., at a high level of generality) or as insignificant extra-solution activity.”

GENETIC VETERINARY SCIS., INC. V. LABOKLIN GMBH & CO. KG (Cont'd)

■ Step Two (cont'd):

- “As for claim 3, which recites ‘utiliz[ing] a primer pair’ as the means for locating the mutation...LABOKLIN’s expert testified that while he had never used primer pairs to genotype base pair position 972 in the SUV39H2 gene, primer pairs is a ‘decades old’ technique ‘just like boiling or baking.’”

GENETIC VETERINARY SCIS., INC. V. LABOKLIN GMBH & CO. KG (Cont'd)

- 1. An in vitro method for genotyping a Labrador Retriever comprising:
 - a) obtaining a biological sample from the Labrador Retriever;**
 - b) genotyping a SUV39H2 gene encoding the polypeptide of SEQ ID NO: 1[;] and**
 - c) detecting the presence of a replacement of a nucleotide T with a nucleotide G at position 972 of SEQ ID NO: 2.****
- 2. The method according to claim 1, wherein the genotyping is achieved by [polymerase chain reaction (“PCR”)], real-time PCR, melting point analysis of double-stranded DNA, mass spectroscopy, direct DNA sequencing, restriction fragment length polymorphism (RFLP), single strand conformation polymorphism (SSCP), high performance liquid chromatography (HPLC), or single base primer extension.**
- 3. The method of claim 1, wherein the genotyping utilizes a primer pair compris[ed] of a first primer and a second primer, each comprising a contiguous span of at least 14 nucleotides of the sequence SEQ ID NO: 2 or a sequence complementary thereto, wherein:
 - a) said first primer hybridizes to a first DNA strand of the SUV39H2 gene;**
 - b) said second primer hybridizes to the strand complementary to said first DNA strand of the SUV39H2 gene; and**
 - c) the 3' ends of said first and second primers are located on regions flanking the position 972 of SEQ ID NO: 2, or of nucleotide positions complementary thereto****

INO THERAPEUTICS LLC V PRAXAIR DISTRIBUTION INC. (Fed. Cir., Aug. 27, 2019) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: After bench trial, district court issued memorandum finding claims ineligible**
- **Technology:**
 - **Methods and devices for administering inhaled nitric oxide (“iNO”).**
- **Step one:**
 - **The court said the claim “instructs a physician to administer iNO gas to non-LVD patients as before, while now excluding the LVD patients. The exclusion step merely restates the natural law. It expressly recites ‘excluding the second patient from treatment with inhaled nitric oxide, based on the determination that the second patient has left ventricular dysfunction, so is at particular risk of increased PCWP leading to pulmonary edema upon treatment with inhaled nitric oxide.’”**

INO THERAPEUTICS LLC V PRAXAIR DISTRIBUTION INC. (Cont'd)

■ Step one (cont'd):

- The court did not consider the claims to be an eligible treatment method because “the focus of the invention is not on a new way of actually treating the underlying condition,” does not “recite a way of reducing the risk of pulmonary edema while providing some level of treatment to those patients.”
- “[T]he focus of the invention is screening for a particular adverse condition that, once identified, requires iNO treatment be withheld. A treatment step of administering a prior art dosage is also present. But that step is plainly not the focus of the claimed invention. Mallinckrodt concedes this step is not innovative. Mallinckrodt does not point to ‘any innovation other than its [purported] discovery of the natural law.’”

INO THERAPEUTICS LLC V PRAXAIR DISTRIBUTION INC. (Cont'd)

- **Step two:**
 - “In essence, claim 1 boils down to an instruction to doctors: when treating neonatal patients with iNO gas, take into account their natural reaction to iNO gas. Do not give iNO gas to patients with LVD; otherwise, proceed with treatment. Any other steps are either necessary to manifest the natural law or are undisputedly routine and conventional.”

INO THERAPEUTICS LLC V PRAXAIR DISTRIBUTION INC. (Cont'd)

'741 Patent:

1. A method of treating patients who are candidates for inhaled nitric oxide treatment, which method reduces the risk that inhalation of nitric oxide gas will induce an increase in pulmonary capillary wedge pressure (PCWP) leading to pulmonary edema in neonatal patients with hypoxic respiratory failure, the method comprising:

(a) identifying a plurality of term or near-term neonatal patients who have hypoxic respiratory failure and are candidates for 20 ppm inhaled nitric oxide treatment;

(b) determining that a first patient of the plurality does not have left ventricular dysfunction;

(c) determining that a second patient of the plurality has left ventricular dysfunction, so is at particular risk of increased PCWP leading to pulmonary edema upon treatment with inhaled nitric oxide;

(d) administering 20 ppm inhaled nitric oxide treatment to the first patient; and

(e) excluding the second patient from treatment with inhaled nitric oxide, based on the determination that the second patient has left ventricular dysfunction, so is at particular risk of increased PCWP leading to pulmonary edema upon treatment with inhaled nitric oxide.

