Leahy-Smith Patent Act:

Effects on Emerging Technologies of the Weak Grace Period

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David Boundy is speaking in his individual capacity, based on his experience before joining Cantor Fitzgerald. Nothing in this talk is to be construed as a position of Cantor or any other client of Mr. Boundy.

Biggest economic effect of the patent system

- Patents are about investment, and turning raw ideas into going businesses that put useful products in consumers' hands.
  - Ideas are cheap.
  - Turning an idea into a product—proof-of-concept testing, identifying the best chemical compound out of a large genus, engineering, debugging, prototype-to-product engineering, ruggedizing and reliability engineering, testing for "safe and effective," building a production facility, building a distribution and sales channel, marketing to develop demand—**those steps are *expensive*.**
- Patents allow companies to invest to commercialize high first-unit cost products (high R&D, low reproduction costs)
- Patents reduce business risks and tip investment decisions from the traditional and safe to the innovative and riskier
- Investors look for "unfair advantages," for extreme patent strength, to protect against competitors after a risky invention changes the world. Patent strength is essential to fostering risky investments/inventions
- Other goals (incentivizing invention, disclosure) are secondary

The 2011 Act is a huge gamble

- Very small changes in perceived risk and investment economics have ***much larger*** effects on investment flows
  - Every investment competes against a vast array of alternatives. All investment decisions are made at the margin—investors make large choices based on small differences.
  - Venture capital and similar investors team up, "all hold hands and jump together," and don't invest in stage *n* unless there's a good chance that there will be more investors for stage *n*+1. If investment economics change enough to scare off a few investors, each pullout will multiply severalfold
- The 2011 Act is a ***very*** "twitchy" control knob on the most sensitive point of 20% of the economy—small changes will have ***very*** large effects.
- There have been only three meaningful studies of those economic effects, all three concluded that Patent Reform is bad for startups (Lo & Sutthipistal, Boundy, Wagner & Abrams)

Who wins, who loses?

losers (better off under 1952 Act)	winners (better off under 2011 Act)
disruptive innovations	incremental improvement inventions
inventions that take time to develop, test, perfect, and require bigger patent applications	inventions that can be conceived, tested, perfected and prepared for filing in very little time
foundational discoveries that support broad claims (Prof. Wegner's "upstream creators"), *e.g.*, universities, startups	specific products based on the foundational discovery ("downstream innovators"), *e.g.*, drug companies' specific molecule or slow-release formulation
cross-firm "open innovation"	large companies that integrate financing, R&D, manufacturing, and marketing in-house
startups that need to team with outsiders to obtain financing, manufacturing, marketing	
new market entrants	market incumbents
inventors	Aggregators that use others' technology
American inventors inventing for American markets	multinational companies and non-U.S. inventors
companies that use their patents to secure investment from external investors and build new businesses	companies that obtain their capital based on ongoing business operations
companies that build themselves around their patents	companies whose markets are protected by economic factors other than patents
patents	trade secrets
patent prosecutors	reexamination and postgrant review specialists, litigators
outside law firms	in-house lawyers

