

# **The Impact of US Patent Reform on Innovation**

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# RIM - BlackBerry



- **Lazaridis, founder of RIM, invented a wireless e-mail system**
  - **Campana (NTP) (and possibly three others) also invented wireless e-mail system; NTP patents**
    - **NTP failed to commercialize**
- **RIM learned about NTP's patents 10 years after it started development, 4 years after its first prototype, and 2 years after signing contracts with phone companies**
- **NTP sues RIM for patent infringement**
  - **Under threat of injunction, RIM settles with NTP for \$612m**

# A Decade of Patent Reform

- Higher standards
  - KSR – inventive step
  - In re Fisher – utility
- Subject matter
  - Bilski and Prometheus
  - Remedies
  - eBay – injunctions
  - Lucent v. Gateway -- damages

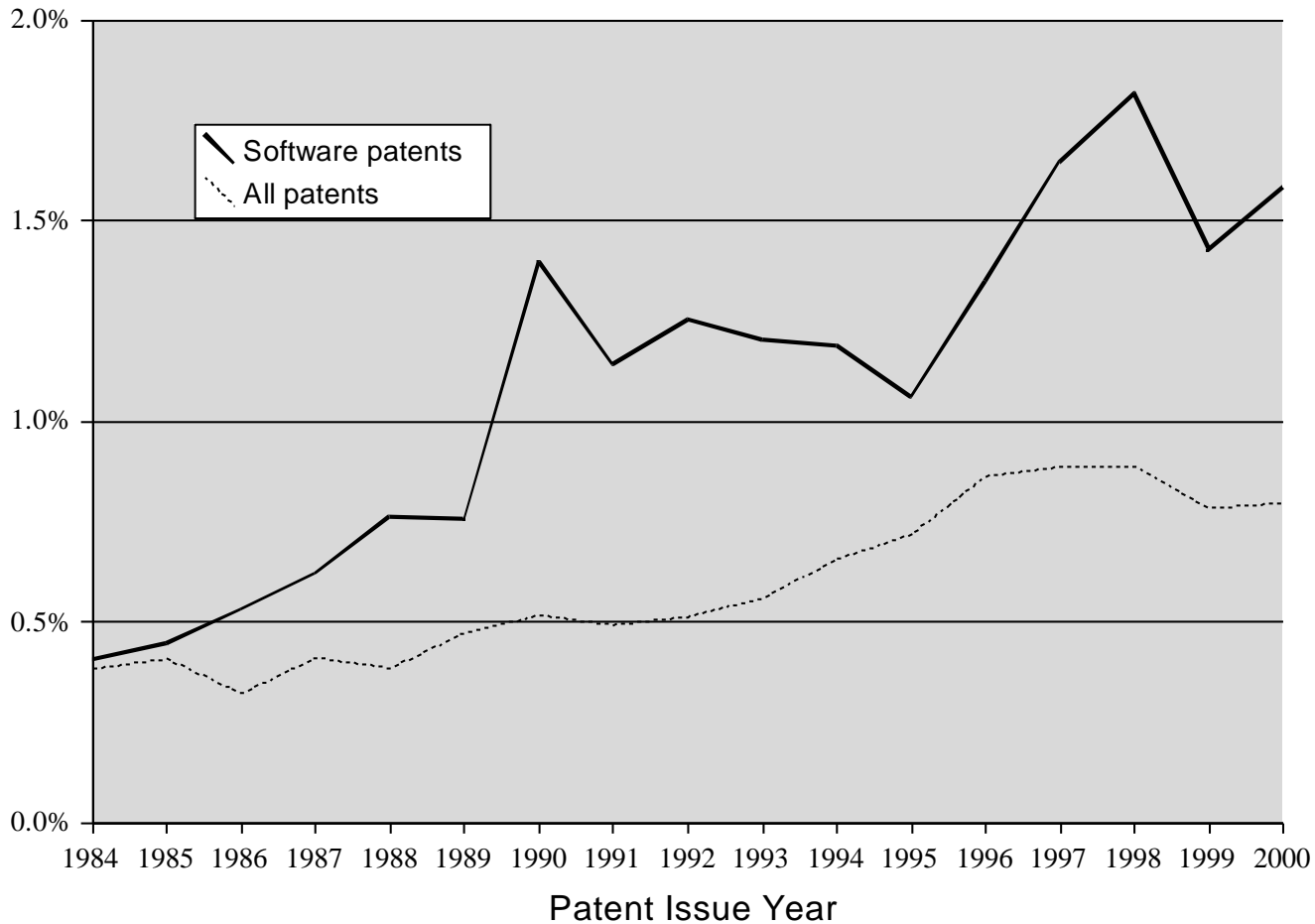
# A Decade of Patent Reform

- AIA 2011
  - First to File
  - Opposition (Post-grant review)
  - Prior use
  - Joinder

# Purpose of Reform

- Response to “low quality” = PTO errors regarding novelty and inventive step
- Harmonization
- Improve Notice

# Probability a Patent is in One or More Lawsuits within 4 years of issue



Patent Failure



PATENT

Notice

FAILURE

HOW JUDGES,  
BUREAUCRATS,  
AND LAWYERS  
PUT INNOVATORS AT RISK

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Patent system is supposed to encourage innovation but actually taxes innovators in most industries (other than chemicals/pharma)

Patent **notice** works reasonably well for chemicals/pharma, but not elsewhere

# Real Property Development and Notice





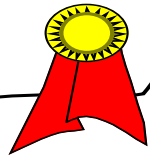
# Irresponsible Real Property Development