BOEHRINGER INGELHEIM PHARM. INC. V. MYLAN PHARM. INC. (Fed. Cir., Mar. 16, 2020) (non-precedential)

- **Outcome: Claims valid**
- **Procedure: District court granted judgment on the pleadings**
- **Technology:**
 - The treatment and/or prevention of metabolic diseases such as type 2 diabetes mellitus with DPP-IV inhibitors where normal metformin therapy is not appropriate.
- **Step one:**
 - “Boehringer argues that the claims are directed to a ‘method of treating a specific disease ([type 2 diabetes mellitus]) for specific patients (with renal impairment) using a specific compound (linagliptin) at specific doses (same dose in patients with renal impairment as in patients with normal renal function) to achieve a specific outcome.’”

BOEHRINGER INGELHEIM PHARM. INC. V. MYLAN PHARM. INC. (Cont'd)

- **Step one (cont'd):**

- “We hold that, consistent with this court’s decision in *Vanda Pharmaceuticals Inc. v. West-Ward Pharmaceuticals International Ltd.*, 887 F.3d 1117 (Fed. Cir. 2018), the claims are directed to a particular method of treatment under step one and are therefore patent eligible.”

BOEHRINGER INGELHEIM PHARM. INC. V. MYLAN PHARM. INC. (Cont'd)

1. A method of treating and/or preventing metabolic diseases in a patient for whom metformin therapy is inappropriate due to at least one contraindication against metformin comprising orally administering to the patient a DPP-IV inhibitor wherein the contraindication is selected from the group consisting of: renal disease, renal impairment or renal dysfunction, unstable or acute congestive heart failure, acute or chronic metabolic acidosis, and hereditary galactose intolerance.

10. The method according to claim 1 wherein the metabolic disorder is type 2 diabetes mellitus and wherein the contraindication is renal disease, renal impairment or renal dysfunction, and wherein said DPP-4 inhibitor is used for said patient in the same dose as for a patient with normal renal function

ILLUMINA, INC. V. ARIOSIA DIAGNOSTICS, INC. (Fed. Cir., Mar. 17, 2020)

- **Outcome: Claims valid**
- **Procedure: District court granted SJ**
- **Technology:**
 - **Methods of preparing a fraction of cell-free DNA that is enriched in fetal DNA.**
- **Step one:**
 - **“Under *Mayo*, we have consistently held diagnostic claims unpatentable.... In contrast, we have held that method of treatment claims are patent-eligible.... The claims in this case do not fall into either bucket....”**
 - **The court noted the patent challenger’s “inability...to clearly identify the natural phenomenon that forms the basis of its challenge.”**

ILLUMINA, INC. V. ARIOSIA DIAGNOSTICS, INC. (Cont'd)

■ Step one (cont'd):

- “The claims in this case are directed to methods for preparing a fraction of cell-free DNA that is enriched in fetal DNA. The methods include specific process steps—size discriminating and selectively removing DNA fragments that are above a specified size threshold—to increase the relative amount of fetal DNA as compared to maternal DNA in the sample....Those process steps change the composition of the mixture, resulting in a DNA fraction that is different from the naturally-occurring fraction in the mother’s blood. Thus, the process achieves more than simply observing that fetal DNA is shorter than maternal DNA or detecting the presence of that phenomenon.”
- “The dependent claims further illustrate the concrete nature of the claimed process steps. For example, claims 7–8 of the ’751 and claims 8–9 of the ’931 patent require that the size discrimination step comprise ‘centrifugation,’ and specifically ‘density gradient centrifugation.’”

ILLUMINA, INC. V. ARIOSIA DIAGNOSTICS, INC. (Cont'd)

■ Step one (cont'd):

- The challenger “*insists that the claims in this case are no more eligible than the claims at issue in Ariosa. We disagree. In Ariosa, the relevant independent claims were directed to a method ‘for detecting a paternally inherited nucleic acid’ (claims 1 and 24) or a method ‘for performing a prenatal diagnosis’ (claim 25)....The only operative steps in the claims were ‘amplifying’ (i.e., making more of) the cell-free fetal DNA and then ‘detecting [it],’ ‘subjecting [it] ... to a test,’ or ‘performing nucleic acid analysis on [it] to detect [it].’ *Id.* We found those claims ineligible because, like the invalid diagnostic claims at issue in *Mayo*, *Athena*, and *Cleveland Clinic*, they were directed to detecting a natural phenomenon.”*
- “[T]he inventors used their discovery to invent a method of preparing a fraction of DNA that includes physical process steps to selectively remove some maternal DNA in blood to produce a mixture enriched in fetal DNA.”

ILLUMINA, INC. V. ARIOSIA DIAGNOSTICS, INC. (Cont'd)

■ Step one (cont'd):

- “And we recognize, of course, that the inventors of the '751 and '931 patents did not invent centrifugation, chromatography, electrophoresis, or nanotechnology. But while such considerations may be relevant to the inquiry under *Alice/Mayo* step two, or to other statutory considerations such as obviousness that are not at issue before us in this case, they do not impact the *Alice/Mayo* step one question whether the claims themselves are directed to a natural phenomenon.”

ILLUMINA, INC. V. ARIOSIA DIAGNOSTICS, INC.

