

The Honorable Karen G. Mills,  
Administrator,  
U.S. Small Business Administration  
409 3<sup>rd</sup> Street, SW  
Washington, DC 20416

December 15, 2009

CC: Penny K. Pickett, Associate Administrator, Office of Entrepreneurial Development, SBA  
Susan M. Walthall, Acting Chief Counsel for Advocacy, SBA  
Gary Locke, Secretary, U.S. Department of Commerce  
David Kappos, Under Secretary of Commerce for IP and Director of the USPTO  
Nydia M. Velázquez, Chairwoman, House Small Business Committee  
Mary L. Landrieu, Chair, Senate Committee on Small Business and Entrepreneurship

We wish to express our concerns relating to S. 515, the so-called “Patent Reform Act of 2009.” We write to you as the head of an independent agency of the federal government created to aid, counsel, assist and protect the interests of small business concerns, to preserve free competitive enterprise and to maintain and strengthen the overall economy of our nation. We are the *Small Business Coalition On Patent Legislation* - a national consortium formed by organizations representing and assisting early-stage startup companies, small-businesses, individual and academic inventors, researchers and new innovative market entrants (see the description of current participants in Slide 2 of our attached handout).

Your agency has a unique role, expertise and mandate in evaluating statutory and regulatory effects on small businesses, and it should have significant input into the Administration’s position on S. 515. In an October 5, 2009 letter<sup>1</sup> to the Senate Committee on the Judiciary, the U.S. Secretary of Commerce, Mr. Gary Locke expressed the Administration’s general support of certain provisions of S. 515 that, if enacted, will inflict unprecedented harm on small firms that rely on patented innovations. Such changes will impede new investments and new jobs creation in the very segment of the economy that is responsible for most of America’s new jobs. We are particularly concerned about support expressed in the Secretary’s letter for two provisions of S. 515: (i) repeal of first inventors’ rights, changing the patent priority determining date from the date of invention to the date of filing the application, and (ii) provisions instituting new and additional post-grant proceedings at the U.S. Patent and Trademark Office (USPTO) to challenge issued patents. Both changes sharply favor large companies and market incumbents and will be highly prejudicial to new market entrants, independent inventors, startup companies and small businesses.

### **Repeal of the first inventor’s patent priority rights**

Departing from a decades-long, bipartisan foreign intellectual property policy position, Secretary Locke now supports unconditional “transitioning” of the U.S. patent system to a “First inventor To File” (FTF) system. The details of S. 515 do not merely govern a very small number of priority contests at the USPTO between two inventors (termed Interferences), as some have claimed. The Senate Bill would rewrite Section 102 in its entirety, redefining the prior art that can be used to block issuance of a patent or invalidate it after issuance, and weakens the grace period now given to inventors to allow them to test, develop and commercialize their inventions before filing their patent application.

No one has studied or evaluated the expected effects on U.S. patenting practices, the balance of costs and risks for small and large U.S. businesses, the adverse effects on patent quality, or the increased USPTO workload from such a change. Noteworthy is the recent McGill University study of the Canadian transition to FTF in 1989, finding adverse effects on small businesses in Canada and generally negative effects on patent quality in Canada.<sup>2</sup> We urge the U.S. Small Business Administration (SBA) in cooperation with the USPTO to undertake a study that addresses

<sup>1</sup> See [www.ogc.doc.gov/ogc/legreg/letters/111/S515Oct0509.pdf](http://www.ogc.doc.gov/ogc/legreg/letters/111/S515Oct0509.pdf)

<sup>2</sup> S.T. Lo and D. Sutthiphisal, Does it Matter Who Has the Right to Patent: First-to-Invent or First-to-File? Lessons from Canada, *NBER Working Papers*, No. W14926, (April 2009), at SSRN: <http://ssrn.com/abstract=1394833>.

the concerns we present here prior to any support or enactment of FTF provisions that overturn more than 200 years of American patent law.

In remarks at an independent inventors' conference, USPTO Director, Mr. David Kappos "explained" that his agency's position shift in support of Section 102 amendments to FTF is predicated on the miniscule number of interference proceedings at the USPTO.<sup>3</sup> However, inventor interference contests at the USPTO, their existence, rarity or outcome have very little to do with the harm caused to small businesses by a filing-date-based priority patent system and the resulting decline in patent quality. Focusing on applications that *reach* the USPTO misses the point. The harmful effects of FTF for small startups and early-stage patenting firms will be in losing patent protection on inventions for which applications *will not*, or *could not*, reach the USPTO. Harm will arise due to the "race to the patent office" whether or not an interference occurs with a competing application. Harm will be inflicted when inventors race to the patent office with the *wrong* application, for the *wrong* invention, and for the wrong reasons, exhausting precious resources in the process.

The proponents of FTF argue that it would provide the administrative convenience of improved *certainty* as to patents' priority date. However, a U.S. transition to FTF will unfairly shift costs and *uncertainty* risks from large firms to small patenting firms. Currently, important new ideas that gestate during months or even years are often fleshed-out, vetted, *eliminated* or reduced to practice prior to filing.<sup>4</sup> Unlike large patenting firms that have lower-cost in-house patent prosecution resources and can afford to file more often, small businesses and early-stage startups will incur substantial increases in risks of losing patent protection. Small firms are less likely to have funds to flood the USPTO with patent applications<sup>5</sup>, and small firms more often need to disclose their inventions to many potential investors (including large would-be competitors) before having the funding to engage in patent prosecution. Large incumbent firms do not face these problems, and under FTF policies, they will gain competitive advantage over their startup rivals entering the market.

An example illustrating these relevant externally invisible factors is shown in Slide 12 of the Attachment with an *actual profile* of a five-year R&D and invention effort of one startup member<sup>6</sup> of our Coalition. At least *fifty* important inventive ideas have been conceived, evaluated and tested over periods spanning months or years in the course of this system's development (labeled by color squares). The majority of these inventions proved to be useless. During that time, only six patent applications had been filed (labeled by "path to success" arrows). The prospects of such a development effort under FTF would have been alarmingly ominous. Because the cost, effort and time lost to have acted on every one of these inventions would have been prohibitive, this R&D team would have had to frequently face a painful dilemma as to *which of these inventions* should be written up and filed in a patent application. Unfortunately, many such premature guesses would have proved wrong, so, under FTF, costly applications would be filed for some useless inventions and patent protection would be lost for other valuable inventions. The founder of another of our member companies would have encountered similar uncertainties, in his venture-backed company, had FTF been the law. His case is shown in Slides 13-14.

The great risks, costs, dilemmas and increased patent protection *uncertainties* that the FTF environment will create will undermine early-stage startups' ability to attract investment capital or even to get established. Slide 6 describes other risks and stark uncertainty imbalances that will be created by FTF. Importantly, unlike other effects that would only come after the patents filed under FTF issue *years after enactment*, the risks associated with increased patenting uncertainties at small firms may begin having negative effects on new job creation in a matter of *only months from enactment* of FTF.

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<sup>3</sup> David Kappos' speech at the Independent Inventors Conference, November 5th, 2009.

See <http://www.uspto.gov/news/speeches/2009/2009nov5.jsp#heading-6> ("...your chances of being impacted by this change are 1 in 441,637. Those are lightning strike level odds, folks!").

<sup>4</sup> See Slide 22.

<sup>5</sup> Furthermore, startups' patenting costs per patent are significantly higher than that of large firms (See Slide 19).

<sup>6</sup> The inventions described are those of Mova®, the contour reality capture technology. It was first used on *The Curious Case of Benjamin Button* (2008) for Brad Pitt's age facial effects, resulting in an Academy Award®. See details of its 5-year development process at <http://j.mp/Mova-development>.