**Costly Mistake!**

*Deed*

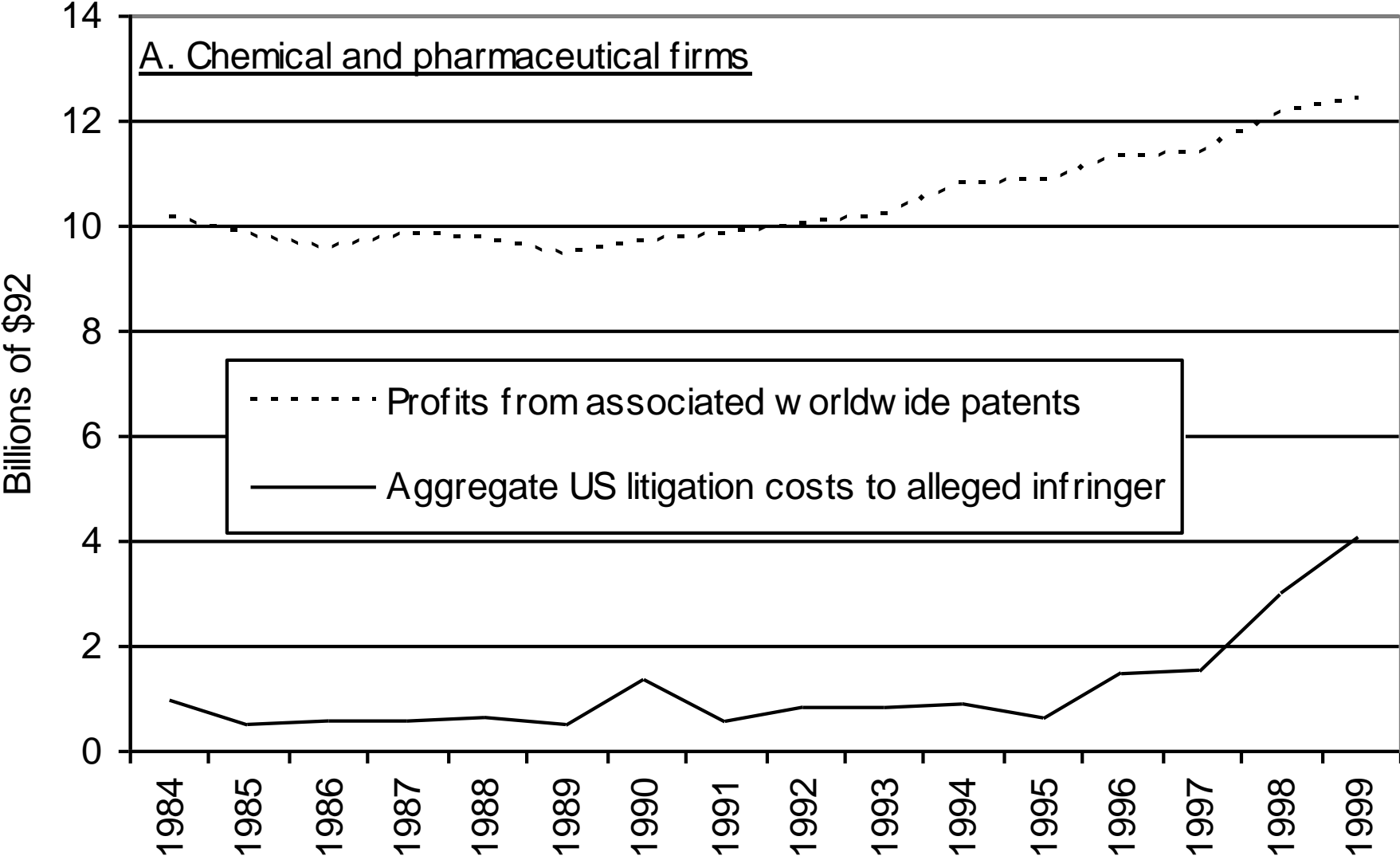
Legal  
Description



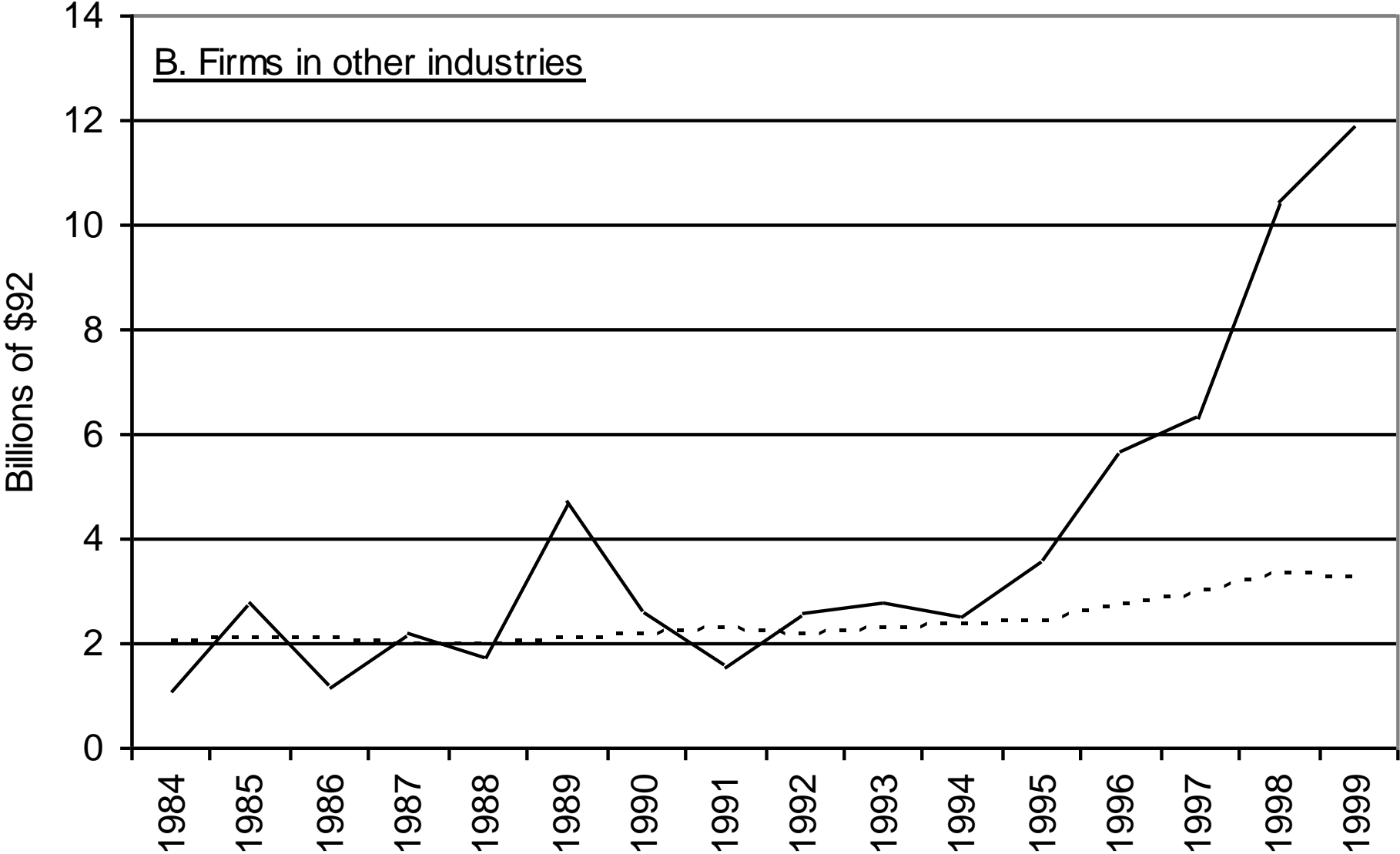
# Patents and Notice

- “Strangers” often fail to take notice of patent rights