(Cont'd)

1. A method for preparing a deoxyribonucleic acid (DNA) fraction from a pregnant human female useful for analyzing a genetic locus involved in a fetal chromosomal aberration, comprising:

(a) extracting DNA from a substantially cell-free sample of blood plasma or blood serum of a pregnant human female to obtain extracellular circulatory fetal and maternal DNA fragments;

(b) producing a fraction of the DNA extracted in (a) by:

(i) size discrimination of extracellular circulatory DNA fragments, and

(ii) selectively removing the DNA fragments greater than approximately 500 base pairs,

wherein the DNA fraction after (b) comprises a plurality of genetic loci of the extracellular circulatory fetal and maternal DNA; and

(c) analyzing a genetic locus in the fraction of DNA produced in (b).

XY, LLC V. TRANS OVA GENETICS, LC (Fed. Cir., July 31, 2020)

- **Outcome: Claims valid**
- **Procedure: District court granted judgment on the pleadings finding claims invalid**
- **Technology:**
 - A method of sorting particles using flow cytometry technology.
- **Step one:**
 - “[C]laim 1...is not merely directed to a ‘mathematical equation that permits rotating multi-dimensional data.’...Rather, the claims are directed to a purportedly improved method of operating a flow cytometry apparatus to classify and sort particles into at least two populations in real time, wherein first and second detectors detect signals from individual particles and a processor converts the signals to n-dimensional parameter data and rotationally alters that data to increase spatial separation among the data, thereby facilitating classification and sorting of each individual particle.”

XY, LLC V. TRANS OVA GENETICS, LC (Cont'd)

■ Step one (cont'd):

- “Like the claims in *Diehr*, the asserted claims ‘describe in detail a step-by-step method’ for accomplishing a physical process.... *Diehr*’s claims and the asserted claims of the ’559 patent each represent a purported improvement to otherwise-known industrial or laboratory processes through specific application of mathematical algorithms.”
- “Similarly, the *Thales* claims and the asserted ’559 patent claims both recite methods in which at least two sensors or detectors gather data about an object before mathematical operations are applied to the gathered data to generate more accurate information about the object than was previously possible in the art.”

XY, LLC V. TRANS OVA GENETICS, LC (Cont'd)

■ Step one (cont'd):

- “Here, by contrast [to *Parker v. Flook*], claim 1 of the '559 patent recites an improved method of operating a flow cytometry apparatus to sort individual particles in the same sample in real time, and includes a detailed recitation of the means for doing so.”
- “By contrast [to *Cleveland Clinic v. True Health Diag.*], the '559 patent's claimed invention purports to improve a laboratory technique for detecting, classifying, and sorting particles from an individual sample, so as to sort each population of particles ‘more accurately than in any other separation system.’”

■ Step two:

- “Having concluded that the asserted claims of the '559 patent are not directed to an abstract idea at *Alice* step one, we need not reach *Alice* step two.”

XY, LLC V. TRANS OVA GENETICS, LC (Cont'd)

1. A method of operating a flow cytometry apparatus with at least n detectors to analyze at least two populations of particles in the same sample, the method comprising:
 - (a) establishing a fluid stream in the flow cytometry apparatus with at least n detectors, the at least n detectors including a first detector and a second detector;
 - (b) entraining particles from the sample in the fluid stream in the flow cytometry apparatus;
 - (c) executing instructions read from a computer readable memory with a processor, the processor being in communication with the first detector in the flow cytometer, to detect a first signal from the first detector based on individual particles in the fluid stream;
 - (d) executing instructions read from the computer readable memory with the processor, the processor being in communication with the second detector in the flow cytometer, to detect a second signal from the second detector based on the individual particles in the fluid stream;
 - (e) executing instructions read from the computer readable memory with the processor to convert at least the first signal and the second signal into n -dimensional parameter data for detected particles in the sample, wherein the n -dimensional parameter data for particles from the at least two populations overlap in at least one of the dimensions;
 - (f) executing instructions read from the computer readable memory with the processor to rotationally alter the n -dimensional parameter data so that spatial separation of the data from the particles from the at least two populations in the at least one dimension that is overlapped is increased;
 - (g) executing instructions read from the computer readable memory with the processor to real-time classify each of the individual detected particles into one of a first population and a second population of the at least two populations based on at least the rotationally altered n -dimensional parameter data; and
 - (h) using the real-time classification, sorting the individual particles with the flow cytometer.

