#AliceStorm

Patent Eligibility Forecast: Dark Skies Continue, Possible Clearing in the Future

Robert Sachs
Fenwick & West LLP
How Did We Get Here?

Where Are We?

Where Are We Going?
Obligatory Slide on *Alice Corp. v CLS Bank*

- Step 1: Are the claims at issue directed to a patent-ineligible concept (e.g., abstract idea)?
- Step 2: Is there an “inventive concept” – sufficient to “transform” the claimed abstract idea into a patent-eligible application?
What’s an Abstract Idea?

- *Alice*: “In any event, we need not labor to delimit the precise contours of the "abstract ideas" category in this case.”

- Federal Circuit: “Because the Supreme Court has chosen not to “delimit the precise contours of the ‘abstract ideas’ category,” *Alice*, 134 S. Ct. at 2357, “it is not always easy to determine the boundary between abstraction and patent-eligible subject matter.”

- “[T]he two-step test may be more like a one step test evocative of Justice Stewart’s most famous phrase [‘I know it when I see it’].”
At the same time, we tread carefully in construing this exclusionary principle lest it swallow all of patent law. At some level, "all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas."

Alice Corp. v. CLS Bank
JUSTICE BREYER: And what I suspect, in my opinion, Mayo did and Bilski and the other cases is sketch an outer shell of the content, hoping that the experts, you and the other lawyers and the circuit court, could fill in a little better than we had done the content of that shell.
@rrs711 @patentbuddy @MannySchecter my partner spoke w/ s crt justice about Alice - he had no idea that it had such an impact. #clueless
Where Are We?
Don’t Blink, you’ll miss a court killing a patent. By the end of this week, this slide will be out of date...

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As of 4/25/17
Software is under attack: While business methods get the press, software patents are the ones being most frequently attacked in litigation
§ 101 Rejection Rates Before and After *Alice*

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TC3600BM Examiners Apply Different Rules

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<td>637</td>
<td>745</td>
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- This is number of Examiners by the percent of Office Actions that have S.101 rejections, after *Enfish* Memo (May 2016) to 12/2016.
- 41 Ecommerce Examiners have 100% rejection rate.
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Federal Circuit: A Developing Theory of Eligibility

- 8 cases finding patent eligible since June, 2014:
  - Thales Visionix, Inc. v. United States (March 8, 2017)
  - Amdocs (Israel) Ltd. v. Opnet Telecom, Inc. (November 1, 2016)
  - McRo v. Bandai Namco (September 12, 2016)
  - Rapid Litigation Management Ltd. v. CellzDirect, Inc. (July 5, 2016)
  - Bascom Global Internet Servs. v. AT&T Mobility LLC (June 27, 2016)
  - Enfish LLC v. Microsoft Corp. (May 12, 2016)
  - DDR Holdings, LLC v. Hotels.com, L.P. (December 5, 2015)

- 80 cases ineligible
  - 36 affirmances (opinions)
  - 1 reversal
  - 42 per curiam affirmances
Federal Circuit’s § 101 Theory: Using a Computer As a Tool v. Improving the Tool

Ineligible
- Using a computer as a “routine” or “obvious” tool to automate an existing method
- Using a computer to collect and aggregate data, regardless of specificity
- Claiming the result, not now the result is achieved

Eligible
- Using a specific implementation of a computer to automate a new* method
- Claiming how, not the result
- Claims do not preempt all ways of obtaining result
Routine Automation & Data Collection: Content Extraction v Wells Fargo (Dec. 23, 2014)

- Claimed: Extracting data from scanned documents without a template, and storing the data in memory.
- "Humans have always performed these functions."
- "There is no “inventive concept” in CET’s use of a generic scanner and computer to perform well-understood, routine, and conventional activities commonly used in industry."

1. A method of processing information from a diversity of types of hard copy documents, said method comprising the steps of:
   - receiving output representing a diversity of types of hard copy documents from an automated digitizing unit and storing information from said diversity of types of hard copy documents into a memory, said information not fixed from one document to the next, said receiving step not preceded by scanning, via said automated digitizing unit, of a separate document containing format requirements;
   - recognizing portions of said hard copy documents corresponding to a first data field; and
   - storing information from said portions of said hard copy documents corresponding to said first data field into memory locations for said first data field.
Claimed: Testing of prices and statistical analysis of results to automatically select a best price and then send offers.