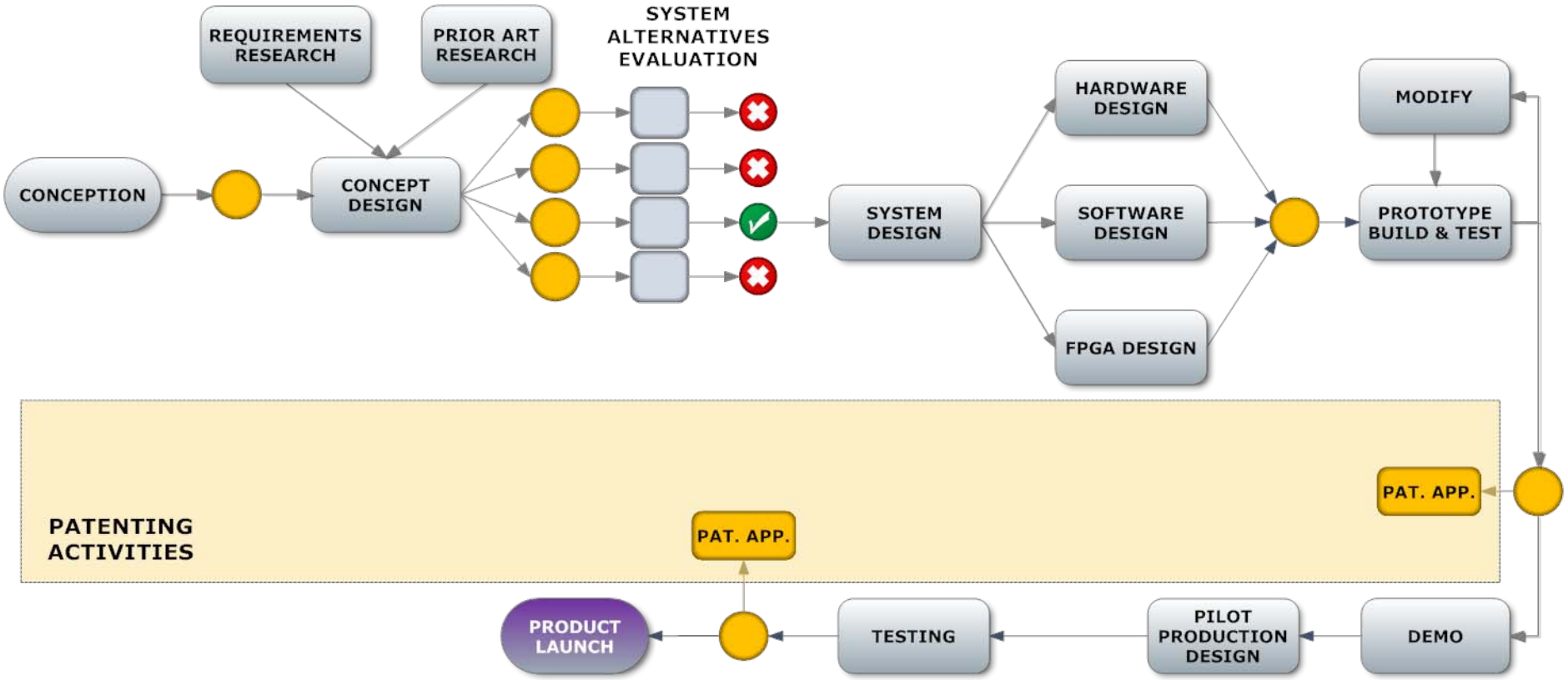
Startup "***Best Practices***"

- Startups' and small business' "best practices" balance all aspects of running a business
  - R&D procedures and efficient scheduling
  - Raising funding and engaging with strategic partners
  - Managing marketing and disclosure
  - Intellectual property protection and patent prosecution
- In allocating the limited resources, patenting activities cannot trump other critical business and operational needs

How small companies use the 1952 Act's grace period

- Allows time to test and perfect inventions, and to prepare quality patent applications
  - to be able to talk outside the firm to negotiate financing and strategic partnerships
  - to delay filing until bad inventions are separated from good, and good inventions are debugged
- Protection against departing employees, accidental disclosures, etc.
- The most important prongs of the 1952 grace period are § 102(a) and (e), that run from "date of invention"—they are ***GONE***.

Example of startup “Best Practices” from invention to product launch



Current patent law is geared around innovators’ “best practices” that focus scarce resources on minimizing total development time and reducing technical risks