Recent Miscellaneous § 101 Federal Circuit Cases

IN RE RUDY (Fed. Cir., Apr. 24, 2020)

- **Outcome: Claims invalid**
- **Procedure: PTAB affirmed examiner's rejection**
- **Technology:**
 - Method of selecting a fishing hook based on observed water conditions.
- **Step one:**
 - **“We 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...we apply our law and the relevant Supreme Court precedent, not the Office Guidance, when analyzing subject matter eligibility.”**
 - **“[W]e conclude that although a portion of the Board’s analysis is framed as a recitation of the Office Guidance, in this particular case the Board’s reasoning and conclusion are nevertheless fully in accord with the relevant caselaw .”**

IN RE RUDY (Cont'd)

■ Step one (cont'd):

- The Court found the invention “is directed to the abstract idea of selecting a fishing hook based on observed water conditions. The claimed method requires three steps. First, the user ‘observ[es] the clarity of water’ to determine whether the water is ‘clear, stained, or muddy.’...Second, the user ‘measur[es] light transmittance at a depth in the water where a fishing hook is to be placed.’...Third and finally, the user ‘select[s] a colored or colorless ... fishing hook’ based on the clarity and light transmittance of the water, in accordance with the chart that is included in the claim....This mental process of hook color selection based on a provided chart demonstrates that claim 34 as a whole is directed to an abstract idea.”
(Citing *Elec. Pwr. Grp.*)
- “We have held in the computer context that ‘collecting information’ and ‘analyzing’ that information are within the realm of abstract ideas....The same is true in other contexts, including the fishing context.”

IN RE RUDY (Cont'd)

■ Step one (cont'd):

- “[I]n an apparent attempt to invoke the machine-or-transformation test for patent eligibility, Mr. Rudy argues that practicing claim 34 ‘acts upon or transforms fish’ by transforming ‘freely swimming fish to hooked and landed fish’ or by transforming a fishing hook ‘from one not having a target fish on it to one dressed with a fish when a successful strike ensues.’... While the machine-or-transformation test remains ‘a useful and important clue’ for determining eligibility under § 101...we need not decide in this case whether the transformation from free fish to hooked fish is the type of transformation discussed in *Bilski* and its predecessor cases.”

IN RE RUDY (Cont'd)

■ Step two:

- “In this case, the three elements of the claim (observing water clarity, measuring light transmittance, and selecting the color of the hook to be used) are each themselves abstract, being mental processes akin to data collection or analysis. Considered as an ordered combination, these three steps merely repeat the abstract idea of selecting a fishing hook based on observed water conditions.”

IN RE RUDY (Cont'd)

34. A method for fishing comprising steps of

(1) observing clarity of water to be fished to determine whether the water is clear, stained, or muddy,

(2) measuring light transmittance at a depth in the water where a fishing hook is to be placed, and then

(3) selecting a colored or colorless quality of the fishing hook to be used by matching the observed water conditions ((1) and (2)) with a color or colorless quality which has been previously determined to be less attractive under said conditions than those pointed out by the following correlation for fish-attractive non-fluorescent colors:

Water Condition	% Light Transmittance, i.e., light intensity at fishing depth as a percentage										
	of light intensity at surface on a clear noon summer day										
Clear	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
	Black	White	Yellow	Blue	Purple	Silver	Green	Gray	Gold	Red	Red
		Blue				Green					
Stained	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
	Black	White	Black	Gold	Orange	Red	Silver	Blue	Purple	Green	Gray
		Black	Yellow						Green		
Muddy	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
	Black	Orange	Yellow	Yellow	Silver	Red	Red	Green	Gray	Purple	Black
					Silver	White	White	Gold		Blue	

IN RE ZUNSHINE (Fed. Cir., July 8, 2020) (non-precedential)

- **Outcome: Claims invalid**
- **Procedure: PTAB affirmed examiner's rejection**
- **Technology:**
 - Method of weight loss
- **Step one:**
 - The Court affirmed the Board's decision the claims are directed to an abstract idea: "Claims 1–3 recite processes in which a user cuts his or her food intake by a particular amount during regular mealtimes, follows prescribed 'how-to-eat rules' for eating outside of the regular mealtimes, and maintains the regime for at least three months. Each of claims 1–3 amount to nothing more than reducing food intake to achieve weight loss and snacking to curb hunger. Humans have long managed their personal diets in such a manner, and thus claims 1–3 are directed to an abstract idea."

IN RE ZUNSHINE (Cont'd)

■ Step one (cont'd):

- “[T]he purported improvement in claims 1–3—i.e., solving the ‘hunger problem’ in calorie-restricted weight-loss diets—is neither a technical improvement tied to a specific apparatus nor an improvement of an existing technological process. Instead, in this case, the solution to the hunger problem in claims 1–3 is itself an ineligible abstract idea.”
- “Mr. Zunshine asserts that ‘Vanda teaches that a treatment of a disease is not directed to a judicial exception, and, thus, is patent-eligible subject matter...[but these] claims merely direct a user to manage his or her food intake according to a series of rules that humans have long followed in managing their diets. Such personal management of food intake is an abstract idea that is not patent eligible.”

IN RE ZUNSHINE (Cont'd)

■ Step two:

- “Mr. Zunshine further asserts that the elements of claims 1–3 are not found in the prior art and that together the elements produce ‘spectacular’ weight loss....The purported inventive concepts identified by Mr. Zunshine are nothing more than the abstract ideas themselves.”

