

Patenting Software:

A Case Study in Overcoming *Alice*

March 20, 2019

FISH.
FISH & RICHARDSON

Hosts

Frank Gerratana



Principal
Boston

Tracy Hitt



Principal
Atlanta

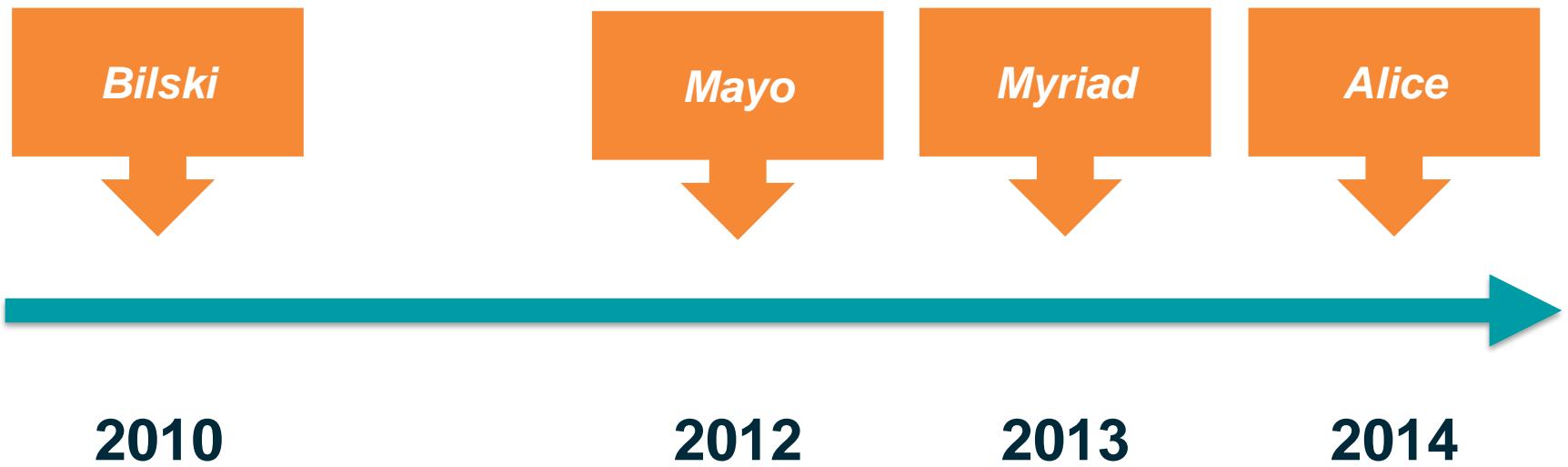
Roadmap

- 1 How Did We Get Here?
- 2 The State of Software Practice at the USPTO
- 3 USPTO 2019 Revised Guidance
- 4 Fish's Approach to *Alice*
- 5 Looking Ahead

The background features a complex network of interconnected nodes in various colors (blue, green, yellow, red) against a dark blue to purple gradient. A thick, solid white diagonal band runs from the top-left towards the bottom-right, partially obscuring the background.

How Did We Get Here?

Alice Didn't Come Out of Nowhere



Patent-Eligible Subject Matter (circa 2012)

- 35 U.S.C. § 101 → defines what inventions are eligible for patent
- Statutory categories:
 - Process
 - Machine
 - Manufacture
 - Composition of matter
- Exceptions:
 - Laws of nature (e.g., gravity)
 - Natural phenomena (e.g., chemical X reacts with chemical Y)
 - Abstract ideas (e.g., mathematical formula)

Congress intended statutory subject matter to
“include anything under the sun that is made by man.”

Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980), citing S Rep. No 1979, 82d Cong., 2d Sess., 5 (1952); H.R.Rep. No. 1979, 82d Cong., 2d Sess., 6 (1952).

Patent-Eligible Subject Matter – Bio (Laws of Nature)

Mayo v. Prometheus, S. Ct. (2012)

- Addresses patent-eligibility of judicial exceptions (laws of nature).
- Optimizing therapeutic efficacy for treatment of an immune-mediated gastrointestinal disorder.
- Relationships between biological measurements and drug/disease outcome are laws of nature.
- Sets forth the “two-part test” for patent-eligibility of claims including judicial exceptions.