“the addition of steps to test prices and collect data based on customer reactions does not add any meaningful limitations to the abstract idea”

“At best, the claims describe the automation of the fundamental economic concept of offer-based price optimization”

1. A method of pricing a product for sale, the method comprising:
   - testing each price of a plurality of prices by sending a first set of electronic messages over a network to devices;
   - gathering...statistics generated during said testing about how the potential customers responded to the offers...
   - using a computerized system to read said statistics ...and to automatically determine, based on said statistics, an estimated outcome of using each of the plurality of prices for the product;
   - selecting a price at which to sell said product based on the estimated outcome determined by said computerized system; and
   - sending a second set of electronic messages over the network, wherein the second set of electronic messages include offers, to be presented to potential customers, of said product at said selected price.
Routine Automation & Data Collection:  
*Versata v. SAP* (July 9, 2015)

- Claimed: Testing of prices and statistical analysis of results to automatically select a best price and then send offers.
- “Using ….hierarchies to determine a price…. [is] a basic conceptual framework for organizing information, similar to the claims involving collecting, recognizing, and storing data in Content Extraction”
- “Viewed as a whole, the claims simply recite the concept of price determination by using organizational and product group hierarchies as performed by a generic computer.”
- Claims recite a “commonplace business method aimed at processing business information despite being applied on a general purpose computer.

17. A method for determining a price of a product offered to a purchasing organization comprising:

- **arranging a hierarchy of organizational groups** comprising a plurality of branches …;
- **arranging a hierarchy of product groups** comprising a plurality of branches …;
- **storing pricing information** in a data source, wherein the pricing information is associated, with (i) a pricing type, (ii) the organizational groups, and (iii) the product groups;
- retrieving applicable pricing information corresponding to the product, the purchasing organization, ….;
- **sorting the pricing information** according to the pricing types, the product, the purchasing organization, the hierarchy of product groups, and the hierarchy of organizational groups;
- **eliminating any of the pricing information** that is less restrictive; and determining the product price using the sorted pricing information.
1. A computer-implemented system for enabling borrowers to anonymously shop for loan packages offered by a plurality of lenders, the system comprising:

- a database that stores loan package data **specifying loan packages** for home loans offered by the lenders…; and

- a computer system that provides:
  - a first interface that allows the lenders to securely upload at least some of the loan package data for their respective loan packages to the database over a computer network; and
  - a second interface that prompts a borrower to enter personal loan evaluation information, and invokes, on a computer, a borrower grading module which uses at least the entered personal loan evaluation information to calculate a credit grading for the borrower…;

- wherein the second interface provides functionality for the borrower to search the database to identify a set of loan packages for which the borrower qualifies based on the credit grading, and to compare the loan packages within the set, including loan type and interest rate, **while remaining anonymous to each of the lenders** and without having to post a request to any of the lenders, said second interface configured to display to the borrower an indication of a total cost of each loan package in the set, said total cost including costs of closing services not provided by corresponding lenders.
Routine Automation & Data Collection: *Mortgage Grader*

- “The claim limitations, analyzed individually and “as a whole,” recite nothing more than the collection of information to generate a “credit grading” and to facilitate anonymous loan shopping.”

- The series of steps covered by the asserted claims—borrower applies for a loan, a third party calculates the borrower’s credit grading, lenders provide loan pricing information to the third party based on the borrower’s credit grading, and only thereafter (at the election of the borrower) the borrower discloses its identity to a lender—could all be performed by humans without a computer.
Routine Automation & Data Collection:  
**TLI Communications v. AV Automotive** (May 17, 2016)

- Claimed: transmitting images to a server with “classification information,” extracting the classification information, and storing the images with the classification.