IN RE ZUNSHINE (Cont'd)

1. A process wherein, on day one, you--which stands for a user of the process-- cut your food intake during all three regular meals, breakfast, lunch, and dinner, by 1/3 and keep it that way for 3 months, and follow the how-to-eat rules: (1) no food unless you are hungry, or it is your regular mealtime, breakfast, lunch, or dinner, (2) if you are hungry and it is not your regular mealtime, you drink a glass of water, first, and wait 10-15 minutes; if you are still hungry, then you eat a snack, and (3) the amount of the snack is determined by your BMI (body mass index) and the time left before the next regular meal or bedtime, whichever comes first.

AMERICAN AXLE & MANUFACTURING, INC. V. NEAPCO HOLDINGS LLC (Fed. Cir., July 31, 2020)

- **Outcome:** Some claims invalid, some remanded for further consideration
- **Procedure:**
 - District Court granted summary judgment finding claims ineligible
 - Fed Cir initially affirmed finding all claims invalid
 - On petition for rehearing, Federal Circuit revised earlier opinion
- **Technology:**
 - Method for manufacturing driveline propeller shafts with liners that are designed to reduce vibration transmission.
- **Step one (Claim 22):**
 - “Under the district court's construction, ‘tuning a mass and a stiffness of at least one liner’ in claim 22 means ‘controlling the mass and stiffness of at least one liner to configure the liner to match the relevant frequency or frequencies.’...Thus, claim 22 requires use of a natural law of relating frequency to mass and stiffness—i.e., Hooke's law.”

AMERICAN AXLE & MANUFACTURING, INC. V. NEAPCO HOLDINGS LLC (Cont'd)

■ Step one (Claim 22) (cont'd):

- “That claim 22 here merely describes a desired result is evident from the face of the claim. The claim on its face does not identify the ‘particular [tuned] liners’ or the ‘improved method’ of tuning the liners to achieve the claimed result....No factual finding was or is required.”
- “The Supreme Court has long held that claims that state a goal without a solution are patent ineligible.”
- “As ‘reflected repeatedly in our cases,’ to avoid ineligibility, a claim must ‘ha[ve] the specificity required to transform [the] claim from one claiming only a result to one claiming a way of achieving it....the same principle necessarily applies in natural law cases.”

AMERICAN AXLE & MANUFACTURING, INC. V. NEAPCO HOLDINGS LLC (Cont'd)

- **Step one (Claim 22) (cont'd):**
 - “Claim 22 here simply instructs the reader to tune the liner to achieve a claimed result, without limitation to particular ways to do so. This holding as to step 1 of *Alice* extends only where, as here, a claim on its face clearly invokes a natural law, and nothing more, to achieve a claimed result.”
- **Step two (Claim 22):**
 - “As to Mayo/Alice step 2, nothing in claim 22 qualifies as an ‘inventive concept’ to transform it into patent eligible matter.”

AMERICAN AXLE & MANUFACTURING, INC. V. NEAPCO HOLDINGS LLC (Cont'd)

■ Step one (Claim 1) (cont'd):

- “Claim 1 is different from claim 22. While it is true that both claims require ‘tuning,’ claim 1 is more general. It requires ‘tuning at least one liner to attenuate at least two types of vibration transmitted through the shaft member.’”
- “The district court construed this term to mean ‘controlling characteristics of at least one liner to configure the liner to match a relevant frequency or frequencies to reduce at least two types of vibration transmitted through the shaft member.’...The specification indicates or may suggest that the ‘characteristics’ that can be ‘tuned’ in claim 1 include variables other than mass and stiffness.”
- “In light of the district court’s construction of claim 1, which requires only controlling characteristics and positioning the liner, we cannot conclude that it is merely directed to Hooke’s law.... we cannot say claim 1 as construed is directed to a particular natural law and nothing more.”

AMERICAN AXLE & MANUFACTURING, INC. V. NEAPCO HOLDINGS LLC (Cont'd)

■ Step one (Claim 1) (cont'd):

- “The district court's opinion suggests that the broader concept of tuning is an abstract idea...and the same question may be raised about the broad concept of positioning.”
- “But the abstract idea basis was not adequately presented and litigated in the district court. We think that it is appropriate to vacate the judgment as to claim 1 and its dependent claims and remand the case for the district court to address this alternative eligibility theory in the first instance.”

AMERICAN AXLE & MANUFACTURING, INC. V. NEAPCO HOLDINGS LLC (Cont'd)

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.

AMERICAN AXLE & MANUFACTURING, INC. V. NEAPCO HOLDINGS LLC (Cont'd)

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.

