Update on Patentability of Software:
The Most Recent Case Law and Doctrine

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- Patent Eligibility in the U.S.
- Timeline: Key Post-*Alice Developments*
  - December 16, 2014 – USPTO Interim Eligibility Guidance
  - May 4, 2016 - USPTO Memo re: Formulating a Subject Matter Eligibility Rejection
  - May 12, 2016 - *Enfish v. Microsoft*
  - May 17, 2016 - *TLI Communications v. AV Automotive*
  - May 19, 2016 - USPTO Memo re: *Enfish* and *TLI* Decisions
  - May 31, 2016 - SCOTUS Denies Petition in *Vehicle Intelligence v. Mercedes-Benz*
- What's Next?
- Practical Considerations

- Statutory Basis: 35 U.S.C. § 101
  - "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 . . ."

- Judicial Exceptions to § 101
  - Patent ineligible - claims directed to
    - *laws of nature,*
    - *natural phenomena, or*
    - *abstract ideas*

May 4, 2016

USPTO Memo re:
Formulating a Subject
Matter Eligibility Rejection

May 17, 2016

TLI Comm. v. AV Automotive

May 12, 2016

Enfish v. Microsoft

May 19, 2016

USPTO Subject Matter
Eligibility Update

December 16, 2014

USPTO Interim Eligibility Guidance

June 19, 2014

Alice Corp v. CLS Bank

July 30, 2015 USPTO

Update on Subject Matter Eligibility

Two Step Eligibility Test
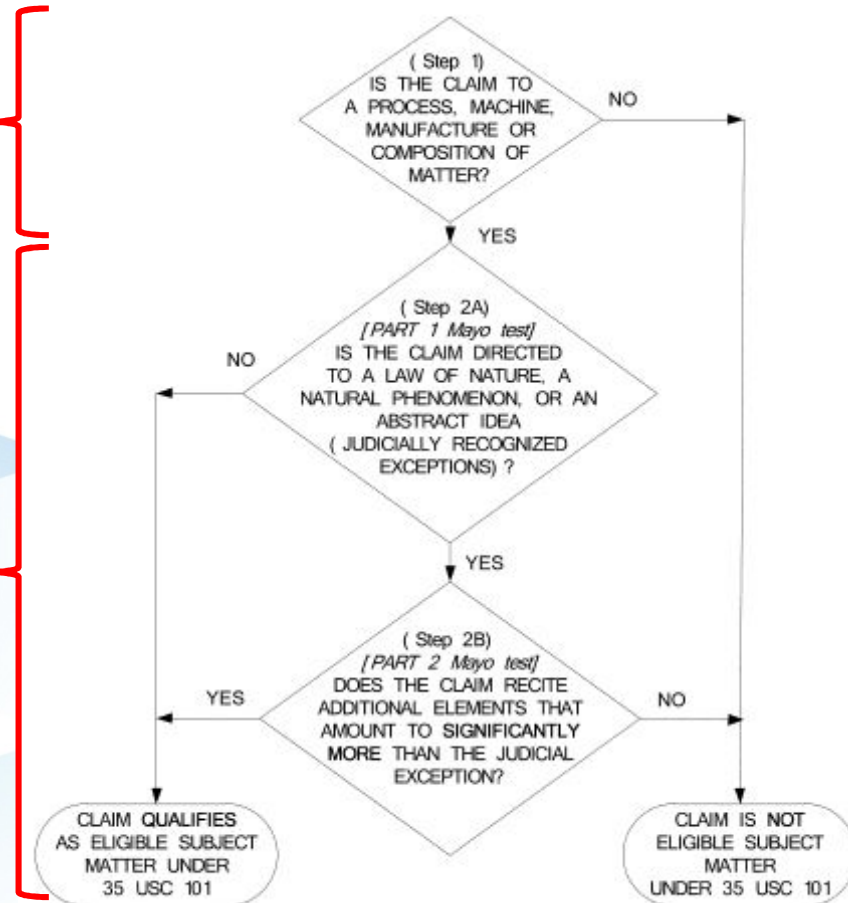
Statutory analysis, i.e., 35 U.S.C. § 101

Step 1:

Two-part *Alice* analysis:
(also called *Mayo* test)
for claims directed to laws of nature, natural phenomena, and abstract ideas

Step 2:

SUBJECT MATTER ELIGIBILITY TEST FOR PRODUCTS AND PROCESSES

PRIOR TO EVALUATING A CLAIM FOR PATENTABILITY, ESTABLISH THE BROADEST REASONABLE INTERPRETATION OF THE CLAIM. ANALYZE THE CLAIM AS A WHOLE WHEN EVALUATING FOR PATENTABILITY.