17. A method for recording and administering digital images, comprising the steps of:
  - **recording images** using a digital pick up unit in a telephone unit,
  - **storing the images** recorded by the digital pick up unit in a digital form as digital images,
  - **transmitting data** including at least the digital images and classification information to a server, wherein said classification information is prescribable by a user of the telephone unit for allocation to the digital images,
  - **receiving the data** by the server,
  - **extracting classification information** which characterizes the digital images from the received data, and
  - **storing the digital images** in the server, said step of storing taking into consideration the classification information.
Routine Automation & Data Collection: TLI Communications

- “[A]ttaching classification data, such as dates and times, to images for the purpose of storing those images in an organized manner” is like the data collection in Content Extraction

- The claims are “directed to the use of conventional or generic technology in a nascent but well-known environment, without any claim that the invention reflects an inventive solution to any problem presented by combining the two…. the inventor sought to “provid[e] for recording, administration and archiving of digital images simply, fast.”

- “The specification does not describe a new telephone, a new server, or a new physical combination of the two. The specification fails to provide any technical details for the tangible components, but instead predominately describes the system and methods in purely functional terms.”
12. A method of detecting events on an interconnected electric power grid in real time over a wide area and automatically analyzing the events on the interconnected electric power grid, the method comprising:

- **receiving a plurality of data streams**, each of the data streams comprising sub-second, time stamped synchronized phasor measurements…;
- **receiving data** from other power system data sources…;
- **receiving data** from a plurality of non-grid data sources;
- **detecting and analyzing events** in real-time from the plurality of data streams …;
- **displaying the event analysis** results and diagnoses of events…;
- **displaying concurrent visualization** of measurements from the data streams…;
- accumulating and updating the measurements from the data streams.. and
- deriving a composite indicator of reliability that is an indicator of power grid vulnerability…
Electric Power Group v. Alstom
Electric Power Group v. Alstom

FIG. 10

Grid-3P Application Server

Grid-3P Database

COM+ Client

COM+ Server

Internet

Grid-3P Web Server

Grid-3P Web Clients

SCADA Database
Market Database
PI Database
Phasor Data Database

Customer Proprietary Data

OLEDB Connection

XML

SOAP

XML (Data)

SOAP (Request)
“In Enfish, we relied on the distinction made in Alice between, on one hand, computer-functionality improvements and, on the other, uses of existing computers as tools in aid of processes focused on “abstract ideas”

“Merely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes”

“Inquiry therefore must turn to any requirements for how the desired result is achieved.”

“Nothing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, ending, and presenting the desired information.”
Electric Power: New “Uses” are Not Eligible

“The claims in this case specify what information in the power-grid field it is desirable to gather, analyze, and display, including in “real time”; but they do not include any requirement for performing the claimed functions of gathering, analyzing, and displaying in real time by use of anything but entirely conventional, generic technology. The claims therefore do not state an arguably inventive concept in the realm of application of the information-based abstract ideas.”
1. A method of providing an intelligent user interface to an online application comprising the steps of:

- furnishing a plurality of icons on a web page displayed to a user of a web browser, wherein each of said icons is a hyperlink to a dynamically generated online application form set, and wherein said web browser comprises Back and Forward navigation functionalities;

- displaying said dynamically generated online application form set in response to the activation of said hyperlink, wherein said dynamically generated online application form set comprises a state determined by at least one user input; and

- maintaining said state upon the activation of another of said icons, wherein said maintaining allows use of said Back and Forward navigation functionalities without loss of said state.
Claiming the Result: *Internet Patents v. Active Network* (June 23, 2015)

- “Claim 1 contains no restriction on how the result is accomplished. The mechanism for maintaining the state is not described, although this is stated to be the essential innovation.”

- “IPC's proposed interpretation of "maintaining state" describes the effect or result dissociated from any method by which maintaining the state is accomplished upon the activation of an icon."
Claiming the Result: *Vehicle Intelligence & Safety v. Mercedes Benz* (December 28, 2015)

- Claimed: using expert system to determine operator impairment

8. A method to screen an equipment operator for impairment, comprising:
   - screening an equipment operator by one or more expert systems to detect potential impairment of said equipment operator;
   - selectively testing said equipment operator when said screening of said equipment operator detects potential impairment of said equipment operator; and
   - controlling operation of said equipment if said selective testing of said equipment operator indicates said impairment of said equipment operator, wherein said screening of said equipment operator includes a time-sharing allocation of at least one processor executing at least one expert system.
Claiming the Result: *Vehicle Intelligence*

- The claims do not “provide any details as to how this “expert system” works or how it produces faster, more accurate and reliable results”

- “But critically absent from the entire patent is how the existing vehicle equipment can be used to measure these characteristics; …, how the decision module determines if an operator is impaired…. how the decision module decides which control response to make… how the “expert system” effectuates the chosen control response.”