No one had studied the circumstances or the inventors' pre-filing activities such as those described in Slides 12-14 or those resulting in the delay periods shown in Slide 22. A related practical problem with FTF is shown in Slide 23, which shows that prior art published less than one year before the filing date is the most frequent source for invalidating patent applications in the European Patent Office (EPO), which operates under FTF law. This category of prior art currently cannot be used to block or invalidate patents, because the U.S. has a one-year "grace period." Yet, no one had studied the number of U.S. patents that will be invalidated by such prior art published *after the invention date* if FTF were adopted, or the chilling effect that this loss of U.S. patent protection would have on innovation. Initial detailed legal analysis of the proposed change in S. 515 reveals several of its flaws. The analysis shows that it creates strong incentives for making early nonenabling "springing public disclosures" in order to preempt later filed patent applications that are enabling from being granted as patents. Such "springing public disclosures" will also allow *second* inventors who *file second* to obtain the patent.<sup>7</sup>

As an agency entrusted only with determining patentability of applications it receives, the USPTO has very little understanding of the actual invention process, the startup pre-grant activities, the commercial decisions to patent, the entrepreneurial search and 'mating' with equity investors and the risks investors assume by developing new inventions. The USPTO can be likened to the "midwife" in the birth of patents: The USPTO has no expertise or information as to how inventions are conceived or gestated - how "Harry met Sally" to form the *partnership* of inventors and investors. Understanding all of these factors is essential in predicting the effects of FTF on small startup patentees. SBA's expertise and history of studying such matters can help fill a significant void in understanding of FTF effects.

A troubling aspect of the USPTO's advocacy for a transition to FTF is its apparent lack of data and models *within* its field of expertise, for the inevitable increase in patent application flow it will receive under FTF. In remarks supporting an unconditional transition to FTF, the Administration totally ignored the pendency, backlog and examination workload increases due to FTF. Relevant data from foreign patent offices on first-filings under FTF can be used to model the increased flow and the subsequent abandonment of applications under FTF. For example, Slide 16 shows that nearly 60% of applications filed under FTF pressures in the EPO become useless to their owners and are abandoned before they are taken up for examination. In contrast, only 12% of applications filed at the EPO without being subject to such pressure are abandoned. Coupling this with the examination rate in each category, this means that under FTF constraints, it takes *more than two times* the number of applications compared to our current system, in order to obtain one surviving application worthy of examination for patent protection. The USPTO totally ignored these costly inefficiencies of FTF.

Beyond increasing the pendency and the backlog, the increased flow of applications to the USPTO will also have dire financial collateral consequences. As seen in Slide 16, about one in three applications filed under FTF constraints are dropped prior to examination after receiving the Search Report. However, should the U.S. adopt FTF, this class of applications will be abandoned mostly after the first office action on the merits because the USPTO provides the search report only as part of its first examination action. Thus, the USPTO would be spending search and examination resources on applications that would otherwise never reach examination, let alone a patent grant that fetches grant and renewal fees. This will cause a substantial increase in the Office's upfront costs accompanied by *no matching back-end revenues* from patent grant fees or renewals. Consequently, unavoidable increases of upfront application filing fees to make up the shortfall in patent renewal fees would have to be put in place to support the Office's user-fee-funded operation. Presently, the USPTO collects only 27% of the full-term patent fees in the pre-grant stage - an important feature that permits small businesses to defer patenting costs until they achieve commercial success. In contrast, the patent office in Canada, our nearest neighbor employing FTF, needs to collect 60% of its full-term patent fees upfront. No one had studied to what extent the Canadian fee structure under its FTF system would have to be followed at the USPTO due to upfront fee increases necessitated by U.S. adoption of FTF.

Secretary Locke's letter suggests that U.S. transition to FTF will "simplify the patent system, reduce legal costs, [and] improve fairness." The "complex, time-consuming and resource intensive" costs of global patent

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<sup>7</sup> B. Pedersen and J. Woo, "The 'Matrix' for First-Inventor-To-File: An Experimental Investigation into Proposed Changes in U.S. Patent Law", (December 4, 2009). Available at SSRN: <http://ssrn.com/abstract=1518660>

procurement is the supposed target of this “reform,” which the letter asserts would benefit American innovators with “greater predictability, reliability and competitiveness.” Unfortunately, neither the Commerce Department nor its daughter agency, the USPTO, had substantiated any of these assertions with facts. Rather, ample evidence to the contrary is readily available. A connection between a U.S. transition to FTF and the achievement of the illusory goal of reducing the often-prohibitive costs of foreign patent procurement had never been shown to exist. For example, the major cost components driving the total average cost of a European patent to levels that reach 10 times that of U.S. patents are large patenting authority fees and translation costs,<sup>8</sup> none of which are addressable by U.S. transitioning to an FTF system. The U.S. government’s own studies identified and confirmed these very cost components and showed that typical costs for small business to obtain and maintain foreign patents are between 16-36 times that of their costs for a counterpart U.S. patent, constituting severe international patenting barriers for small business.<sup>9</sup>

Unfortunately, S. 515 does nothing to improve U.S. small businesses’ affordable access to national patent systems abroad, and it would give away one of the few “negotiating chips” that the U.S. retains to encourage foreign patenting authorities to move in directions helpful to U.S. small business. We are concerned that legislative changes proposed by those who call for “harmonization” only serve the interests of large multinational firms, who have recently seized the patent reform agenda.

***Post Grant Review (PGR)***

We generally concur and share the concerns expressed by 56 companies in their September 14, 2009 letter<sup>10</sup> to Secretary of Commerce Gary Locke. The proposed PGR of S. 515 is too easily manipulated to the detriment of small businesses because it fails to address adequately the problem of infringers who make repeated challenges to patents after they issue. Instead, the proposed PGR provision adds an extra chance for infringers to serially challenge patents in piecemeal because of the extremely low threshold for starting PGR. The adverse effects of the PGR provisions of S. 515 as currently drafted had been detailed in a study by economics professor Scott Shane.<sup>11</sup> Slides 26-27 attached, explain the particular heightened PGR concerns pertaining to small business patenting firms.

We thank you for your attention and consideration,

Sincerely,

CONNECT  
American Innovators for Patent Reform  
IP Advocate  
United Inventors Association

National Small Business Association  
National Association of Patent Practitioners  
Professional Inventors Alliance USA

*Attachment:* Small Business Coalition on Patent Legislation. Position Summary.

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<sup>8</sup> Bruno van Pottelsberghe de la Potterie and Didier Francois, “The Cost Factor in Patent Systems,” *Journal of Industry, Competition and Trade* (2008) DOI: [10.1007/s10842-008-0033-2](https://doi.org/10.1007/s10842-008-0033-2).

<sup>9</sup> U.S. General Accounting Office, *Federal Action Needed to Help Small Businesses Address Foreign Patent Challenges*, [GAO-02-789](https://www.gao.gov/products/GAO-02-789) (July 2002); U.S. General Accounting Office, *Experts’ Advice for Small Businesses Seeking Foreign Patents*, [GAO-03-910](https://www.gao.gov/products/GAO-03-910) (June, 2003).