(Step 1)
IS THE CLAIM TO A PROCESS, MACHINE, MANUFACTURE OR COMPOSITION OF MATTER?

NO

YES

(Step 2A)
[PART 1 Mayo test]
IS THE CLAIM DIRECTED TO A LAW OF NATURE, A NATURAL PHENOMENON, OR AN ABSTRACT IDEA (JUDICIALLY RECOGNIZED EXCEPTIONS) ?

NO

YES

(Step 2B)
[PART 2 Mayo test]
DOES THE CLAIM RECITE ADDITIONAL ELEMENTS THAT AMOUNT TO SIGNIFICANTLY MORE THAN THE JUDICIAL EXCEPTION?

YES

NO

CLAIM QUALIFIES AS ELIGIBLE SUBJECT MATTER UNDER 35 USC 101

CLAIM IS NOT ELIGIBLE SUBJECT MATTER UNDER 35 USC 101

https://www.gpo.gov/fdsys/pkg/FR-2014-12-16/pdf/2014-29414.pdf

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- Provided examination instructions for applying the *Mayo/Alice test*
  - Required more detailed analysis by examiners for making rejections under § 101
  - Proper rejection under § 101 requires analysis under all steps of *Mayo/Alice* test
  - If judicial exception is identified in step 2A – examiner should address the additional claim elements **both individually and in combination** to determine if eligible subject matter is claimed
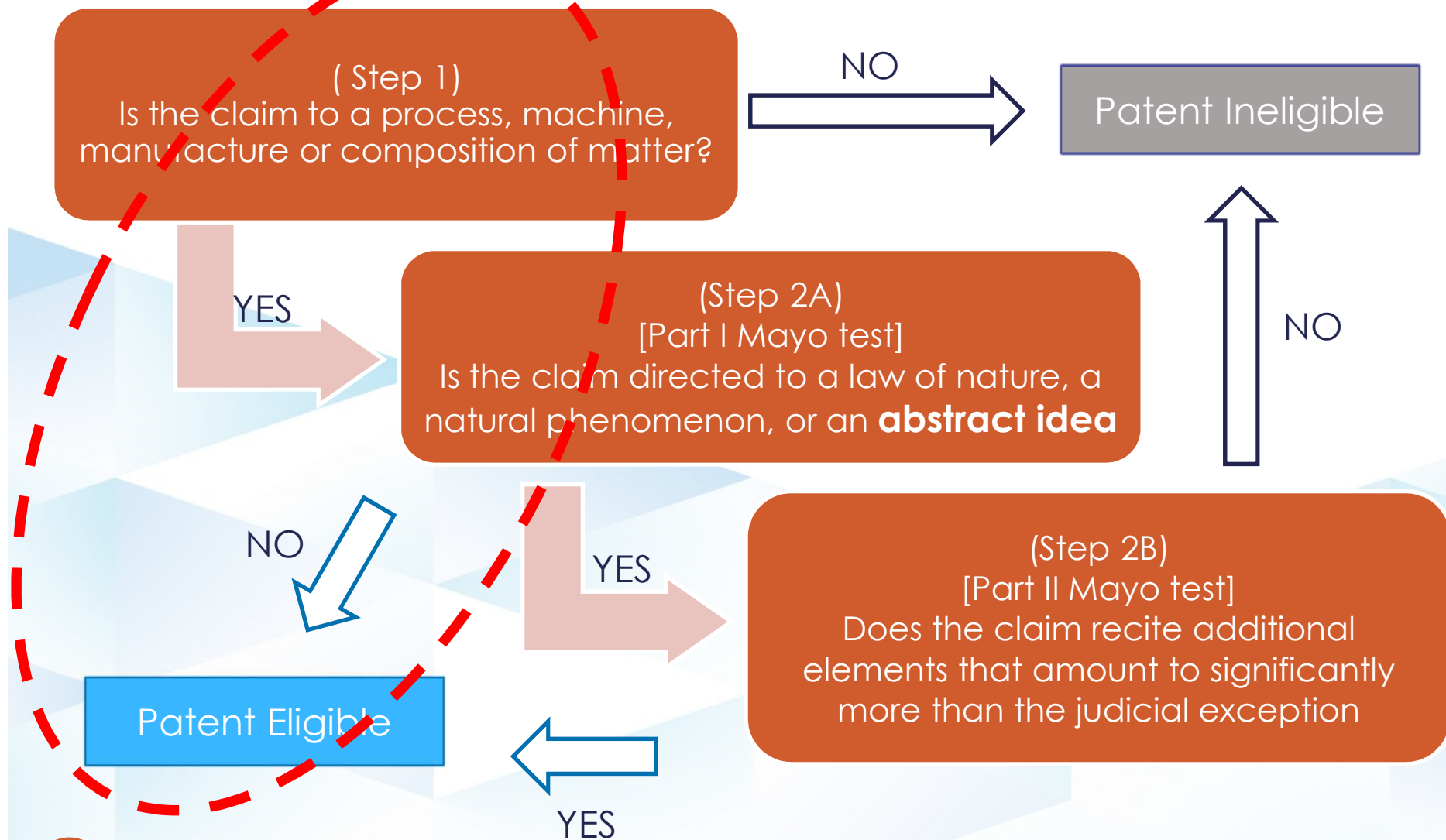   - i.e. do they add significantly more