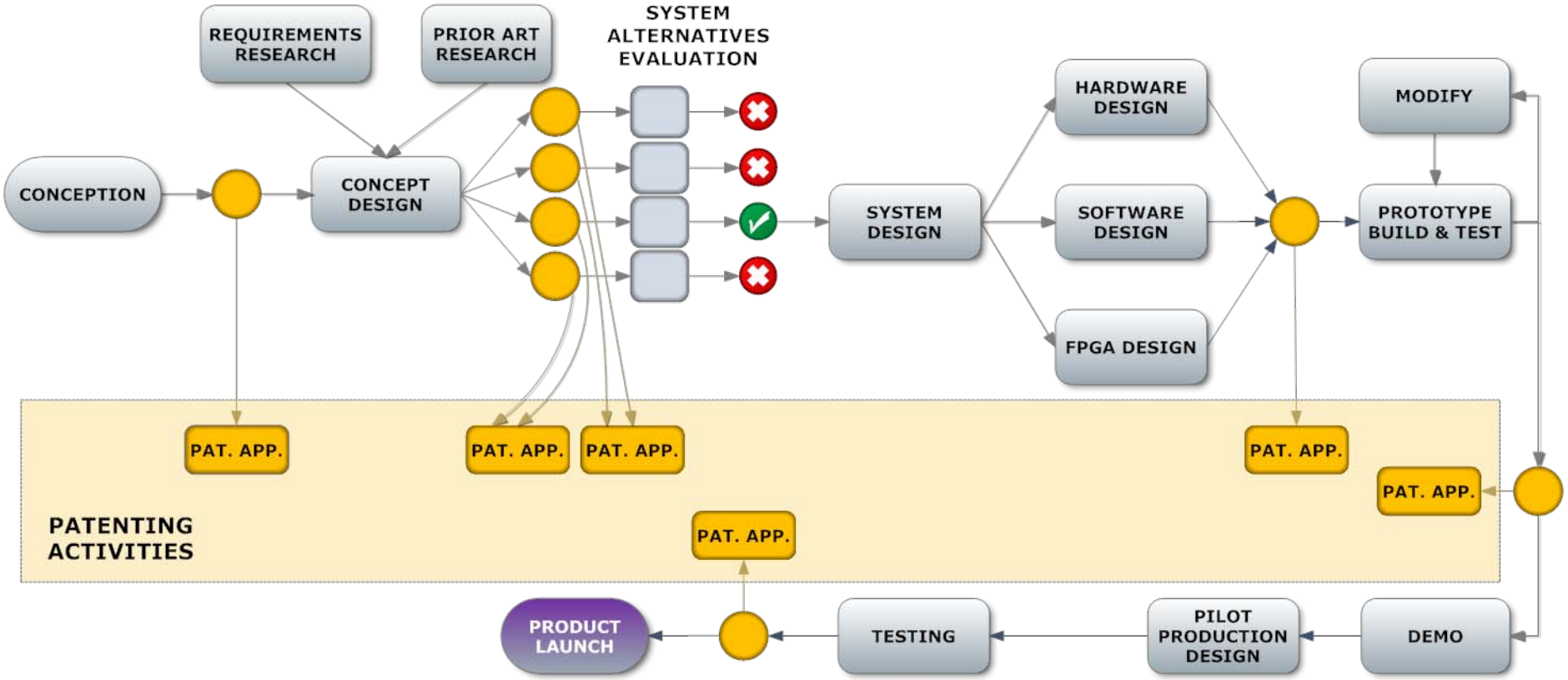
Source: Ron D. Katznelson, SBA Presentation, (2010).

Grace period under the 2011 Act

- Any “patented, described in a printed publication, or in public use, on sale, or otherwise available to the public” anywhere, prior to effective filing date bars patentability
- Unless disclosure was within one year and “directly or indirectly” obtained from the inventor
- OR (probably, after ambiguous statute is resolved) the inventor publishes an article that gives a full patent-quality disclosure

- All the options that support any grace period involve great expenditure of inventor time, and usually attorney time, or large risk of ***immense*** expenditure to show “direct or indirect” derivation

The loss of a grace period under 2011 Act forces costly deviations from “Best Practices”



Under 2011 Act, innovators will be required to spend scarce financial resources on premature and more frequent patenting, instead of advancing toward product development

Source: Ron D. Katznelson, SBA Presentation, (2010).

The grace period remaining under the 2011 Act is commercially useless

- The big difference between the 1952 Act and 2011 Act:
  - Under the 1952 Act, most legally-relevant facts are facts within the inventor's control. Once an invention is conceived, the inventor has to document conception and diligence, and has to keep an eye open for § 102(b) art, but that's standard business risk stuff
  - Under the 2011 Act, the relevant facts are out of the inventor's control. The standard tools for managing risk don't work.

Uncontrollable Risks—Legal

- "Drafting ambiguities … permeate the statute and more and more are being seen as the hallmark of this legislation. All too often the apparent intention of the legislature is countered by statutory wording that is inconsistent with that apparent intention." —Prof. Wegner
  - A list of ambiguties is in the handout
- Businesses can't work efficiently when boundaries are not clear. We've got 140 years of common law to interpret the 1952 Act, and that's out the window.

- PTO has no substantive rule making authority. PTO *cannot* clarify these ambiguities by rule. PTO's attempts to "interpret" are outside PTO's jurisdiction. PTO's rules will be invalid, PTO's interpretations will not be given *Chevron* deference. All PTO can do in this area is add another voice to the confusion.