  - Fail to license before investing in new technology
  - Miss the opportunity to avoid infringement by “designing around” a patent

# Patent benefits exceed costs in chem/pharma but ...



**Patent benefits exceed costs in chem/pharma but the reverse is true in other industries!**



***Patent Notice Failure*** is the reason innovators must contend with some many asserted patents

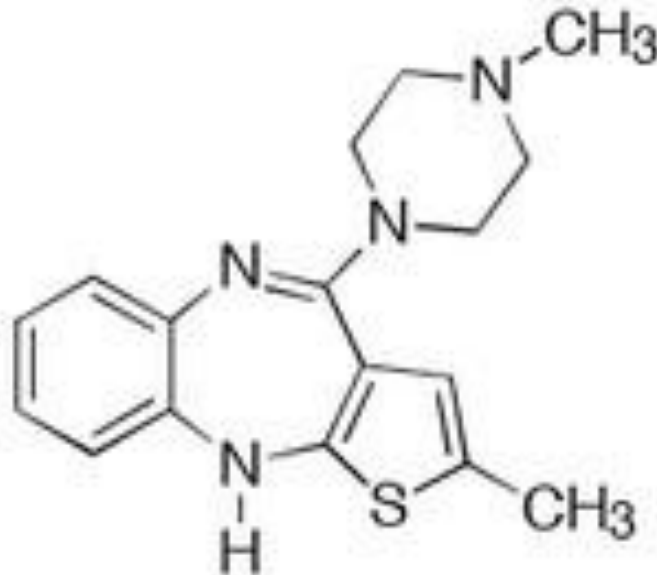
What **causes** notice failure? Can we improve patent notice?