<sup>10</sup> <http://blog.seattlepi.com/microsoft/library/20090917lockeletter.pdf>

<sup>11</sup> Scott Shane, “Problems To Be Expected From Expanded Administrative Challenges To U.S. Patents,” (July 20, 2009) at <http://j.mp/Shane-on-PGR>

*Small Business Coalition  
on Patent Legislation*

**Patent Reform Act of 2009**  
**Summary of Positions**

*December 9, 2009*

# Small Business Coalition on Patent Legislation - Participants

	<p><b>CONNECT</b> is a non-profit organization dedicated to creating and sustaining the growth of innovative technology and life science businesses in San Diego. Since 1985, CONNECT has assisted in the formation and development of over 2,000 companies and is widely regarded as the world's most successful regional program linking inventors and entrepreneurs with the resources they need for success. <a href="http://www.connect.org">www.connect.org</a></p>
	<p>The <b>National Small Business Association</b> (NSBA) is a national non-profit membership organization founded in 1937, representing America's small business companies and entrepreneurs. Reaching more than 150,000 small businesses, NSBA is the first and oldest national small-business advocacy organization in the United States. <a href="http://www.nsba.biz">www.nsba.biz</a></p>
	<p><b>IP Advocate</b> is a non-profit organization dedicated to equipping the academic research community with critical information needed to understand and traverse the complex flow of policy, law and procedure from innovation through technology transfer and commercialization of intellectual property. <a href="http://www.ipadvocate.org">www.ipadvocate.org</a></p>
	<p>The <b>American Innovators for Patent Reform</b> (AIPR) is a coalition of inventors, patent owners, researchers, engineers, entrepreneurs, licensing executives, patent agents and attorneys, and others involved in creating or protecting innovation and advocating for stronger patent protection. <a href="http://www.aminn.org">www.aminn.org</a></p>
	<p>The <b>National Association of Patent Practitioners</b> (NAPP) is a non-profit organization dedicated to supporting patent practitioners and those working in the field of patent law in matters relating to patent law, its practice, and technological advances. <a href="http://www.napp.org">www.napp.org</a></p>
<p><b>PIAUSA</b></p>	<p>The <b>Professional Inventors Alliance USA</b> (PIAUSA) is a national organization promoting inventor-entrepreneur and small business interests since 1993. PIAUSA works to protect American invention and encourage innovation by providing the nation's independent inventors a united voice to improve public policy. <a href="http://www.piausa.org">www.piausa.org</a></p>
	<p>The <b>United Inventors Association</b> (UIA) is a non-profit member supported organization dedicated to inventor education and support. Since its founding in 1990, UIA continues to provide reliable information to inventors, as well as Certification to groups and service providers who comply with rigorous professional and ethical standards. <a href="http://www.uiausa.org">www.uiausa.org</a></p>

# Concerns regarding the Patent Reform Act of 2009

## Content

- Participants of the *Small Business Coalition on Patent Legislation* joined to address Small-Business' unique concerns about less talked-about but pernicious aspects of proposed patent reform legislation
- Concerns about the proposed First-To-File amendments to 35 U.S.C §102
- Other important concerns
  - Post-Grant Review
  - Expanded USPTO rulemaking authority
- Conclusion and proposed legislative action

# Concerns about the proposed First-To-File amendments to 35 U.S.C §102

- The First-To-File (FTF) proposal:
  - Changes the American invention-date-based priority system to that based on filing date
  - Fundamentally redefines the prior art and limits patentability by including prior art created after the invention date to bar a patent
  - Pushed by large, “incumbent” firms seeking a change to the detriment of small companies, new entrants, startup innovators, independent inventors, and future businesses
  - Had undergone no study or evaluation of the expected effects on U.S. patenting practices, the balance of costs and risks for small and large U.S. businesses, or of the adverse effects on patent quality and the USPTO workload
  - FTF is promoted as means for avoiding U.S. “embarrassment” but absent a single global legal system, no credible *substantive* “harmonization” benefit has been demonstrated

# Our legislative proposal

- We urge replacement of the language amending § 102 with language that directs the Small Business Administration and the U.S. Department of Commerce to conduct a study to assess and report to Congress on the expected effects of changing U.S. patent priority laws to a filing date-based system. The report should examine:
  - the expected effects on patenting practices and procedures
  - the expected economic effects on small and large U.S. patenting firms and the U.S. economy as a whole
  - the assurances (if any) that major foreign patenting authorities will institute a one-year grace period for filing a priority application upon a U.S. transition to a First-To-File system
  - the expected effects on patent quality
  - the expected effects on the USPTO, its workload and pendency

# FTF will shift costs and uncertainty risks from large firms to small patenting firms

- FTF is purported to improve certainty about patent priority dates. However, this will be accompanied by substantial increases in risks of losing patent protection by small companies that cannot afford to flood the USPTO with patent applications, or need to disclose their inventions to many potential investors (including large would-be competitors) before having the funding to engage in patent prosecution
- FTF's purported certainty improvements in "Freedom to Operate" (FTO) analyses are grossly exaggerated, as invention date is determinative of validity in only a small minority of patent dispute cases
- The 'FTO deck' is already heavily stacked against small patenting firms, who only have a few patents and often must evaluate hundreds of their large-firm competitors' patents. In contrast, large firms can manage their FTO risks by patent portfolio pooling arrangements with other large firms. This pooling is often done secretly
- Large firms often have in-house patent prosecution resources for their patented developments and use internal investment funds that are at lower risk. In contrast, small firms must look for more costly outside patent counsel services and for external investment capital that is inherently at higher risk. FTF will only aggravate this stark imbalance of risks

## Adverse effects of a U.S. transition to FTF

- Will substantially increase the number of applications filed, because of the need to "race to the patent office" before a new idea is fleshed out and reduced to practice. Will result in a flood of undeveloped, lower quality and less relevant applications. Will encourage "paper inventions" that are untested
- Will generate more than 30% extra work for the USPTO and any low quality patents that issue therefrom will be short lived, fetching no renewal revenues for the Office
- The resultant decline in disclosure breadth would not only deny the public from receiving the full benefits of the patent bargain, but will also produce a progressively poorer prior art record, resulting in overbroad or low quality patents subsequently being issued
- Domestic inventors would lose substantive priority rights that are often critical in upholding patent validity. About 13% of applications would lose more than 1 year in effective patent priority
- Other innovators would have to invest R&D in non-infringing solutions "designing-around" patents that would have never been applied for, let alone issued, under the current First-To-Invent system

# Other patent reform concerns

- Post Grant Review – Concerns with current language, explained in the Supplement
- Expanded USPTO Rulemaking authority - Concerns with current language, explained in the Supplement

# Supplement

**For further details, see also:**

NSBA's letter to senate leadership: <http://www.nsba.biz/docs/09PatentS515.pdf>

Startup companies' letter to senators: <http://j.mp/Startup-FTF-Letter>

Dr. Alex Poltorak on First-To-File: <http://www.iptoday.com/articles/2008-4-poltorak.asp>

Presentation on the invention process - the development of Mova® <http://j.mp/Mova-development>