The *Mayo* Test

Step 1

Determine whether the claims at issue are directed to a patent-ineligible concept

Step 2

If so, determine whether the claim's elements, considered both individually and in combination, are sufficient to ensure that the patent in practice amounts to significantly more than a patent on the ineligible concept itself

Patent-Eligible Subject Matter – Bio (Continued)

***Association for Molecular Pathology v. Myriad Genetics, Inc.*, S. Ct. (2013)**

- Addresses patent-eligibility of judicial exceptions (product of nature).
- Isolation of mutated BRCA1 and BRCA2 genes that put women at high risk for breast cancer and ovarian cancer.
- An isolated gene is a product of nature - *naturally occurring phenomena* - and not patentable subject matter.
- Applies the first step of the *Mayo* test.

Patent-Eligible Subject Matter – CII (Abstract Ideas)

Alice Corp. v. CLS Bank, S. Ct. (2014)

- Addresses patent-eligibility of software encompassing abstract idea(s).
- Computer-implemented, electronic escrow service for facilitating financial transactions.
- Settles parties' obligations to eliminate the risk that only one party's obligation will be paid.
- Alice applied the two part Mayo test in the context of software.

Two-part test for software claims:

- 1) Is the claim directed to ***an abstract idea?***
- 2) If yes, do the claim's elements, both individually and in combination, amount to significantly more than the abstract idea itself?

Laws of Nature (*Mayo*)



Natural Phenomena (*Myriad*)



Abstract Ideas (*Alice*)

Alice Step One – Abstract Idea?

- No clear indication as to what constitutes an abstract idea.
- Made clear an invention is not rendered ineligible for patent simply because it involves an abstract concept.
- Need to distinguish between patents that claim the building blocks of human ingenuity and those that integrate the building blocks into something more.
- Abstract ideas are generally defined by example
 - Filtering Content
 - Fundamental Economic Practice (hedging risk, electronic escrow service, advertising)
 - Organizing Human Activity
 - Mathematical Formulae
 - Idea Itself

Alice Step Two – Significantly More?

- The second step of the *Mayo/Alice* test has proven to be particularly difficult for the USPTO and lower courts to apply.
- It does not provide a bright-line rule; instead, it allows the decision maker to exercise a certain amount of discretion when evaluating whether there is anything “significantly more” in the claim.
- As a result, many patent examiners have issued *Alice* rejections to virtually any claims that are implemented using software.