2019 USPTO Guidelines on Patent Subject Matter Eligibility

Guidelines Effective January 7, 2019

- PTO-P-2018-0053
- PTO-P-2018-0059
- Guidelines published in the FR for public comments
- Examples 37-46 were published on the USPTO website
- Patent examiners are being trained on the new guidelines using the new Examples 37-46

Applying guidance at the USPTO



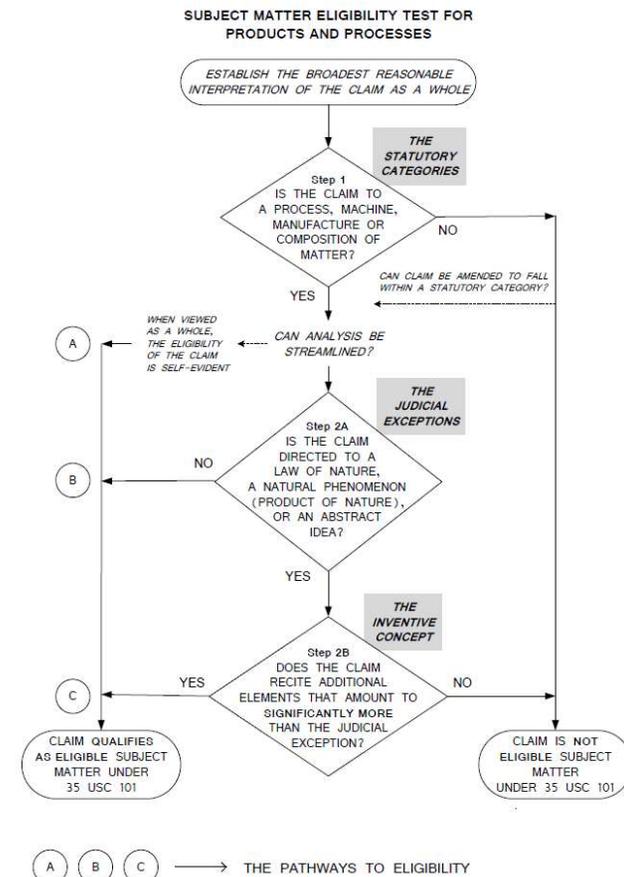
- Update is part of comprehensive and on-going approach to enhancing patent quality:
 - Guidance documents discussing legal principles (*e.g.*, 2019 PEG, Update, memoranda)
 - Examples illustrating application of legal principles
 - Indices to assist in locating most pertinent examples and case law precedent
 - Training

USPTO guidance as of March 2020

- Four main documents:
 1. The **MPEP** sets forth overall analysis for evaluating subject matter eligibility;
 2. The **2019 Revised Patent Subject Matter Eligibility Guidance** (“2019 PEG”) revises guidance in MPEP to define abstract ideas and change how examiners evaluate the first part of the Supreme Court’s *Alice/Mayo* test (called Step 2A in the MPEP);
 3. The **October 2019 Update: Subject Matter Eligibility** (“Update”) clarifies portions of the 2019 PEG and its interaction with the MPEP; and
 4. The **Berkheimer Memorandum** revises guidance in MPEP by clarifying how to evaluate the second part of the Supreme Court’s *Alice/Mayo* test (called Step 2B in the MPEP).

MPEP sets forth overall eligibility analysis

- Explains the two criteria for subject matter eligibility:
 - the claimed invention must be to a statutory category (Step 1); and
 - the claimed invention must qualify as patent-eligible subject matter (Steps 2A and 2B, aka the *Alice/Mayo* test).
- Includes flowchart at right, which illustrates the overall analysis.

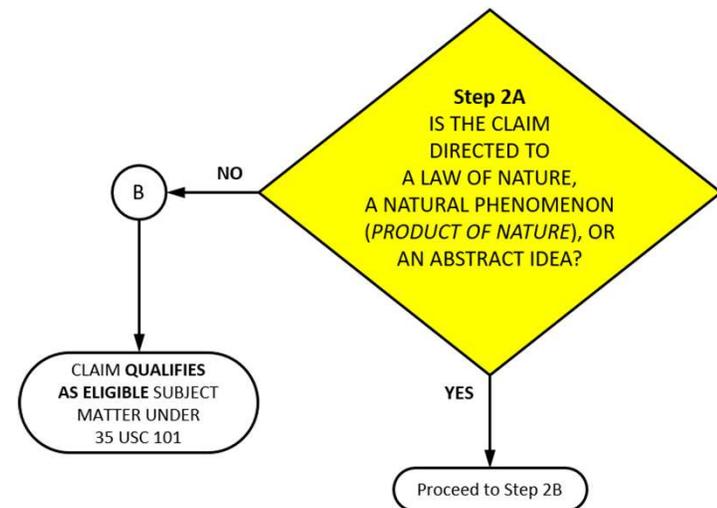


Revised Patent Subject Matter Eligibility Guidance

- Limits abstract ideas to:
 - Mathematical concepts
 - Organizing human activity
 - Mental processes
- Claim is not directed to a judicial exception if it is integrated into a practical application at Step 2A of the Alice test.
- Claim not integrated into a practical application of the exception is evaluated in Step 2B for the presence of an inventive concept

Step 2A: “Directed To” A Judicial Exception

- Per 2019 PEG, Step 2A is now a two-prong inquiry:
 - Prong One evaluates whether the claim recites a judicial exception.
 - Prong Two evaluates whether the claim recites additional elements that integrate the exception into a practical application of the exception.
- Together, these prongs answer the first step of the *Alice/Mayo* test (whether the claim is “directed to” a judicial exception).