Uncontrollable Risks—Third parties

- Situations that destroy patent rights:
  - A third party discloses an embodiment that is close but not exactly the same. New § 102(b) appears to preserve a right to a microscopically-narrow picture claim, but the third party is prior art that bars any commercially-valuable claim. Gone.
  - A departing employee, a treacherous employee, a student out on a job interview, an employee who's skeptical of the patent system in general—discloses information without a clear trail back to the correct inventor
  - A reporter seeing a demo at a trade show reports without attributing the inventor or company
  - Elevator conversations that travel without attribution

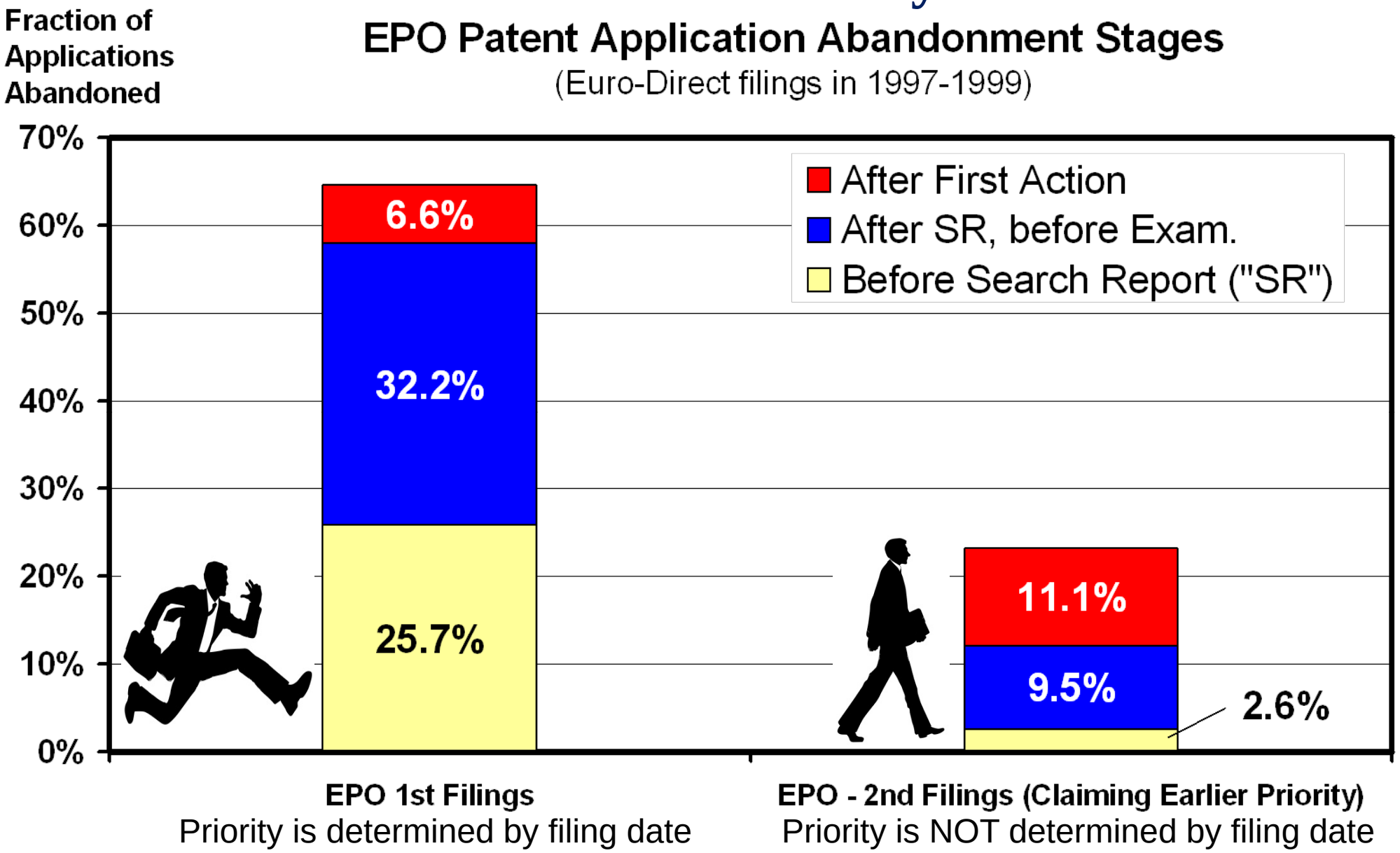
The 2011 Act grace period doesn't cover the activities that startups need