# Causes of Notice Failure

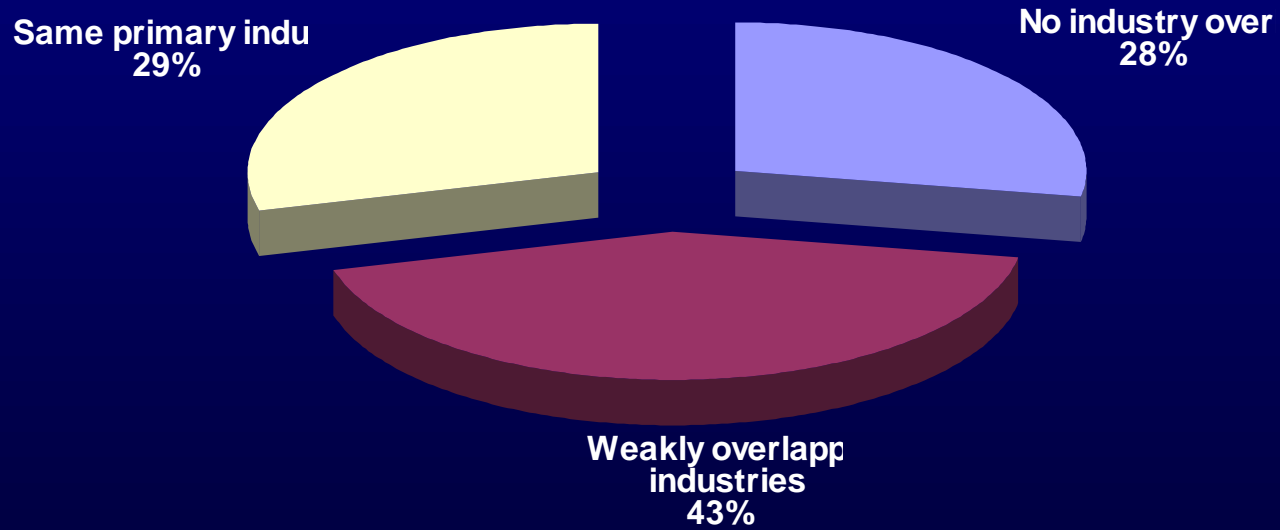
- Lack of transparency
- Fuzzy boundaries
- Inadequate disclosure
- Inadequate search
  - Both patent owners and innovators

# Claims to chemicals offer clear notice

- Lipitor: Trans-6-[2-(3- or 4-carboxamido-substituted pyrrol-1-yl)alkyl]-4-hydroxypyran-2-ones
- Olanzapine:



# Parties to Laws





# Technology Differences Reflect Notice Problems

	Probability suit/patent	Claim Con- struction	Value (\$1,000)
All	2.0%	1.00	78
Chemical	1.1%	0.84	333
Biotech	3.2%	2.37	NA
SW	4.6%	2.18	55
BM	13.7%	6.67	NA

# NPE Lawsuits

<u>Patent Technology Classes</u>		
<u>(NBER)</u>		
<b>Chemical</b>	1%	
Computers & communications	75%	
<b>Drugs &amp; medical</b>	1%	
Electrical & electronics	12%	
Mechanical	4%	
Other	8%	

# NPE Lawsuits and Notice Failure

- Age
  - NPE lawsuits much more likely to involve patents with multiple continuing applications Allison et al. (2009)
  - Mean NPE lawsuit occurs 8 years after the patent issued Risch (2012); also Love (2010)
- Characteristics associated w/ notice failure – hard to find patent, hard to find owner, hard to interpret sw & bm

# Bessen, Ford, Meurer

Event studies

Event = filing lawsuit by NPE, 4,114 events 1990 - 2010

Stock market reaction

Significant loss to investors in defendant firms

Little “evidence” of significant transfers to small inventors

# Summary Statistics Lawsuits

	Mean	Median
No. of publicly listed defendants	15.3	5
Sole defendant	17%	
In litigation with 10 or more defendants	32%	
Software patent	62%	

# Results

- Defendant loss = 0.32% - 0.52% of share value
- Median loss = \$20 million
- Aggregate loss (public defendants)
  - \$500 billion, 1990 – 2010
  - \$83 billion/year, 2007-2010

# Reform

- Federal Circuit
  - Defer to district court claim construction – reverse *Cybor v. FAS Tech.*
  - Strengthen definiteness requirement
  - Strengthen software enablement

# Reform

- PTO
  - Take control of claim language
  - Establish examination priorities
    - In re Miyazaki: “Rather than requiring that the claims are insolubly ambiguous, we hold that if a claim is amenable to two or more plausible claim constructions, the USPTO is justified in requiring the applicant to more precisely define the metes and bounds of the claimed invention by holding the claim unpatentable under 35 U.S.C. 112, second paragraph, as indefinite.”



# Reform

- Congress
  - PTO substantive rule-making
  - Significantly increase fees
  - Limit remedies against innocent infringers
  - Publish applications without delay