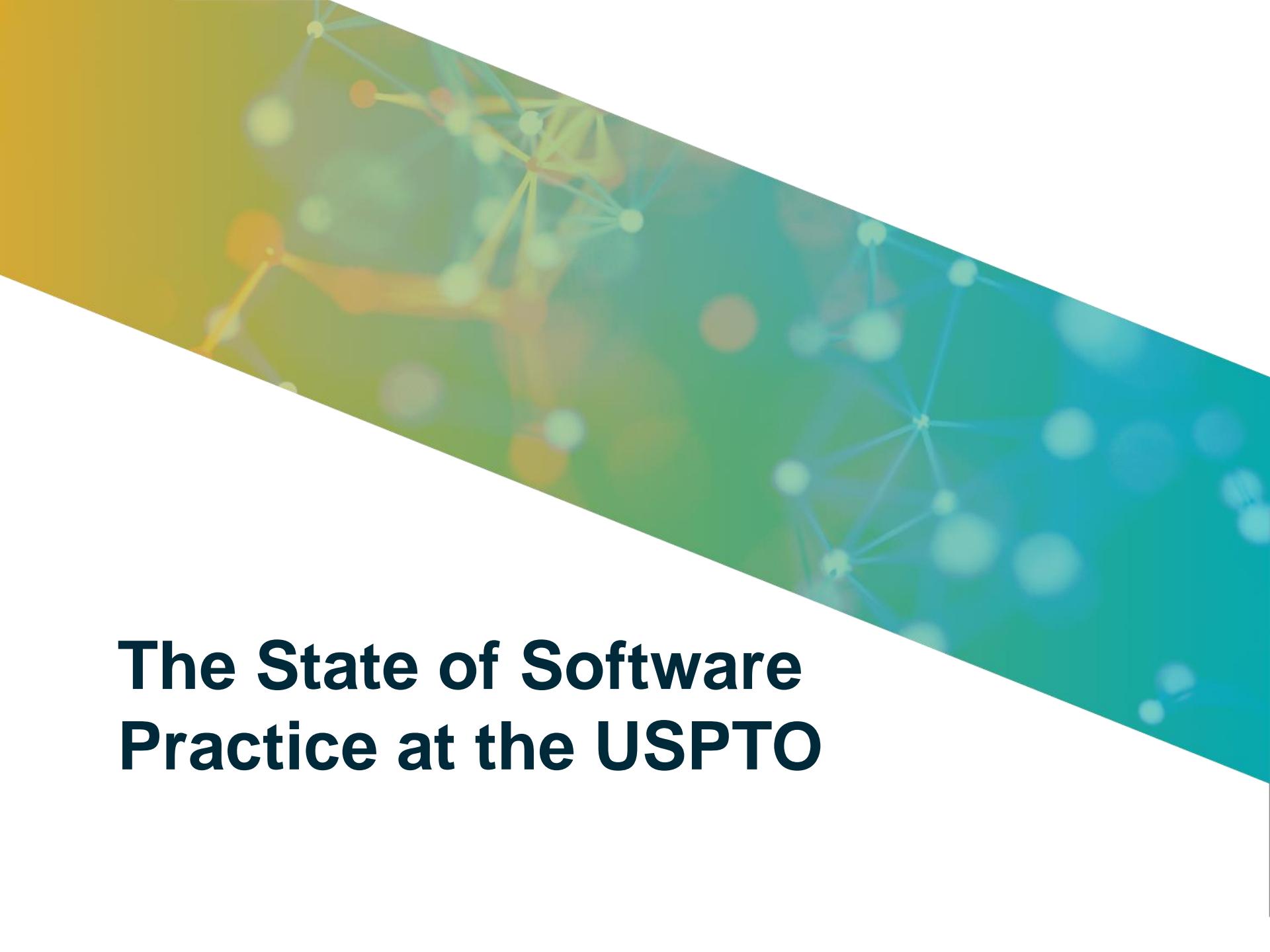
Why so Zealous with *Alice* Rejections?

The USPTO is engaged in a very delicate balancing act between two competing public policy objectives:

Eliminate weak and overly-broad software patents

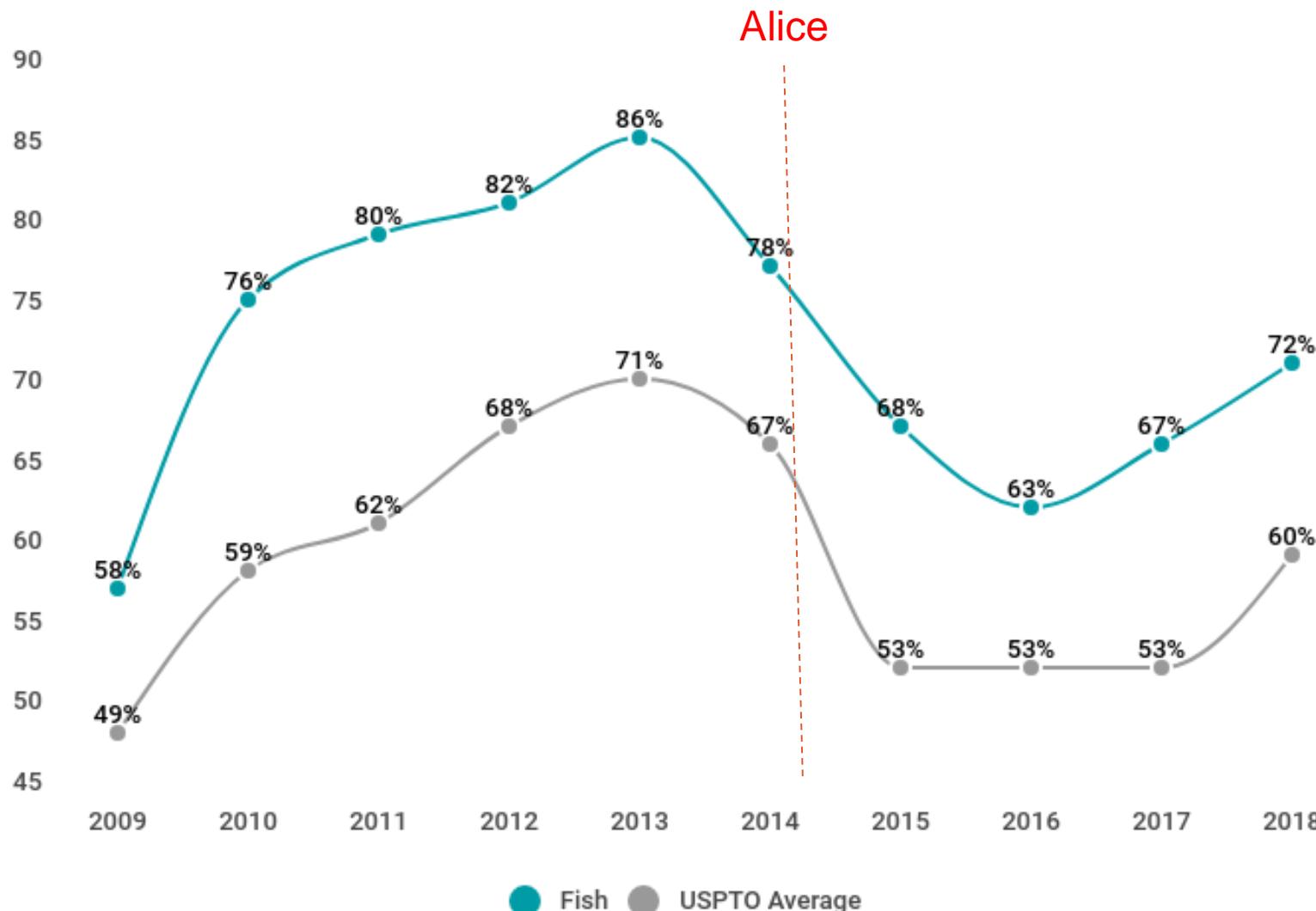
vs.