- “[T]he ’392 patent answers the question of how to provide faster, more accurate and reliable impairment testing by simply stating “use an expert system.””
Claimed: determining state of well drilling operation

“We find nothing in claim 1 that adds anything more to the abstract idea of storing, gathering, and analyzing data.”

“Claim 1 simply recites generic computer functions that amount to nothing more than the goal of determining the state of an oil well operation.”

1. An automated method for determining the state of a well operation, comprising:

- **storing a plurality of states** for a well operation;
- **receiving mechanical and hydraulic data** reported for the well operation from a plurality of systems; and
- **determining that at least some of the data** is valid by comparing the at least some of the data to at least one limit, the at least one limit indicative of a threshold at which the at least some of the data do not accurately represent the mechanical or hydraulic condition purportedly represented by the at least some of the data; and
- when at least some of the data are valid, based on the mechanical and hydraulic data, **automatically selecting one of the states as the state of the well operation.**
1. A method of detecting improper access of a patient’s protected health information (PHI) in a computer environment, the method comprising:

- generating a rule for monitoring audit log data representing at least one of transactions or activities that are executed in the computer environment, which are associated with the patient’s PHI,
- the rule comprising at least one criterion related to accesses in excess of a specific volume, accesses during a predetermined time interval, accesses by a specific user, that is indicative of improper access of the patient’s PHI by an authorized user,
  - wherein the improper access is an indication of potential snooping or identity theft of the patient’s PHI,
  - the authorized user having a predefined role comprising authorized computer access to the patient’s PHI;
- applying the rule to the audit log data to determine if an event has occurred, the event occurring if the at least one criterion has been met;
- storing, in a memory, a hit if the event has occurred; and
- providing notification if the event has occurred.

Claimed: evaluating an audit log of computer access using a “rule” based on frequency, time and user, to identify potential snooping or identity theft.

Abstract idea: “collecting and analyzing information to detect misuse and notifying a user when misuse is detected”

“FairWarning’s claims merely implement an old practice in a new environment”

Routine Automation & Data Collection: FairWarning IP v. Iatric Systems

- Claimed: evaluating an audit log of computer access using a “rule” based on frequency, time and user, to identify potential snooping or identity theft.
- Abstract idea: “collecting and analyzing information to detect misuse and notifying a user when misuse is detected”
- “FairWarning’s claims merely implement an old practice in a new environment”
Eligibility in Specific Implementations

- Using a specific implementation to improve an existing function
- Using a specific implementation of a computer to automate a new* method
- Claiming how to obtain a result, not the result
- Claims do not preempt all ways of obtaining result
“Fn. (5): On a fundamental level, the creation of new compositions and products based on combining elements from different sources has long been a basis for patentable inventions.”

“Unlike the claims in *Ultramercial*, the claims at issue here specify how interactions with the Internet are manipulated to yield a desired result.

“It is also clear that the claims at issue do not attempt to preempt every application of the idea of increasing sales by making two web pages look the same…Rather, they recite a specific way to automate the creation of a composite web page by an “outsource provider”.”
New Methods, Specific Ways of Obtaining Results: *Enfish v. Microsoft* (May 12, 2016)

- A method for storing and retrieving data in a computer memory, comprising the steps of:
  - configuring said memory according to a logical table, said logical table including:
    - a plurality of logical rows, each said logical row including an object identification number (OID) to identify each said logical row, each said logical row corresponding to a record of information;
    - a plurality of logical columns intersecting said plurality of logical rows to define a plurality of logical cells, each said logical column including an OID to identify each said logical column; and wherein
    - at least one of said logical rows has an OID equal to the OID to a corresponding one of said logical columns, and at least one of said logical rows includes logical column information defining each of said logical columns.