Revised Patent Subject Matter Eligibility Guidelines

- Whether a claim recites well-understood, routine or conventional activity is conducted under Step 2B
- The revised guidance supersedes prior guidance in the MPEP and the USPTO website materials on this subject
- All USPTO personnel are expected to follow this guidance

Abstract Ideas Are Limited

- Mathematical concepts
 - Relationships
 - Formulas
 - Equations
 - Calculations
- Organizing human activity
 - Fundamental economic principles or practices
 - Hedging, insurance, mitigating risk
 - Commercial or legal interactions
 - Contracts, legal obligations, advertising, marketing, sales, behaviors, business relations

Organizing Human Activity

- Managing personal behavior or relationships
- People interactions
 - Social activities
 - Teaching
 - Following rules or instructions

Mental Processes

- Concepts performed in the human mind
 - Observation
 - Evaluation
 - Judgment
 - Opinions
 - Use of generic computer components are ignored unless the claim cannot practically be performed in the mind

Update clarifies Prong One for abstract ideas



- Provides additional clarifications on identifying abstract ideas and the relationship between the groupings and judicial decisions.
 - For example, the Update explains that an examiner should determine that a claim recites a “mathematical calculation” when the broadest reasonable interpretation of a claim limitation encompasses a mathematical operation or an act of calculating using mathematical methods to determine a variable or number.
 - Exemplary claim limitations reciting mathematical calculations include:
 - performing a resampled statistical analysis to generate a resampled distribution - *SAP America Inc. v. Investpic, LLC*
 - converting geospatial coordinates into natural numbers – *Burnett v. Panasonic Corp.*
 - calculating a number representing an alarm limit value using the mathematical formula “ $B1 = B0 (1.0 - F) + PVL(F)$ ” – *Parker v. Flook*

Miscellaneous Abstract Ideas

- Analyzed for integration into a practical application
- Analyzed at Step 2B for the presence of an inventive concept
- Brought to TC Director for approval for rejection if claim is directed solely to miscellaneous abstract idea.

Step 1 Analysis for Statutory Categories of Invention

- Claim must fall into a statutory category of invention to be eligible
- If the claim does not such as signal claims in *In re Nuijten*, the claim is not subject matter eligible

Step 2A Analysis

- Evaluate whether there are additional elements in the claim beyond the judicial exception
- Evaluate whether the elements individually are in combination integrate the claim into a practical application
- Examples of practical applications
 - Enfish: Improvement in the functioning of a computer in self referential data table
 - Diehr: Improvement in other technology or technical field (rubber curing process using numerical controller)
 - Vanda Pharma: Treatment of a disease or medical condition
 - Thales Visionox: Tied to a particular machine or manufacture using sensors to more efficiently track object on moving platform
 - Transformation of article to different state or thing
 - Data Engine v. Google: Meaningful tie to a particular technology of 3d machines

Practical Applications

- Core Wireless: GUI for mobile devices that displays commonly accessed data on main menu
- DDR Holdings: matching website look and feel
- Finjan: virus scan that generates security profile identifying both hostile operations
- McRo: rules for lip sync and facial expression animation
- Trading Tech: GUI that prevents order entry at changed price
- Visual Memory: enhanced computer memory system
- Ancora: computer security

Step 2A Analysis

- Examples of no integration into practical application
 - Apply it (use of generic computer elements)
 - Insignificant post-solution activity
 - General link to a particular technological environment or use
- Must treat claim as a whole
- New combination of old elements as in BASCOM can provide the practical application

Step 2B

- Evaluate whether the claim includes inventive concept that is significantly more than excluded subject matter
- Examples include:
 - Abele: tomographic scanning
 - Amdocs: field enhancement in distributed network
 - BASCOM: filtering Internet content
- Berkheimer analysis is now in Step 2B as to routine, conventional old elements

Update clarifies how to evaluate “improvements”



- The specification must provide sufficient details such that one of ordinary skill in the art would recognize the claimed invention as pertaining to an improvement in technology.
 - For example, the specification could identify a technical problem and explain how the specification provides a technical solution.
- After the examiner has consulted the specification and determined the disclosed invention pertains to an improvement in technology, the claim must be evaluated to ensure the claim itself reflects the improvement in technology.
 - An important consideration is whether the claim covers a particular solution to a problem or a particular way to achieve a desired outcome, as opposed to merely claiming the idea of a solution or outcome.

***Prima facie* case**



- Update clarifies that a *prima facie* case of ineligibility requires clear articulation of the reason(s) why the claimed invention is not eligible:
 - Identify the judicial exception, and explain why it is an exception;
 - Identify additional elements (if any), and explain why they do not integrate the judicial exception into a practical application of the exception; and
 - Explain why the additional elements (if any), do not amount to significantly more than the exception.
- Office has provided sample explanations satisfying this burden:
 - Advanced Training module slides 78-91 (example 37), slides 132-150 (example 40), and slides 185-198 (example 42)
 - Sample rejection for example 37