- Patent claimed a self-referential database

- CAFC held that claims reciting "a specific improvement to computer functionality" are not directed to an abstract idea, do not have to be analyzed under step 2 (i.e., 2B) of *Mayo/Alice* test

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A data storage and retrieval system for a computer memory, comprising:

- means for configuring said memory according to a logical table, said logical table including:

  o *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;*

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

- means for indexing data stored in said table.

- # CAFC Applied *Eligibility* Test:
  - ## Step 1:
    - *Determine whether the claim is directed to a process, machine, manufacture, or composition of matter, **or new and useful improvement thereof***
  - ## Step 2A:
    - *Determine whether the claim is directed to a judicial exception, i.e. a law of nature, natural phenomenon, or abstract idea*
  - ## Step 2B:
    - *Determine whether the claim as a whole amounts to significantly more than the judicial exception*

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(Step 1)
Is the claim to a process, machine, manufacture or composition of matter?

NO → Patent Ineligible

YES →

(Step 2A)
[Part I Mayo test]
Is the claim directed to a law of nature, a natural phenomenon, or an **abstract idea**

NO → Patent Eligible

YES →

(Step 2B)
[Part II Mayo test]
Does the claim recite additional elements that amount to significantly more than the judicial exception

NO ↑ Patent Ineligible

YES → Patent Eligible

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CAFC held:

claim recited an improvement to the functionality of a computer, and thus the claim is patent-eligible under Step 2A of the Mayo/Alice test and need not be evaluated under Step 2B

- Reasoning focused extensively on the benefits derived from the self-referential database as stated in the patent specification:

  - First, the patents disclose an indexing technique that allows for faster searching of data than would be possible with the relational model. See, e.g., '604 patent, col. 1 ll. 55–59; id. at col. 2 l. 66–col. 3 l. 6.

  - Second, the patents teach that the self-referential model allows for more effective storage of data other than structured text, such as images and unstructured text. See, e.g., '604 patent, col. 2 ll. 16–22; col. 2 ll. 46–52.

- Finally, the patents teach that the self-referential model allows more flexibility in configuring the database. See, e.g., '604 patent, col. 2 ll. 27–29.

- In particular, whereas deployment of a relational database often involves extensive modeling and configuration of the various tables and relationships in advance of launching the database, Enfish argues that the self-referential database can be launched without such tasks and instead configured on-the-fly.

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- Observations:
  - These benefits are not recited in the claims - only described in the specification
  - Claims are means-plus-function claims, so the court interpreted the claims under 35 U.S.C. § 112(f).
  - Unclear if the means-plus-function elements were outcome-determinative
    - *Court did not expressly say in Enfish that the means-plus-function elements saved the claims from invalidity*
    - *However, the court in TLI v. AV Automotive (same judge who authored the Enfish opinion) did not consider arguments based on elements not expressly recited in the claims*

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- Summary
  - Claimed a method of organizing, categorizing, and storing digital images in a telephone system
  - CAFC held that these are merely "generalized steps . . . performed on a computer using conventional computer activity," and thus 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."