<table>
<thead>
<tr>
<th>ID</th>
<th>Type</th>
<th>Title</th>
<th>Label</th>
<th>Address</th>
<th>Employed By (#4)</th>
<th>Author</th>
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</thead>
<tbody>
<tr>
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<td>FIELD</td>
<td></td>
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</table>
“We thus see no reason to conclude that all claims directed to improvements in computer-related technology, including those directed to software, are abstract and necessarily analyzed at the second step of *Alice*, nor do we believe that *Alice* so directs. Therefore, we find it relevant to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea, even at the first step of the *Alice* analysis.”

“For that reason, the first step in the *Alice* inquiry in this case asks whether the focus of the claims is on the specific asserted improvement in computer capabilities (i.e., the self-referential table for a computer database) or, instead, on a process that qualifies as an “abstract idea” for which computers are invoked merely as a tool.”
Enfish: The Return of Preemption Analysis

- “Here, the claims are **not simply directed to any form** of storing tabular data, but instead are specifically directed to a self-referential table for a computer database.

- “The [district] court determined that the patents’ self-referential concept could be satisfied by creating a table with a simple header row. But that is simply not the case. For example, step three of the algorithm described above explains that the table stores information related to each column in rows of that very same table, such that new columns can be added by creating new rows in the table.”
A content filtering system for filtering content retrieved from an Internet computer network by individual controlled access network accounts, said filtering system comprising:

- a local client computer generating network access requests for said individual controlled access network accounts;
- at least one filtering scheme;
- a plurality of sets of logical filtering elements; and
- a remote ISP server coupled to said client computer and said Internet computer network, said ISP server associating each said network account to at least one filtering scheme and at least one set of filtering elements, said ISP server further receiving said network access requests from said client computer and executing said associated filtering scheme utilizing said associated set of logical filtering elements.
“We agree with the district court that filtering content is an abstract idea because it is a longstanding, well-known method of organizing human behavior.”

“The inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art. As is the case here, an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.”

“The inventive concept described and claimed in the ’606 patent is the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user.”
“Nor do the claims preempt all ways of filtering content on the Internet; rather, they recite a specific, discrete implementation of the abstract idea of filtering content. Filtering content on the Internet was already a known concept, and the patent describes how its particular arrangement of elements is a technical improvement over prior art ways of filtering such content.”

“The claims in *Intellectual Ventures I* preempted all use of the claimed abstract idea on “the Internet, on a generic computer.”

“The claims in *Content Extraction* preempted all use of the claimed abstract idea on well-known generic scanning devices and data processing technology.”

“The claims in *Ultramercial* preempted all use of the claimed abstract idea on the Internet.”

“And the claims in *Accenture* preempted all use of the claimed abstract idea on generic computer components performing conventional activities.”
1. A method for automatically animating lip synchronization and facial expression of three-dimensional characters comprising:

- obtaining a first set of rules that define output morph weight set stream as a function of phoneme sequence and time of said phoneme sequence;
- obtaining a timed data file of phonemes having a plurality of sub-sequences;
- generating an intermediate stream of output morph weight sets and a plurality of transition parameters between two adjacent morph weight sets by evaluating said plurality of sub-sequences against said first set of rules;
- generating a final stream of output morph weight sets at a desired frame rate from said intermediate stream of output morph weight sets and said plurality of transition parameters; and
- applying said final stream of output morph weight sets to a sequence of animated characters to produce lip synchronization and facial expression control of said animated characters.
New Methods, Specific Ways of Obtaining Results: *McRo*

**Before**

Morph facial Model
Using morph Weight set

**After**

Timed Data of Phoneme Sequence

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<tr>
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<th>phoneme</th>
<th>word</th>
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</thead>
<tbody>
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<td>Sil</td>
</tr>
<tr>
<td>1.895</td>
<td>h</td>
<td>hello</td>
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<tr>
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**Morph Weight Set**

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<th>D.S.3 (&quot;i&quot;)</th>
<th>D.S.4 (&quot;o&quot;)</th>
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McRo: Specific Methods Solve Preemption Problem at Step 1

• “Whether at step one or step two of the Alice test, in determining the patentability of a method, a court must look to the claims as an ordered combination, without ignoring the requirements of the individual steps.”

• “The claimed rules here, however, are limited to rules with certain common characteristics, i.e., a genus.”