Encourage legitimate software innovation



The State of Software Practice at the USPTO

Software Allowance Rate



Inconsistency Has Been the Norm

- A particularly challenging aspect of software patent practice is that the USPTO's implementation of the *Alice* decision is remarkably inconsistent among examiners.
- There are inconsistencies even among examiners within the same art unit.
- Some examiners will withdraw an *Alice* rejection if the applicant makes a well-reasoned response.
- Others will not withdraw the rejection under virtually any circumstances.

Director Iancu, April 11, 2018

- “First, our current law surrounding patentable subject matter has created a more unpredictable patent landscape that is hurting innovation and, consequently, investment and job creation. Recent cases from the Supreme Court – Mayo, Myriad, and Alice – have inserted standards into our interpretation of the statute that are difficult to follow. Lower courts applying these cases are struggling to issue consistent results. Patent lawyers trying to advise their clients are, in turn, struggling to predict the outcome with respect to certain patents. And examiners at the USPTO must spend increased amounts of time addressing this challenging issue. The current standards are difficult for all: stakeholders, courts, examiners, practitioners, and investors alike.”



USPTO 2019 Revised Guidance

USPTO 2019 Revised Guidance

Two key revisions:

- 1** Unpatentable abstract ideas are grouped into three categories:
(a) mathematical concepts, (b) certain methods of organizing human activity, and (c) mental processes.
- 2** A claim that recites an abstract idea (or other kind of judicial exception) is not “directed to” the abstract idea if the abstract idea is integrated into a practical application of the abstract idea.

USPTO 2019 Revised Guidance

Enumerated abstract ideas:

- **Mathematical concepts:** mathematical relationships, mathematical formulas or equations, mathematical calculations
- **Certain methods of organizing human activity:** fundamental economic principles or practices, commercial or legal interactions, managing personal behavior or relationships or interactions between people
- **Mental processes:** concepts performed in the human mind (including observations, evaluations, judgments, and opinions)

USPTO 2019 Revised Guidance

“Directed to”

- Under USPTO Step 2A, a claim that integrates a judicial exception into a practical application of that exception is **not** “directed to” the judicial exception.
- A claim is “directed to” a judicial exception only if it fails to incorporate the exception into a practical application of it
- A claim that integrates a judicial exception into a practical application will **apply**, **rely on**, or **use** the exception in a manner that imposes a meaningful limit on the exception

USPTO 2019 Revised Guidance

Revised Step 2A

- **Prong 1:** Evaluate whether the claim recites a judicial exception
 - for abstract ideas, this is limited to the new enumerated groupings
- **Prong 2:** If the claim recites a judicial exception, evaluate whether the judicial exception is integrated into a practical application of it
 - a) Identify whether there are additional elements recited in the claim beyond the judicial exception, and
 - b) Evaluate those additional elements individually and in combination to determine whether they integrate the exception into a practical application using one or more of the considerations laid out by SCOTUS and the Federal Circuit.