**Concerns about  
proposed §102  
amendment**

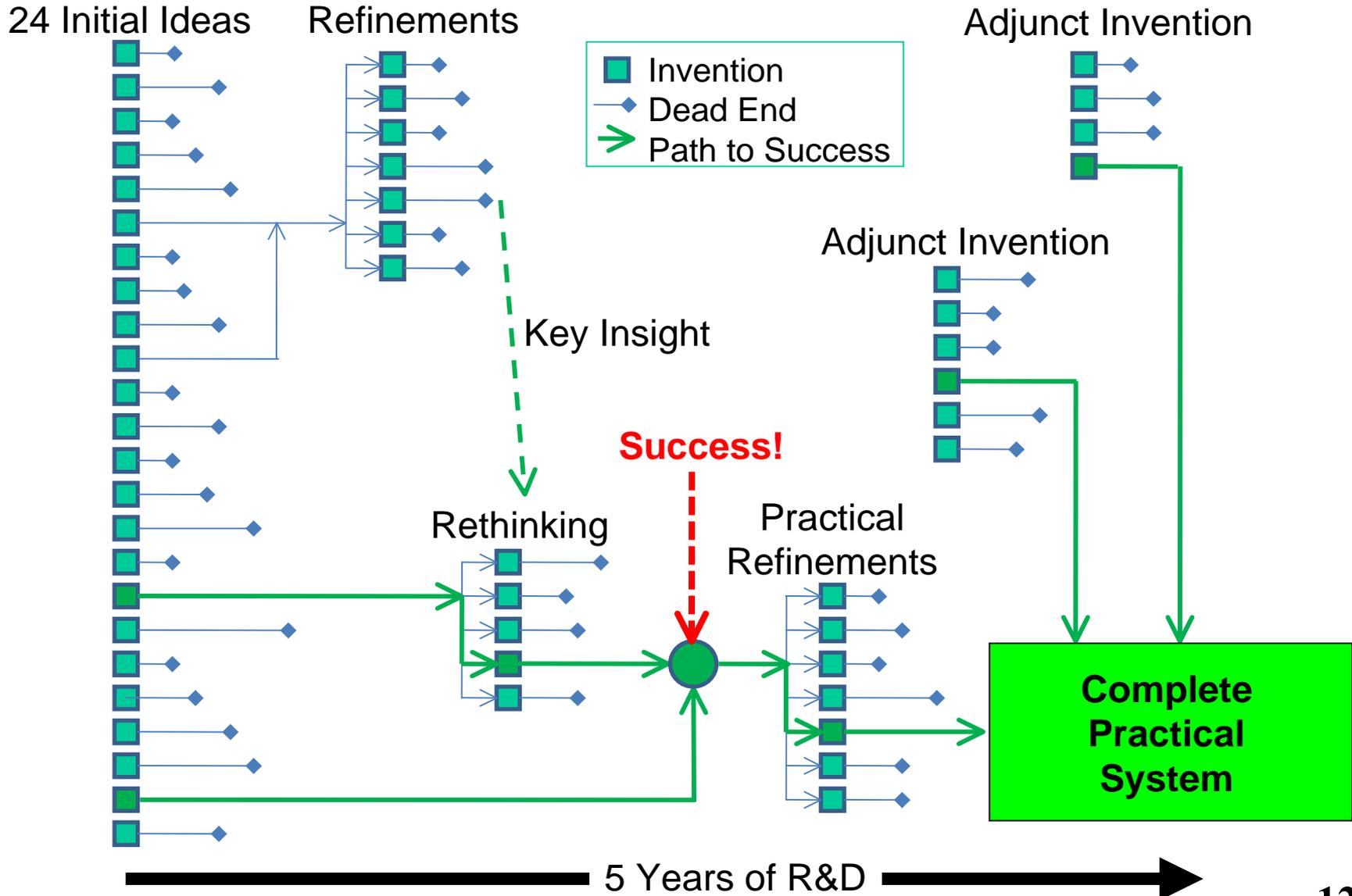
**from the American  
First-To-Invent  
system to the  
First-To-File system**

The pressure to establish filing date priority will require applicants to file at every stage of development without vetting or perfecting their inventions, and to file more frequently

See specific examples from two startup companies in the next three slides.