- Conversations with venture capitalists are not "publicly available" for new § 102(a) prior art—are they "disclosure" for new § 102(b) grace period?
  - These conversations were helpful to show conception and diligence under 1952 Act
  - Probably not helpful under 2011 Act
  - Any discussion with an outsider creates a risk that the information will travel further, and creating a bar

Even where the statute purports to grant a substantive right, there's no procedural support or implementation

- Under 1952 Act, most of the time the party that wants to prove "date of invention" is the party that needs to prove his/her *own actions*, and has the relevant information in his/her own files. The 2011 Act shifts to derivation, where a party needs to show what the *other* party *thought*.
- The 2011 Act does not amend 35 U.S.C. §§ 23 and 24, the "discovery" provisions, to provide the PTO with power to compel production of evidence.
- The 2011 Act provides no forum for adjudicating an applicant-vs-non-applicant derivation issue
- What good is a substantive right without implementing procedure?

Applications with priority dependent on filing date are less mature and are more likely to be abandoned



Data Sources: EPO Data from G. Lazaridis et al. *World Patent Information* **29**, pp. 317-326, (2007). "After SR, before Exam" and "First Action" here means the withdrawal components (2)+(3) and (4) respectively, as defined in the heading of Table 2. ***Chart Source***: Ron D. Katznelson, FTC Presentation (2009).

The mythical $100 provisional

- Proponents often referred to the low cost of a provisional application as a solution to earlier filing deadlines
  - The quick-and-dirty provisional that had value under the 1952 Act has no value under the 2011 Act. Under the 1952 Act, a cheap provisional application established a date of invention, and weighed in diligence. But conception and diligence are irrelevant under the 2011 Act.
  - To be valuable under the 2011 Act, a provisional has to be prepared with all the care of a nonprovisional.
  - But if you're doing that, why file a provisional at all? A two-filing strategy is much more costly than a one-filing strategy.
  - Provisional extends patent term—but that's the only value.

The mythical publication strategy

- New § 102(b)(1)(B) provides a "locked in" grace period against all third parties for publishing—recently recommended on PatentlyO.
- This is worthless as a practical matter:
  - Though the statute is ambiguous, there's a good likelihood that the § 102(b)(1)(B) grace period will only accrue if the publication meets § 112(a) "written description" and "enablement" standards (best mode?) But ensuring that level of disclosure requires review by a patent attorney.
  - If the document meets § 112(a) disclosure standards, then it discloses too much about future business plans. The only rational businesses that do that are those that have monopoly power in their markets.
  - Publication without a filing waives all foreign patent rights (except possibly Canada).
  - Don't use publication, file as a provisional or nonprovisional application. 18 months confidentiality, better source of proof.

Effect on clients

- File early, file often
  - The 1952 Act gave you time to gather information to make well-informed and economically-sound filing decisions, and to prepare robust patent applications. The 2011 Act takes that time away.
  - The filing decisions will be of lower quality. You will prune inventions that turn out to be valuable, you will file applications that turn out to be worthless. Tough. Everyone else is screwed too. It's the new normal.
  - Additional delay at PTO: more applications filed, of lower quality
- You still have to keep good development records.
  - Probability of Derivation proceeding, Prior User Right defense, or other trade secret action is higher than under current law. What other evidence would you rely on?
- New procedures:
  - Biweekly or monthly engineering project reviews:
    - identifying new ideas that should be filed as patent applications
    - compelling developers to spend more time on more frequent patent disclosures and patent prosecution
    - modifying the employee incentive structures to achieve these goals
  - Reviewing every departure of a key employee (perhaps to join a competitor)
- Additional private sector costs of about ***$1 billion*** per year

Effect on patent attorneys

- Fundamental change in client relations:
  - Constant tension with clients about pre-filing time allocation. Who is blamed for delay? Will searches be made? Digested?
  - Educating clients about the inevitable lower yield—more applications must be filed per ultimate grant
- Malpractice insurance:
  - The deadlines are shorter
  - There are fewer opportunities to mitigate harm for missing those deadlines
  - Errors are more likely to come to light within the statute of limitations