USPTO 2019 Revised Guidance

What about abstract ideas that don't fall into an enumerated group?

- Referred to as “tentative abstract ideas.”
- They are evaluated the same way as if they did fit into an enumerated group.
- **However**, examiners must receive approval from their Technology Center Director and must provide a justification for why they are treating the claim at issue as reciting an abstract idea if it does not fall into an enumerated category.

USPTO 2019 Revised Guidance

Step 2B

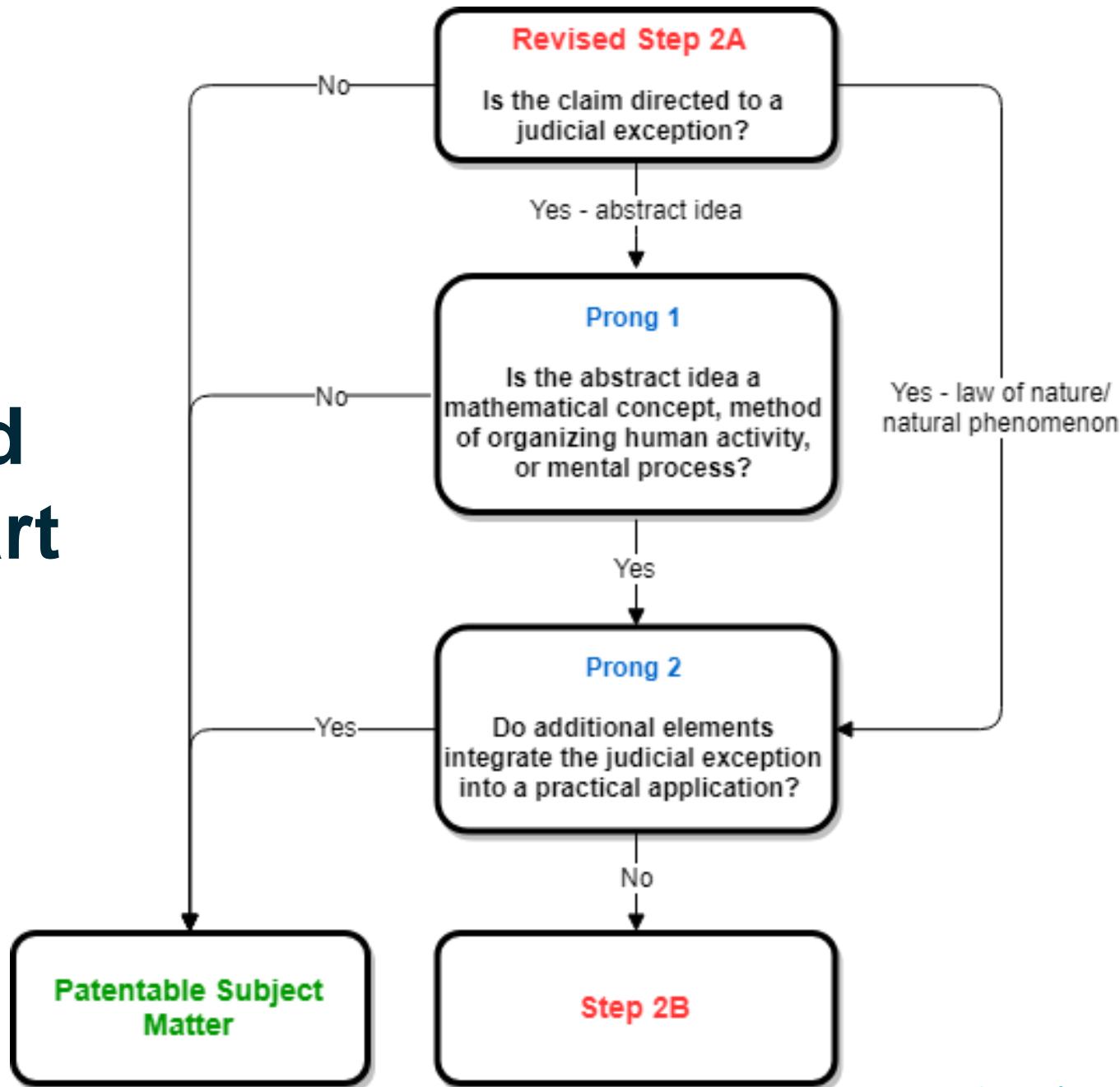
- Examiners should continue to consider whether an additional element or combination of elements:
 - Adds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, which indicates that an inventive concept might be present, or
 - Simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which indicates that an inventive concept might not be present.
- **An assertion that a claim element or elements represents something well-understood, routine, conventional must be supported by evidence.**
- **An element that does not integrate the judicial exception into a practical application under Revised Step 2A (Prong 2) can still qualify as an inventive concept under Step 2B.**