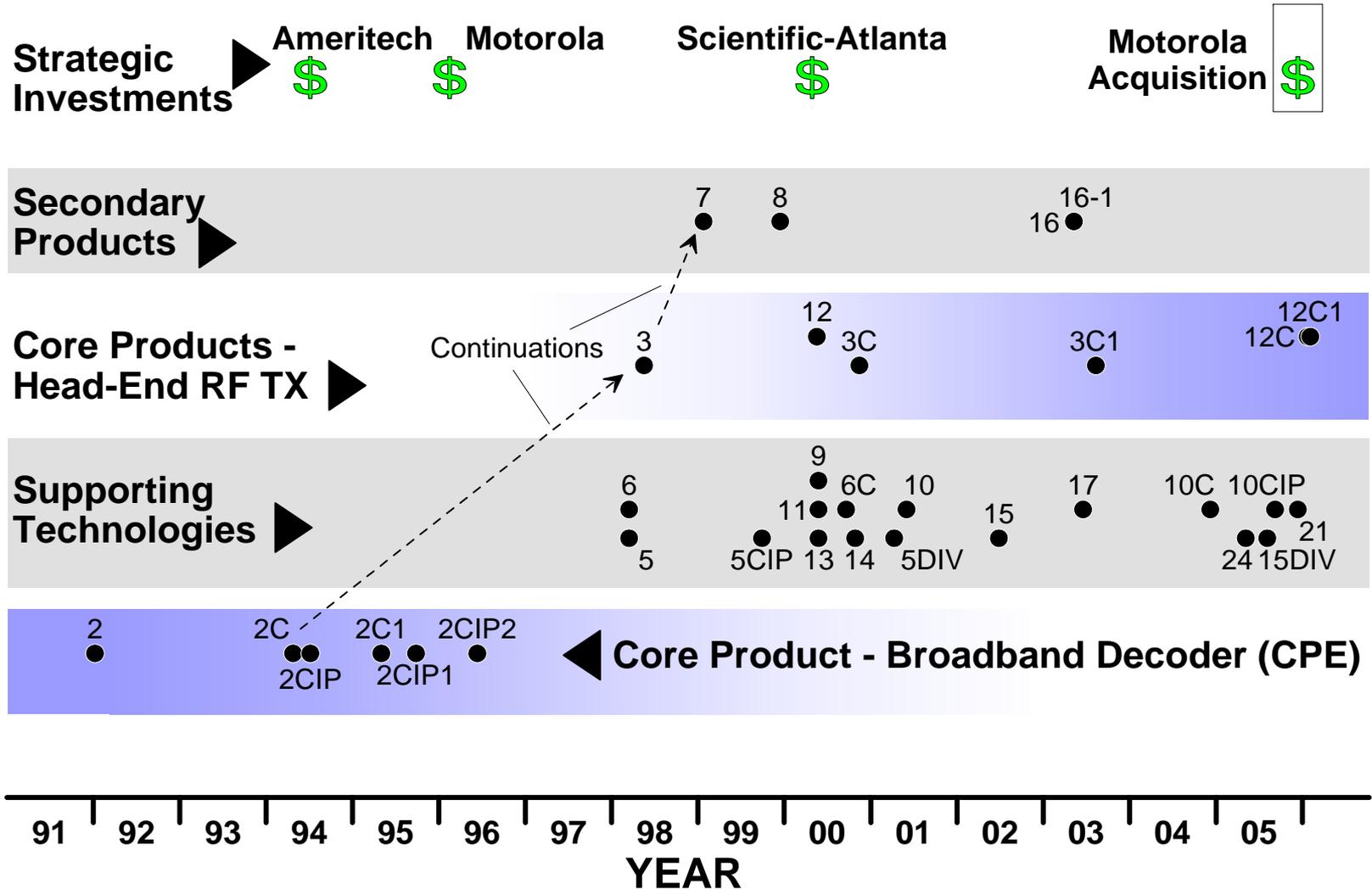


# contour : Invention Path

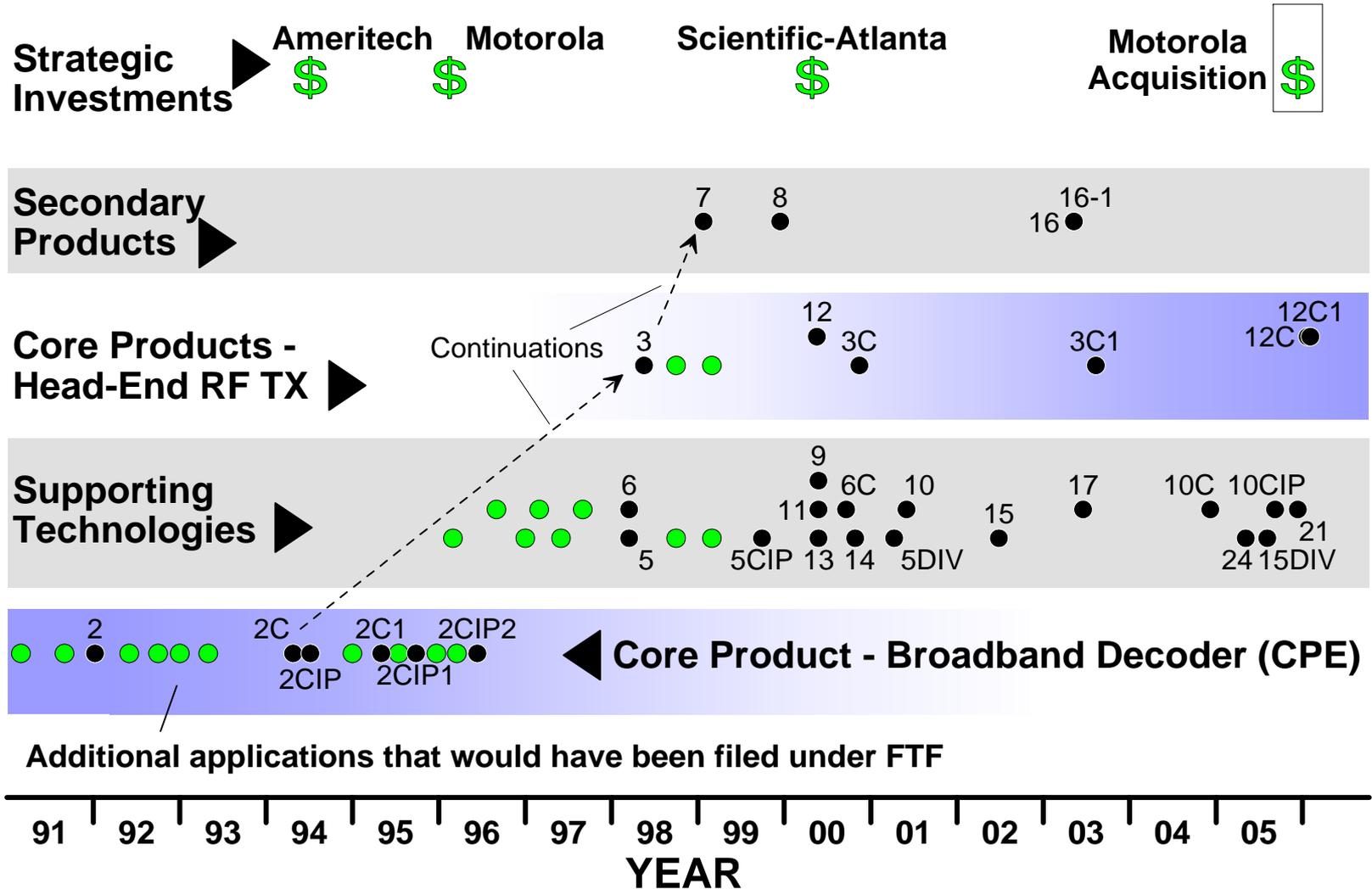


5 Years of R&D

# Broadband Innovations' (BI) Patent/Technology Timeline as it Took Place Under Existing First-To-Invent Patent Law



# Hypothetical Scenario: Many More Applications Would Have Been Filed by BI had 'First-To-File' been the law



# Our experience-based expectations of having to file many more patent applications under a First-To-File system are not mere speculations:

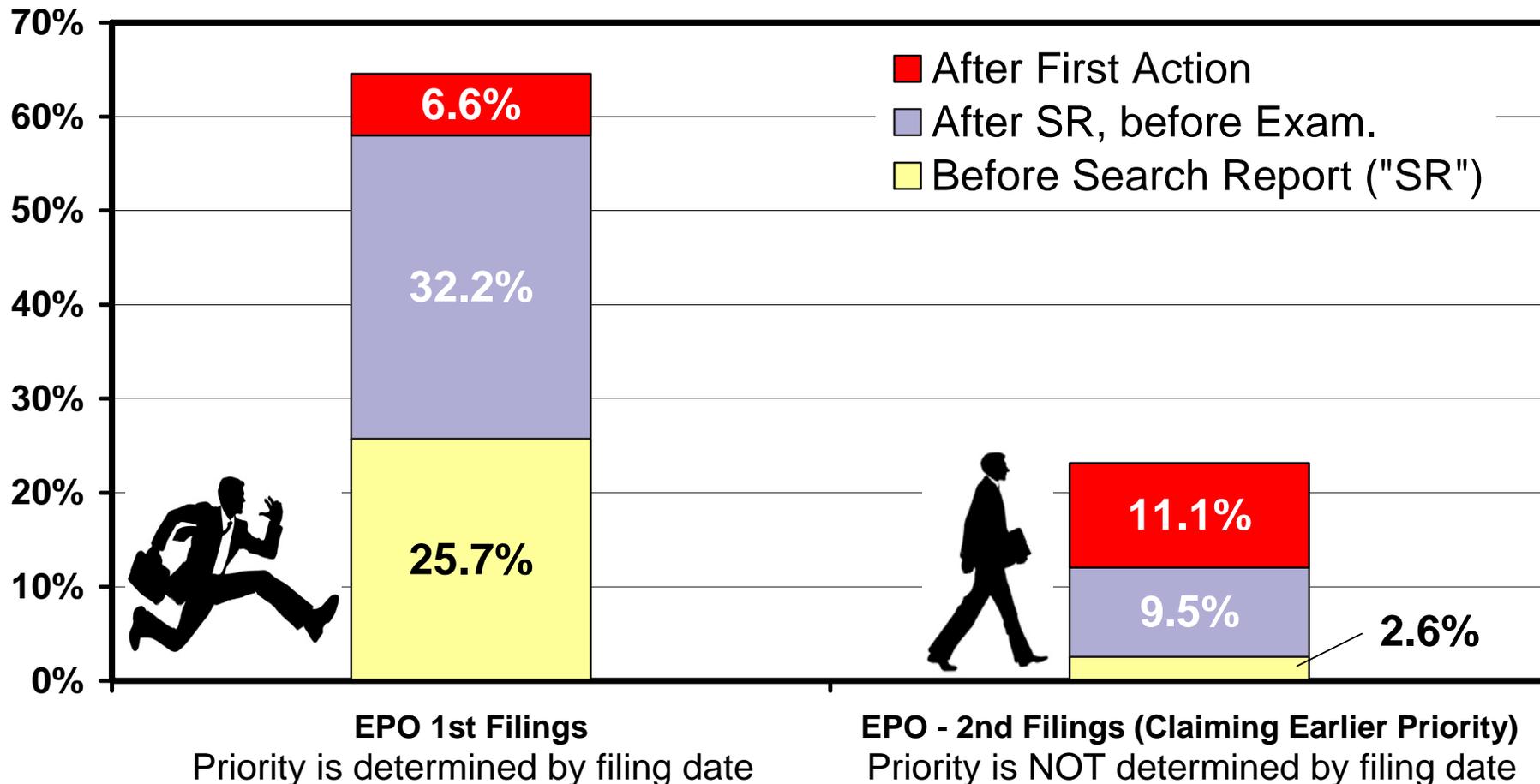
- they are also based on evidence that:
  - many more patents and applications filed under the pressures of a filing date-based system become useless to their owners in short order compared to those filed without such timing constraints. *See* European Patent Office (EPO) data, next slide.
  - due to vetting, further study and scrutiny, applications for 40% of inventions disclosed in writing to patent attorneys are ultimately *not filed* with the USPTO under the current American invention date-based patent system. This number of applications constitutes 66% of current filings. *See* the U.S. universities filing in the slide after next.