Update Appendix 1: Examples



- Illustrate claims that do not recite a judicial exception (eligible at Step 2A Prong One):
 - Example 43 (Treating Kidney Disease)
 - Example 44 (Denveric Acid)
 - Example 46 (Livestock Management)
- Illustrate claims that are not directed to a recited judicial exception (eligible at Step 2A Prong Two):
 - Example 43 (Treating Kidney Disease)
 - Example 44 (Denveric Acid)
 - Example 45 (Controller for Injection Mold)
 - Example 46 (Livestock Management)
- Illustrate significantly more (Step 2B) analysis:
 - Example 43 (Treating Kidney Disease)
 - Example 44 (Denveric Acid)
 - Example 45 (Controller for Injection Mold) *
 - Example 46 (Livestock Management)

* Includes claim that is not integrated into a practical application at Prong Two, but is eligible at Step 2B

Update Appendix 2: Index of examples



- Index provides an overview of the relevance of Examples 1-46 under the 2019 PEG.
- Index indicates which examples provide a practical application or significantly more analysis, and the considerations that are evaluated in each example.

All Examples: Issue Spotting	GUI for Relocating Obscured Text	Updating Alarm Limits	Rubber Manufacturing	Internal Combustion	BIOS System Software	Vaccines
Example Number	23	24	25	26	27	28
Claim Type aka Statutory Category						
Process	•	•	•		•	
Product (Composition of Matter, Manufacture, and/or Machine)			•	•		•
Judicial Exception						
Abstract Idea	•	•	•	•		
Law of Nature						
Product of Nature						•
Multiple exceptions in same claim			•			
No recited exception	•					•
Detailed Analysis						
Streamlined Analysis						
Step 2A Prong One: Generally *	•	•	•	•	•	•
Step 2A Prong One: Markedly Different Characteristics analysis						•
Step 2A Prong Two: Exception Integrated Into A Practical Application **	•	•	•			
Step 2B: Generally	•	•				•
Step 2B: Claim is eligible because it provides an Inventive Concept	•		•			•
Considerations Discussed in Step 2A Prong Two and/or Step 2B						
Improvements to Functioning of a Computer or Other Technology	•		•			
Particular Treatment or Prophylaxis (Prong Two only)						
Particular Machine				•		
Particular Transformation			•			
Other Meaningful Limitations			•			
Mere Instructions To Apply An Exception	•					•
Insignificant Extra-Solution Activity		•	•			•
Field of Use and Technological Environment	•	•				
Well-Understood, Routine, Conventional (WURC) Activity (Step 2B only) †	•	•	•			•
No additional elements, so no Prong Two or Step 2B analysis	•					

Update Appendix 3: Case law chart



- Chart provides additional information so examiners can look at the patent(s) and claim(s) at issue in the case.
- Chart is updated periodically.

Case Name	Decision Type	Citation	Decision Date	Patent(s) or App. No(s).	Title or General Subject Matter	Claim Type	Exception Type	Judicial Conclusion	Classification (USPC & CPC)
<i>Endo Pharms. v. Teva Pharms.</i>	Precedential	919 F.3d 1347, 2019 U.S.P.Q.2d 108545 (Fed Cir. 2019)	3/28/2019	8,808,737	Method of treating pain utilizing controlled release oxymorphone pharmaceutical compositions	Method	Law of Nature	Eligible Claims 1-6	424/464 A61K 31/485
<i>SRI Int'l Inc. v. Cisco Systems Inc.</i>	Precedential	930 F.3d 1295 (Fed Cir. 2019); note that modified opinion of 7/12/2019 replaces original opinion published as 918 F.3d 1368 (Mar. 20, 2019)	7/12/2019	6,711,615 6,484,203	Hierarchical network event monitoring	Method, System	Abstract Idea	Eligible '615: claims 1-4, 14-16, and 18 '203: claims 1-4, 12-15, and 17	709/224 H04L 41/142
<i>Performance Pricing Holdings, LLC v. Google LLC</i>	Non-precedential (Rule 36 affirmance of PTAB CBM)	757 Fed. Appx. 1013 (Fed Cir. 2019)	3/15/2019	8,799,059 7,089,195	Presentation of advertisements	Systems, Methods, Set of Instructions	Abstract Idea	Ineligible '059: claims 1-14 '195: claims 1-20	705/14.26 G06Q 30/00 705/14.69 G06Q 30/00

Practice Tips

- Specification should be robust explain how the claimed invention is integrated into a practical application
- Claims should include specific limitations (non generic computer elements) as to how the functions or results are accomplished
- Claims should demonstrate
 - New combination of old elements
 - New combination of elements that include new elements
 - Improving operation or performance of computer or computer elements (programmable memory), or through CRM that embodies code means that when execute improves performance
 - Improves the user experience by novel rules
 - Uses technology from one field to improve a different technology

Practice Tips

- When writing computer program product claims recite elements as computer code plus function rather than as method steps
- Provide specificity to the claims to establish patentability over prior art separate from judicial exceptions
- Avoid pure functional claiming that does not include specifics as to how results are accomplished

Conclusions

- **Know the USPTO guidelines because the PTAB will apply it for AIA and *ex parte* Proceedings.**
- The USPTO's guidelines may find patent claims eligible that are struck down by the Federal Circuit.
- Know and apply BOTH Fed. Cir. case law as well as the PTO's guidelines.