USPTO 2019 Revised Guidance

What does it do?

- Shifts evaluations of whether the claim falls into one of SCOTUS and the Federal Circuit's exemplary considerations from Step 2B to Step 2A.
- Provides an additional opportunity for a finding of subject matter eligibility at Step 2A (Prong 2).
- At 2A, the Examiner is not to consider whether additional elements were well-known, routine, or conventional. That is only considered at 2B.

Revised Flowchart



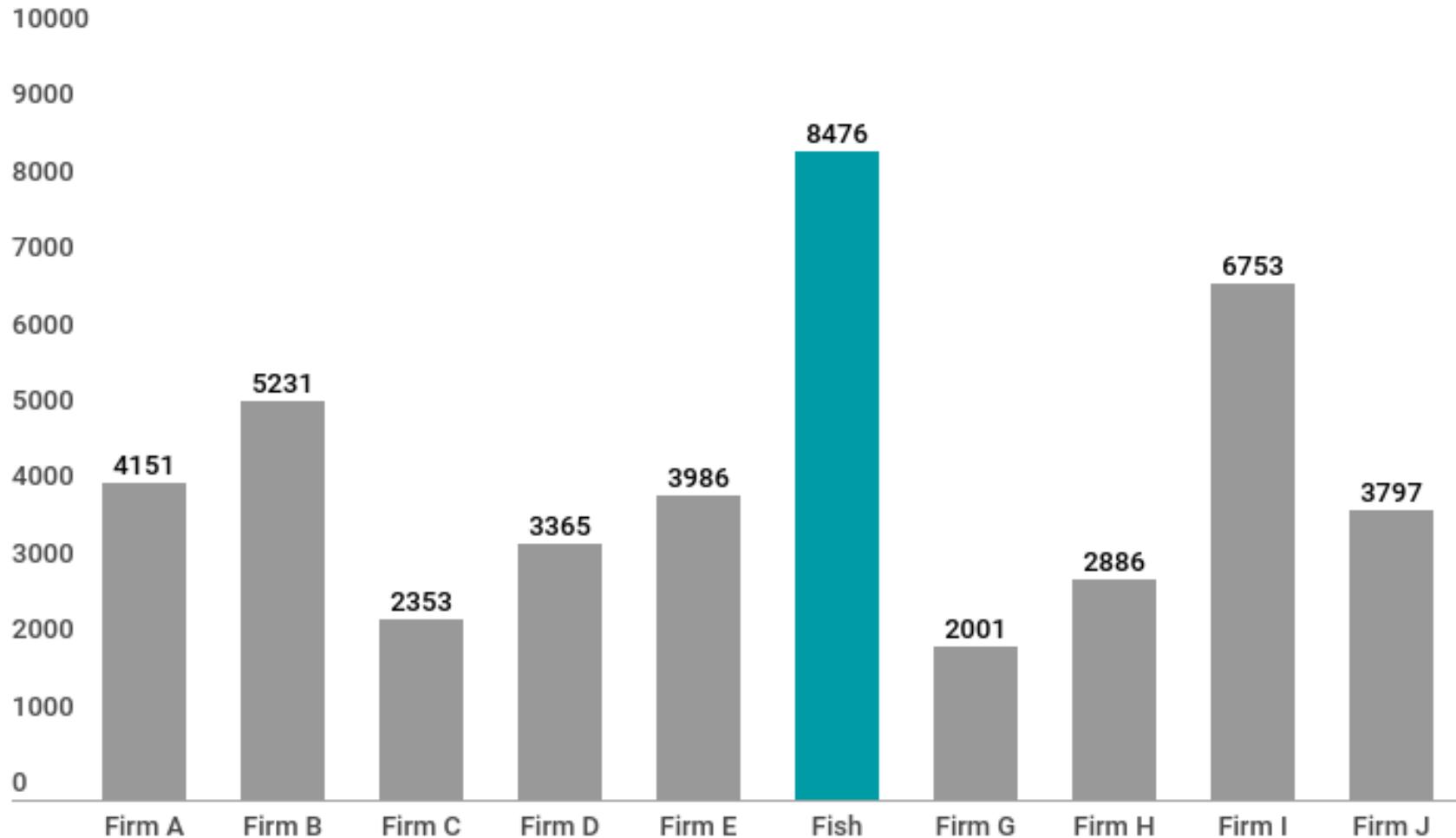
Fish's Approach to *Alice*

A Dedication to Software

1/3

Fish devotes significant time, resources, and talent to our software clients. **Over one third of our attorneys work with software-related matters in some capacity**, and many had long and distinguished careers in the field before joining Fish.

Total Software Applications



Handling *Alice* Rejections

What we've learned through the prosecution of so many software patents is that the foundation of a successful *Alice* strategy is to consider **why** the examiner is issuing the rejection

Handling *Alice* Rejections

Examiners issue *Alice* rejections of “eligible” subject matter for different reasons:

- 1 The examiner (or his or her supervisor) generally believes that software implemented on a traditional computing device is patent-ineligible subject matter.
- 2 The examiner sees merit in the application, but wants the applicant to clarify and strengthen the technical aspects of the claims.

Handling *Alice* Rejections

- If your examiner is in the first camp, there are very few options besides an appeal to the PTAB.
- **HOWEVER**, if your examiner is in the second camp, **the key to success lies in claiming the software in terms that have technical merit.**
- During drafting, ensure that your applications include sufficient technical details so as to maximize the likelihood that your examiner will consider the claims as hard tech rather than pure software.

Arguing the MPEP/Cases

- ***Berkheimer (Step 2B)***
 - Challenge the examiner to provide evidence that a claim element is well-understood, routine, and conventional
 - April 2018 memo
- ***Core Wireless (Step 2A and 2B)***
 - Point to elements of a claim that represent a specific improvement over prior systems, e.g., improved computer interface
- ***McRO (Step 2A and 2B)***
 - Recite elements specific to improving computer technology, e.g., enabling the computer to perform functions it was previously unable to perform