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

Fraction of Applications Abandoned

## EPO Patent Application Abandonment Stages

(Euro-Direct filings in 1997-1999)

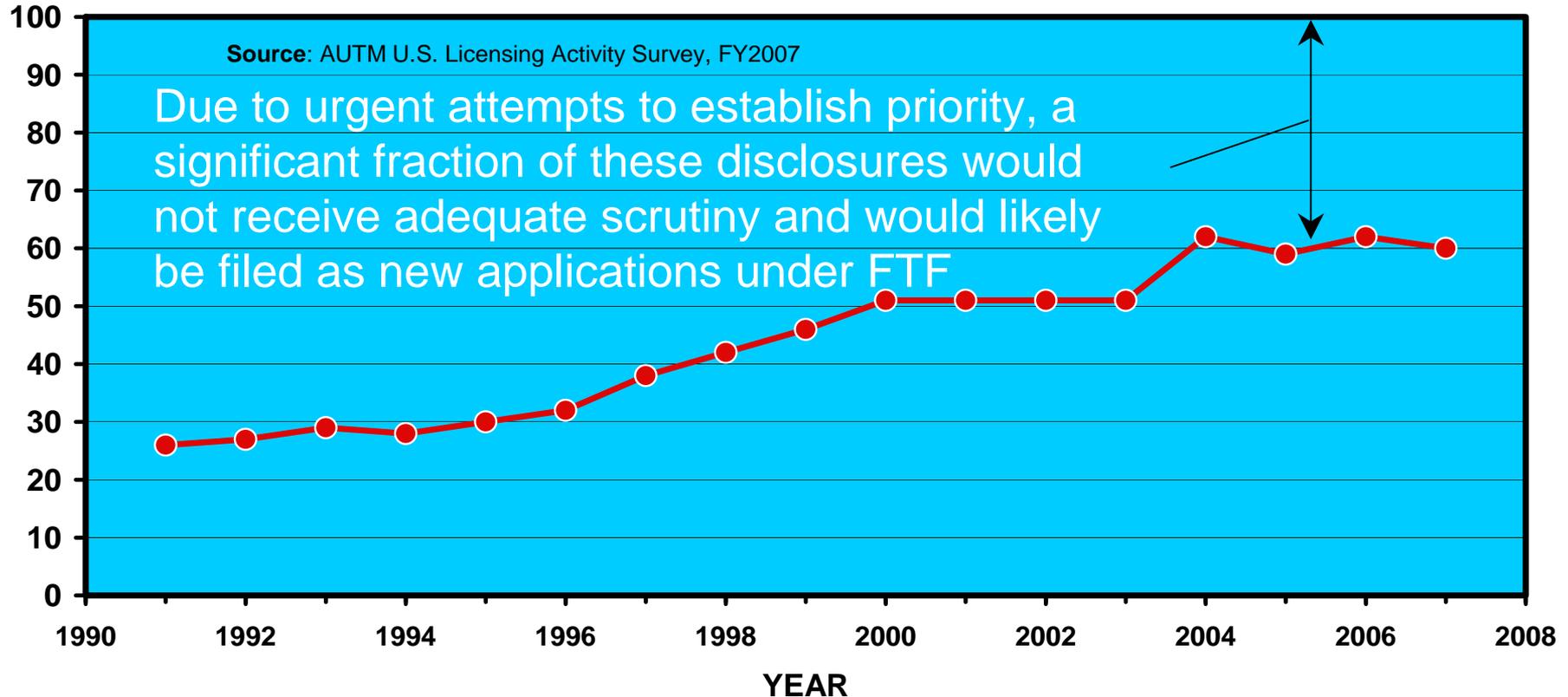


*Data Sources:* EPO Data from G. Lazaridis et al. *World Patent Information* 29, pp. 317-326, (2007). "After SR, before Exam" and "First Action" here means the withdrawal components (2)+(3) and (4) respectively, as defined in the heading of Table 2.

# Many disclosures that are currently held back would be filed under a 'First-To-File' system

U.S. universities' original patent application filings as a fraction of patent disclosures received

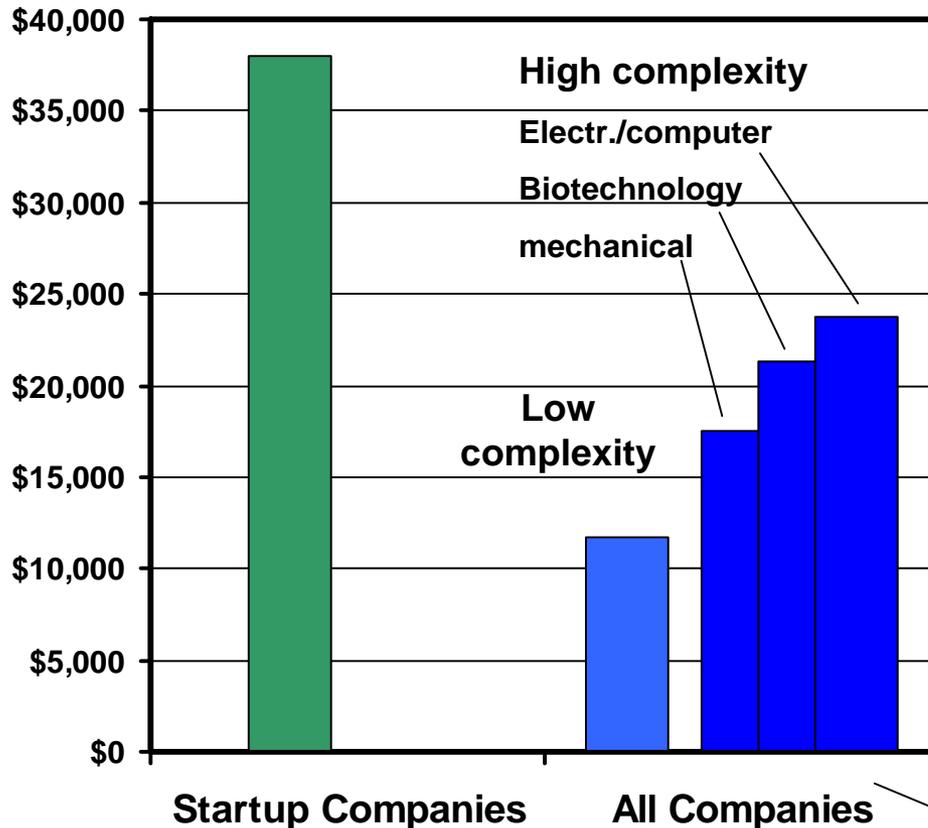
Applications/  
Disclosures (%)



**Why would startups and small patenting firms be severely harmed by the need to file more frequently a larger number of applications?**

# Patenting costs are significantly higher for startup companies

Average cost of obtaining a US patent by entity type



➤ Startups often spend significantly more on patent prosecution than incumbents because startups

- tend to file for patents on inventions that are more important to the company's core business model than large firms,
- usually use outside instead of in-house counsel for patent prosecution; and
- often have difficulty monitoring outside counsel to limit overall costs