• “It is self-evident that genus claims create a greater risk of preemption, thus implicating the primary concern driving § 101 jurisprudence.”
“We therefore look to whether the claims in these patents focus **on a specific means or method that improves the relevant technology** or are **instead directed to a result or effect** that itself is the abstract idea and merely invoke generic processes and machinery.”

The conventional approach “even if automated by rules, would not be within the scope of the claims because it does not evaluate sub-sequences, generate transition parameters or apply transition parameters to create a final morph weight set.”

“The limitations in claim 1 prevent preemption of all processes for achieving automated lip-synchronization of 3-D characters.”
McRo: Evaluating Preemption in Step 1

• “[W]e have recognized that “the absence of complete preemption does not demonstrate patent eligibility.” Ariosa. The narrower concern here is whether the claimed genus of rules preempts all techniques for automating 3-D animation that rely on rules.”

• Why is this reference to Ariosa important?
• Because Reyna wrote Ariosa and McRo decisions.

  • Ariosa: “Where a patent’s claims are deemed only to disclose patent ineligible subject matter under the Mayo framework, as they are in this case, preemption concerns are fully addressed and made moot.”

• The PTO and the courts consistently rely on this statement in Ariosa to ignore preemption arguments.
How Reyna Overcomes the Ariosa Rule

• “Claim 1 requires that the rules be rendered in a specific way: as a relationship between subsequences of phonemes, timing, and the weight to which each phoneme is expressed visually at a particular timing (as represented by the morph weight set).

• The specific structure of the claimed rules would prevent broad preemption of all rules-based means of automating lip synchronization, unless the limits of the rules themselves are broad enough to cover all possible approaches.

• There has been no showing that any rules-based lip-synchronization process must use rules with the specifically claimed characteristics.”
Further Lessons from McRo

“The concern underlying the exceptions to § 101 is not tangibility, but preemption.”
  • Contra: Ultramercial, Electric Power, Digitech

Mathematical rules do not render ineligible
  • “Defendants concede an animator’s process was driven by subjective determinations rather than specific, limited mathematical rules.
  • It is the incorporation of the claimed rules, not the use of the computer, that “improved [the] existing technological process” by allowing the automation of further tasks.
  • Contra: Digitech
How is *FairWarning’s* Rule Different from *McRo*?

“*FairWarning’s* claims merely implement an old practice in a new environment”

“Thus, the traditional [lip-syncing] process and [McRo’s] newly claimed method stood in contrast: while both produced a similar result, i.e., realistic animations of facial movements accompanying speech, the two practices produced those results in fundamentally different ways.”
1. A computer program product embodied on a computer readable storage medium for processing network accounting information comprising:

- computer code for receiving from a first source a first network accounting record;
- computer code for correlating the first network accounting record with accounting information available from a second source; and
- computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.
AmDocs v Opnet Telecom: Unconventional Solution

- “We construed “enhance” as meaning “to apply a number of field enhancements in a distributed fashion.”
- “In other words, this claim entails an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases). The solution requires arguably generic components, including network devices and “gatherers” which “gather” information. However, the claim’s enhancing limitation necessarily requires that these generic components operate in an unconventional manner to achieve an improvement in computer functionality.”
“In contrast, claim 1 of the ’065 patent is tied to a specific structure of various components (network devices, gatherers, ISMs, a central event manager, a central database, a user interface server, and terminals or clients). It is narrowly drawn to not preempt any and all generic enhancement of data in a similar system, and does not merely combine the components in a generic manner, but instead purposefully arranges the components in a distributed architecture to achieve a technological solution to a technological problem specific to computer networks.”

Really? Let’s take another look
1. A computer program product embodied on a computer readable storage medium for processing network accounting information comprising:

- computer code for receiving from a first source a first network accounting record;
- computer code for correlating the first network accounting record with accounting information available from a second source; and
- computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.
1. A method for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange having an inside market with a highest bid price and a lowest ask price on a graphical user interface, the method comprising:

- dynamically displaying a first indicator in one of a plurality of locations in a bid display region, each location in the bid display region corresponding to a price level along a common static price axis, the first indicator representing quantity associated with at least one order to buy the commodity at the highest bid price currently available in the market;