Three Keys to Success with *Alice*

- 1 KNOWLEDGE** – Deep technical background
- 2 SKILL** – Expert drafting abilities
- 3 EXPERIENCE** – Practice before a wide variety of examiners

Looking Ahead



Proposals to Amend 35 U.S.C. § 101

- October 2016: USPTO issues an invitation for written comments on patent subject matter
- Many proposals were submitted, including those from:
 - The ABA's Section of Intellectual Property Law (ABA)
 - The Intellectual Property Owners Association (IPO)
 - The American Intellectual Property Law Association (AIPLA)
- Common criticisms of existing jurisprudence:
 - It is ambiguous, subjective, and applied inconsistently
 - It applies criteria traditionally used to assess novelty and non-obviousness (e.g., “pre-existing,” “well-known in the art,” “routine,” etc.), to subject matter eligibility determinations
 - It is overly restrictive and contrary to the Congressional intent of the Patent Act
 - It impacts particular industries too negatively
 - It disincentivizes innovation and investment in the US

Proposal: ABA

§ 101. Conditions for patentability: eligible subject matter.

- a) **Eligible Subject Matter.**- Whoever invents or discovers any useful process, machine, manufacture, or composition of matter, or any useful improvement thereof, shall be entitled to obtain a patent on such invention or discovery, absent a finding that one or more conditions or requirements under this title have not been met.
- b) **Exception.**- A claim for a useful process, machine, manufacture, or composition of matter, or any useful improvement thereof, may be denied eligibility under this section 101 on the ground that the scope of the exclusive rights under such a claim would preempt the use by others of all practical applications of a law of nature, natural phenomenon, or abstract idea. Patent eligibility under this section shall not be negated when a practical application of a law of nature, natural phenomenon, or abstract idea is the subject matter of the claims upon consideration of those claims as a whole, whereby each and every limitation of the claims shall be fully considered and none ignored. Eligibility under this section 101 shall not be negated based on considerations of patentability as defined in Sections 102, 103 and 112, including whether the claims in whole or in part define an inventive concept.