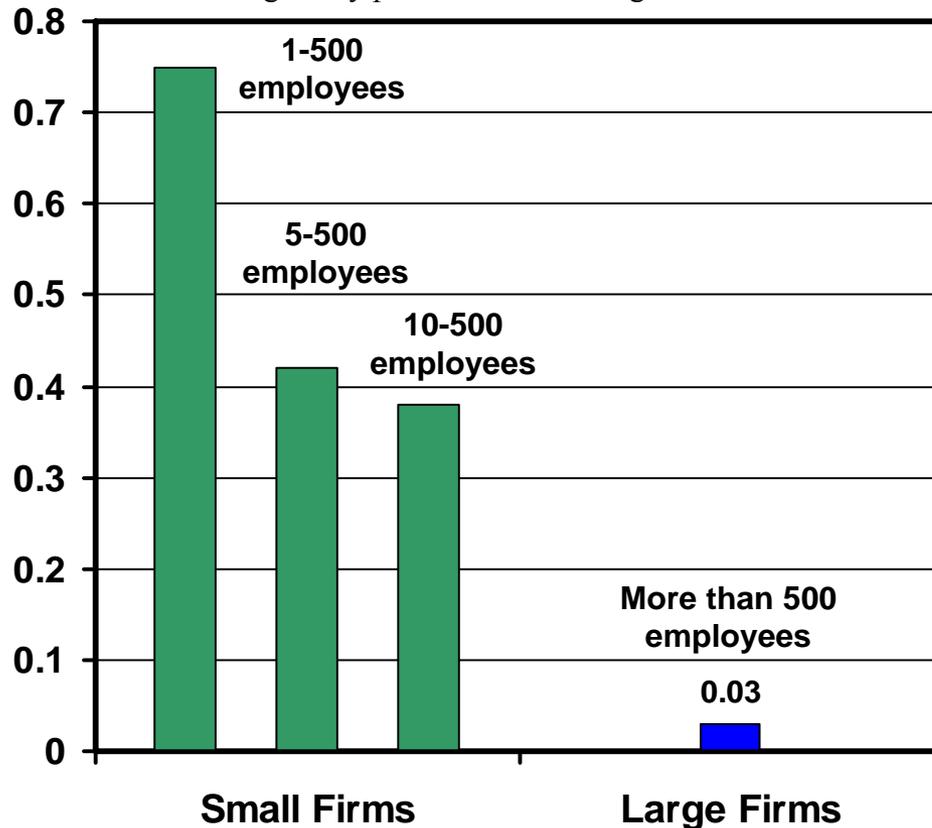
Sources: Graham et al (2009) and AIPLA (2009). See footnote 2 in the letter posted at <http://works.bepress.com/rkatznelson/58/>

Note: These figures *do not* show or include the lower cost patents obtained by in-house counsel prosecution

# Small patenting firms produce and rely on many more patents per employee than large patenting firms

## Average number of granted US patents per employee by firm size

Counting utility patents issued during 1996-2000



## ➤ In contrast with large patenting firms, small patenting firms

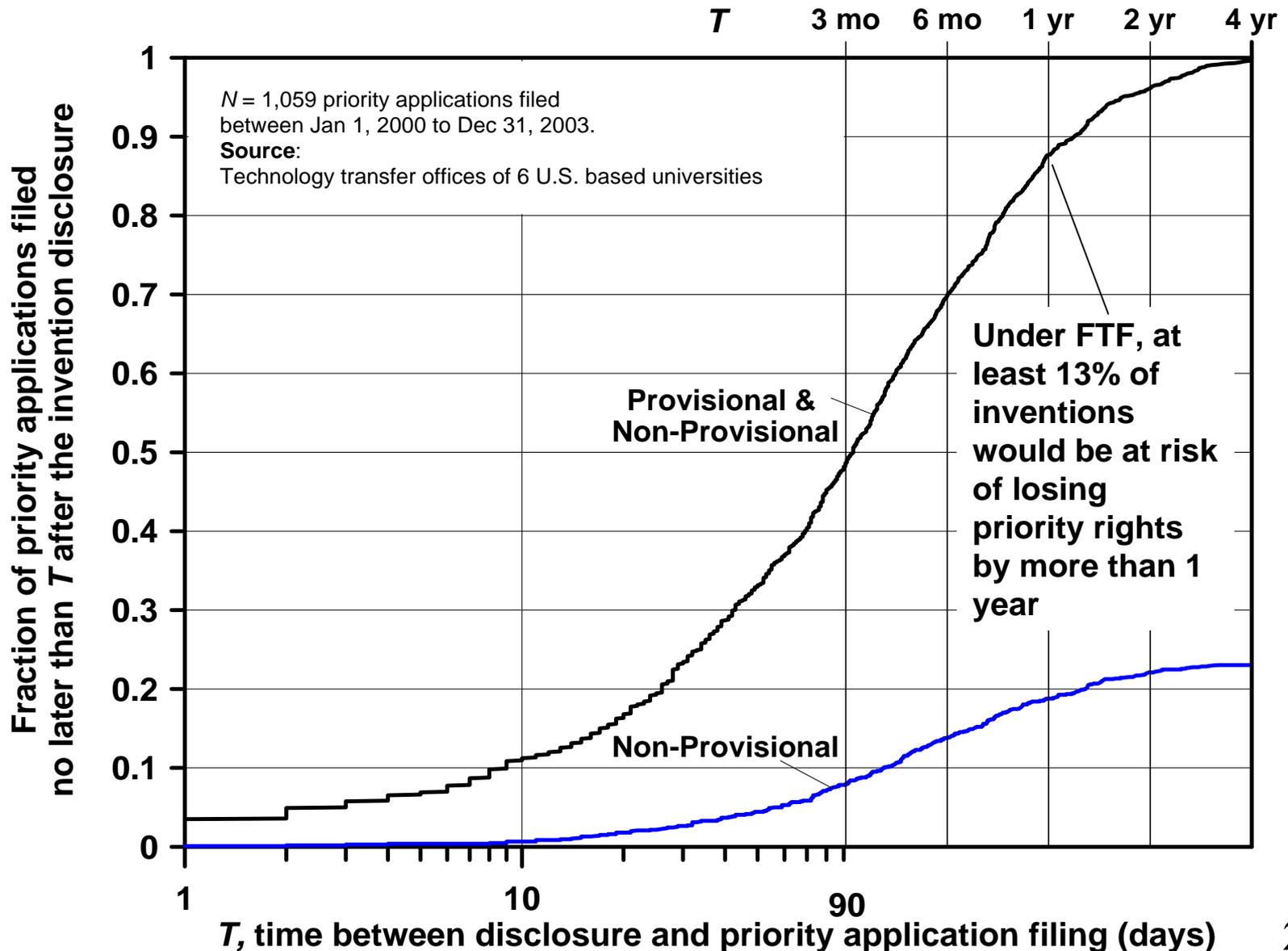
- are often formed to specifically exploit patented inventions,
- often find patents to be their only means for countering the market power of their large firm competitors; and
- rely on patent assets to raise private equity investments

Source: U.S. Small Business Administration, *Small Serial Innovators: The Small Firm Contribution To Technical Change*, p.12 (2003). <http://www.sba.gov/advo/research/rs225tot.pdf>.