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

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

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

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

- First graphical user interface patent found eligible by the Fed. Cir.
- “The district court explained that the challenged patents do not simply claim displaying information on a graphical user interface. **The claims require a specific, structured graphical user interface paired with a prescribed functionality directly related to the graphical user interface’s structure** that is addressed to and resolves a specifically identified problem in the prior state of the art”
Trading Technologies v. CQG

“Applying an overview of this evolving jurisprudence, the public interest in innovative advance is best served when close questions of eligibility are considered along with the understanding flowing from review of the patentability criteria of novelty, unobviousness, and enablement, for when these classical criteria are evaluated, the issue of subject matter eligibility is placed in the context of the patent-based incentive to technologic progress.”
Thales Visonix v. United States

• A system for tracking the motion of an object relative to a moving reference frame, comprising:
  • a first inertial sensor mounted on the tracked object;
  • a second inertial sensor mounted on the moving reference frame; and
  • an element adapted to receive signals from said first and second inertial sensors and configured to determine an orientation of the object relative to the moving reference frame based on the signals received from the first and second inertial sensors.
“These claims are not merely directed to the abstract idea of using “mathematical equations for determining the relative position of a moving object to a moving reference frame,” as the Claims Court found. *Thales*, 122 Fed. Cl. at 252. Rather, the 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.”
Thales Visonix v. United States

“Just as a natural law can be utilized to create an improved laboratory technique for preserving liver cells, *id.* at 1048, so can the application of physics create an improved technique for measuring movement of an object on a moving platform.”

“Far from claiming the equations themselves, the claims seek to protect only the application of physics to the unconventional configuration of sensors as disclosed. As such, these claims are not directed to an abstract idea and thus the claims survive *Alice* step one.”

- This conflates Step 1 with Step 2.
What’s Uncertain?

- The eligibility of “new use” process claims:
  
  - Section 100(b): The term “process” means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.”
  
  - TLI, Electric Power, TDE suggest Ineligible
  - BASCOM, McRo, Enfish suggest Eligible
The Use of Mathematics?

- *Thales*: “That a mathematical equation is required to complete the claimed method and system does not doom the claims to abstraction.”

- Compare: *Coffelt v. Nvidia*
  - “The court noted that “[i]n the instant invention, a **pixel color** is derived mathematically using vectors in a particular steradian region. The calculations claimed can be done by a human mentally or with a pen and paper.”
  - “However, “*calculating* a . . . steradian region of space,” as recited in claim 1, is a purely arithmetic exercise. ’710 patent col. 13 ll. 13–14. The claims thus recite nothing more than a mathematical algorithm that could be implemented using a pen and paper.”
Where Are We Going?
What to Claim?

- Must go beyond simply collecting data, aggregating, high level analysis, and display of data or results
- New arrangement of known functional elements
- New method to achieve improved version of existing result
- New method to achieve new result, not previously obtained
- Disclose benefits of overall approach, and if possible of each specific step in specification
Legislative Approaches

- ABA, AIPLA, and IPO all working on Section 101 revisions
- Key elements
  - Remove “new” from § 101, and limit exceptions and requirements to only those in the statute
  - Clarify that inventors are entitled to patents
  - Define specific limits and basis for ineligible subject matter
  - Exclude consideration of novelty, obviousness, written description, enablement, *Alice* factors from § 101 determination
  - Consider use of person of ordinary skill in the art (POSITA) as basis for determining eligibility, same as in § 103
A method for alleviating congestion in a communication network, the communication network enabling the flow of data to and from a plurality of end user devices that are connected to the network through a plurality of communication devices, the method comprising the steps of:

- monitoring data flows to and from the plurality of end user devices for indications of congestion; and
- controlling the data rate of at least one end user device in response to the congestion indications.

Quiz: Which is Eligible?

- ELIGIBLE!

A method for reducing startup latency associated with a data transmission system having a first device configured to communicate with a second device over a communication channel, the method comprising the steps of:

- establishing a call between the first device and the second device;
- determining whether a characteristic of the communication channel is similar to a corresponding characteristic associated with a previously established communication channel; and
- if the characteristic is similar to the corresponding characteristic, initializing at least one of the first and second devices using a number of stored parameters associated with the previously established communication channel.

INELIGIBLE!