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.*

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- In contrast to the claims in *Enfish*, the CAFC found the claims in *TLI* to be directed to an **abstract idea** because the claimed method merely used a computer to perform the steps and did not alter the **<u>functionality</u>** of the computer.

- CAFC emphasized:

"the claims are not directed to a solution to a 'technological problem' as was the case in *Diamond v. Diehr* . . . [n]or do the claims attempt to solve 'a challenge particular to the Internet.'" (Citing *DDR Holdings v. Hotels.com*)

- *Enfish* and *TLI* cases provided additional guidance for applying the *Mayo/Alice test*
  - "examiner may determine that a claim directed to improvements in computer-related technology is not directed to an abstract idea under Step 2A of the subject matter eligibility examination guidelines (and is thus patent eligible), without the need to analyze the additional elements under Step 2B"
  - improvement does not need to be defined by reference to "physical" components. Instead, the improvement here is defined by logical structures and processes, rather than particular physical features.

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- USPTO acknowledged that "the improvement does not need to be defined by reference to 'physical' components. Instead, the improvement here is defined by logical structures and processes, rather than particular physical features."

- Pointed to *TLI* decision as providing "a contrast between non-abstract claims directed to an improvement to computer functionality and abstract claims that are directed, for example, to generalized steps to be performed on a computer using conventional computer activity."

- USPTO summarized that:

  o *"when performing an analysis of whether a claim is directed to an abstract idea (Step 2A), examiners are to continue to determine if the claim recites (i.e., sets forth or describes) a concept that is similar to concepts previously found abstract by the courts. The fact that a claim is directed to an improvement in computer-related technology can demonstrate that the claim does not recite a concept similar to previously identified abstract ideas"*

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- Petition to SCOTUS was filed March 24, 2016
  - Questions presented:
    - Does the Supreme Court's *Alice* test for … § 101 patent eligibility, or … § 101, actually state that use or application of an abstract idea is automatic, conclusive proof of preemption of the abstract idea?

    - Does the Supreme Court's *Alice* test for … § 101 patent eligibility actually require any patent which improves on already known prior art technology, to re-teach in a vacuum the already known prior art technology all over again in the specification and in each claim in order to have any inventive concepts that qualify for court recognition to satisfy the second step of the Supreme Court's *Alice* test?

    - Doesn't a patent satisfy step two of the Supreme Court's test for … § 101 patent eligibility by having independent patent claims that include multiple explicitly-stated inventive concepts?

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- Petition called the *Mayo/Alice* test "a universal pesticide to kill and invalidate virtually all patents."
- On May 31, 2016 the U.S. Supreme Court denied the petition to consider the appeal.

- In the *Enfish* case, Microsoft may appeal the CAFC's decision.
  - A petition for rehearing by panel or a rehearing *en banc* at the Federal Circuit is due by June 11, 2016.
  - A petition for writ of certiorari to the U.S. Supreme Court must be filed by August 10, 2016.

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- From *Enfish* - computer software running on a general purpose computer is not *per se* abstract (2A of *Mayo/Alice test*), focus on problem/solution
  - Describe how software solves a problem with conventional software/hardware – and sufficiently claim the solution
  - E.g., include description in the specification of how the software improves the computer, i.e., how the software makes the computer faster/smarter/more efficient e.g. adding new functions, making existing functions faster or more efficient (memory access/use in *Enfish*)

- *Alice Corp. v. CLS Bank International*, 573 U.S. __, 134 S. Ct. 2347 (2014)
- *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014)
- *Diamond v. Diehr*, 450 U.S. 175 (1981)
- *Enfish, LLC v. Microsoft Corp.*, 2016 U.S. App. LEXIS 8699 (Fed. Cir. May 12, 2016)
- *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. ___, 132 S.Ct. 1289 (2012)
- *TLI Communcations LLC v. AV Autotomotive, L.L.C.*, 2016 U.S. App. LEXIS 8970 (May 17, 2016)
- Vehicle Intelligence & Safety LLC v. Mercedes-Benz USA, LLC, — F. App'x —, 2015 WL 9461707 (Fed. Cir. 2015), *cert. denied* (May 31, 2016)

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