## Our experience-based concerns about loss of patent priority rights under FTF are not mere speculations:

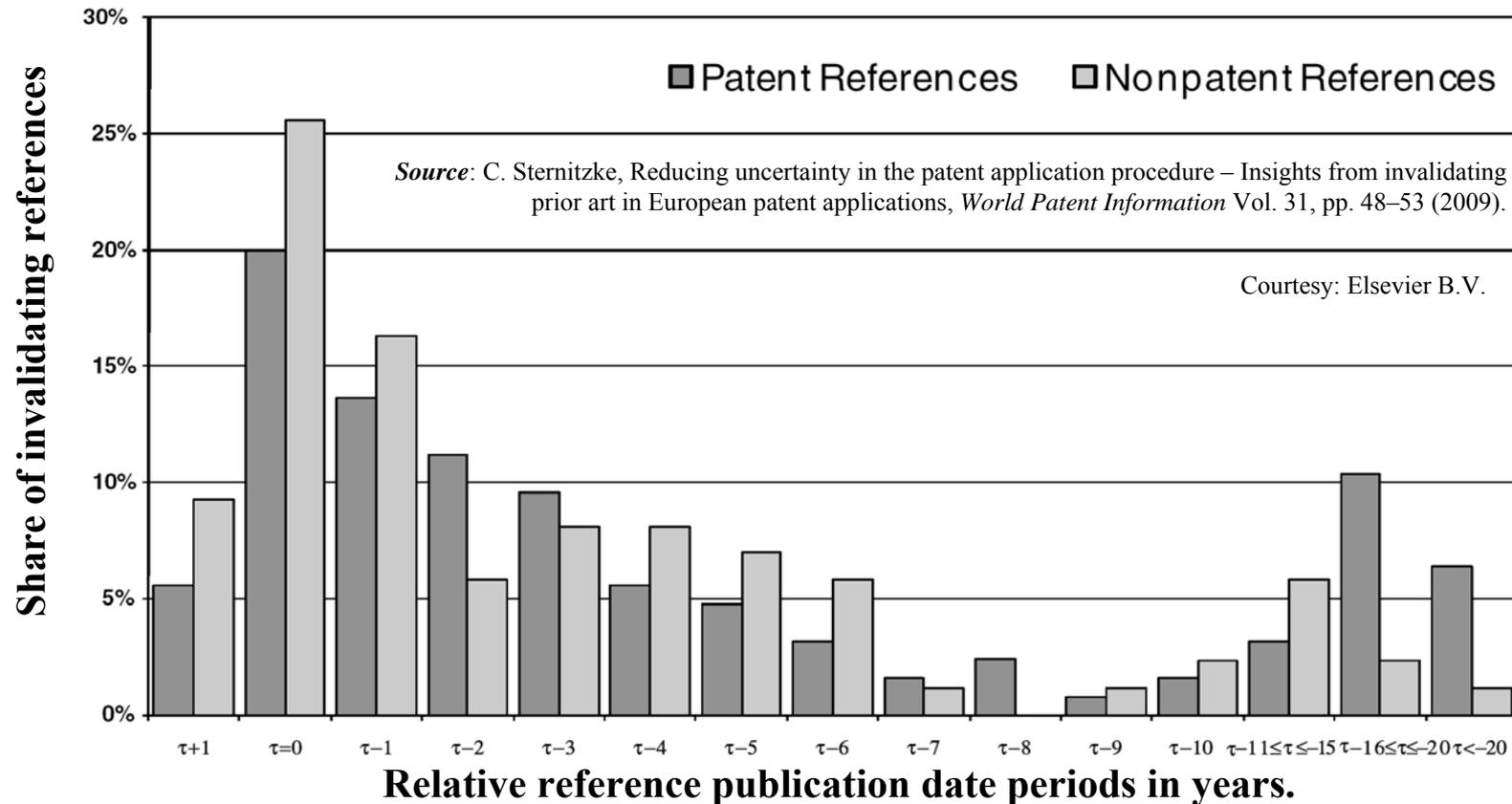
- they are also based on evidence that:
  - many applicants, particularly researchers, engage in elaborate development, experimentation and reduction of their invention to practice prior to filing their application. 13% do so for more than 1 year after disclosing their invention in writing. (*See next slide*).
  - prior art published *less than one year prior to the filing date is the most frequent source* for invalidating patent applications under European FTF. (*See slide after next*). It is currently unavailable under the U.S. one-year Grace Period. No one had studied the number of U.S. patents that will be invalidated by such prior art published *after the invention date* if FTF is adopted, or the chilling effect that this loss of patent protection would have on innovation.

# Time between invention disclosure receipt at US-based universities and filing of the priority patent application with USPTO



# Prior art published less than one year prior to filing date is the most frequent source for invalidating patent applications

## Relative date distribution of the invalidating prior art references cited in ultimately rejected EPO patent applications



Period bin definition: the  $\tau = 0$  bin contains references published less than one year prior to the priority filing date. The  $\tau - 1$  bin corresponds to references published no later than one year and no earlier than 2 years prior to filing date, etc. A small fraction of references published within one year after filing ( $\tau + 1$ ) were used by EPO examiners mostly as review of prior art cited within or as expositions of the level of skill in the art.

## **FTF would change how we do (or rather, not do) business**

- A concern that an incumbent strategic "partner" may misappropriate ideas received under NDA and derive its own parallel "FTF priority" process in competition, would discourage innovator's cooperation with strategic partners in the most crucial stage of their startup's development.
- Would have strong chilling effects on:
  - Intra-company joint developments and responses to RFPs
  - Substantive due diligence of investors or prospective licensees
  - Effective marketing communications
- Disrupt engineering and development processes
  - Would require frequent invention reviews and compel developers to spend more time on patent disclosures and aiding in patent prosecution
  - Employees' development records and engineering notebooks could not be relied on. Every departure of a key employee (perhaps to join a competitor) would necessitate an immediate diversion of his colleagues' time to write and file patent applications on patentable subject matter developed by the departing employee

# FTF will shift costs and uncertainty risks from large firms to small patenting firms

- A move to *administrative convenience* at the expense of *judicial equity* will only further increase large-firm dominance of the U.S. patent system and harm small firms
- FTF is being advanced mostly by large firms, who have *seized the agenda* due to their growing dominance of the U.S. patent system

# Post-Grant Review

## ➤ Point 3 of W.E Deming's 14 Points of Quality Management:

- *Cease dependence on inspection after production to achieve quality. Eliminate the need for inspection on a mass basis by **building quality into the product in the first place.***

➤ Similarly, the solution to the quality problems at the end of the USPTO production line is not adding a new station of quality review at the USPTO but rather “*building quality into the product in the first place*” by administrative improvements of the patent examination process.

## Post-Grant Review (PGR) Concerns

- The proposed PGR is too easily manipulated to the detriment of small businesses patentees. S. 515's PGR language fails to address adequately the problem of infringers who make repeated challenges to patents after they issue.
  - Extremely low threshold for starting PGR
  - No set time limit for a determination in a PGR proceeding and the mere commencement of a PGR proceeding would eliminate the statutory presumption of validity essential to a patent's enforceability.
  - Small business' ability to rely on issued patents will be diminished. The PGR provision permits an incumbent competitor to initiate a PGR challenge merely because a patent issues, driving a new startup out of business

# Expanded USPTO Rulemaking Authority

- We support an *immediate* congressional action independent of the patent reform bill to
  - provide the USPTO with the funds it now seeks to cover shortfalls
  - to stop fee-diversion
- We are concerned about language giving USPTO broad fee-setting authority
  - The bill's clause requiring fees to be set based on cost is too broad
  - “Cost” is undefined. Average cost across all applications/users? Total cost? Cost of each item or category in an application?
  - Does not preclude skewing fee structure to achieve policy goals that are best left to congress
    - Would the Claims and Continuation limits rules come back de-facto via escalating fee structures designed to control “applicants’ behavior”?