Proposal: Joint IPO/AIPLA

Eligible Subject Mater

- a) Whoever invents or discovers, and claims as an invention, any useful process, machine, manufacture, composition of matter, or any useful improvement thereof, shall be entitled to a patent therefor, subject only to the conditions and requirements set forth in this title.

Sole Exceptions to Subject Matter Eligibility

- b) A claimed invention is ineligible under subsection (a) if and only if the claimed invention as a whole (i) exists in nature independently of and prior to any human activity or (ii) is performed solely in the human mind.

Sole Eligibility Standard

- c) The eligibility of a claimed invention under subsections (a) and (b) shall be determined without regard to:
 - i. the requirements or conditions of sections 102, 103, and 112 of this title;
 - ii. the manner in which the claimed invention was made or discovered; or
 - iii. whether the claimed invention includes an inventive concept.

FISH *Alice* Tracker

- <https://www.fr.com/alice-tracker/>



The Alice Tracker provides a single source for significant decisions in which the patent-eligibility of claims is addressed under *Alice*. Our index of sampled cases is updated regularly, and can be filtered on various parameters. Although this page does not include every *Alice*-related decision, we strive to capture the most relevant and informative decisions, and post new decisions as they are published. Although *Alice* dealt with software, *Alice* was not about software *per se*. Instead, it was about the patent-eligibility of an invention encompassing an abstract idea, regardless of whether the abstract idea is implemented in software. *Alice* has changed the landscape for prosecutors and litigators alike. Since the decision, courts have struggled with identifying abstract ideas, as well as the "something more" required to meet part two of the test.

| Date | Court | Judge | Category | Abstract Idea | Something More |
|-------|-------|-------|----------|---------------|----------------|
| Month | Year | | All | All | All |
| | | | | | |
| | | | | | |

Filter by keyword

Keyword

| Name | Date | Court | Category | Abstract Idea | Something More |
|------------------------------------|------------|-----------|--|---------------|----------------|
| In re Marco Guldenaar Holding B.V. | 12/28/2018 | Fed. Cir. | Methods of Organizing Human Activities, Rules for Playing a Game | Yes | No |
| Ancora Techs. v. HTC Am. | 11/16/2018 | Fed. Cir. | None | No | N/A |

What is Alice?

In *Mayo Collaborative Services v. Prometheus Labs., Inc.*, 132 S. Ct. 1289 (2012), the Supreme Court articulated a two-part analytical framework for determining whether a claim is patent-

Thank You!



Frank Gerratana
617-956-5935
gerratana@fr.com

Tracy Hitt
404-724-2775
hitt@fr.com

The opinions expressed are those of the author and do not necessarily reflect the views of Fish & Richardson P.C., any other of its lawyers, its clients, or any of its or their respective affiliates. This presentation is for general information purposes and is not intended to be and should not be taken as legal advice.

Please send your NY CLE forms or questions about the webinar to Angela Park at Park@fr.com

A replay of the webinar will be available for viewing at <https://www.fr.com/webinars/>

© Copyright 2019 Fish & Richardson P.C. These materials may be considered advertising for legal services under the laws and rules of professional conduct of the jurisdictions in which we practice. The material contained in this presentation has been gathered by the lawyers at Fish & Richardson P.C. for informational purposes only, is not intended to be legal advice and does not establish an attorney-client relationship. Legal advice of any nature should be sought from legal counsel. Unsolicited e-mails and information sent to Fish & Richardson P.C. will not be considered confidential and do not create an attorney-client relationship with Fish & Richardson P.C. or any of our attorneys. Furthermore, these communications and materials may be disclosed to others and may not receive a response. If you are not already a client of Fish & Richardson P.C., do not include any confidential information in this message. For more information about Fish & Richardson P.C. and our practices, please visit www.fr.com.

FISH.
FISH & RICHARDSON