

A Policy Framework for Knowledge-Based Capital

OECD/MIT (Dec. 3-4, 2012)

Intangible Resources and Notice Externalities: A Policy Framework

Peter S. Menell

**Robert L. Bridges Professor of Law
Director, Berkeley Center for Law & Technology
University of California at Berkeley**



**Peter S. Menell & Michael Meurer, Notice Failure and Notice Externalities,
Journal of Legal Analysis (2012) http://ssrn.com/abstract_id=1973171**

Intangible Resources and Notice Externalities

I. Theory of Notice Externalities

II. Resource Characteristics

III. Policy Framework

- **Identifying Important Patent Needles in the Haystack Act**

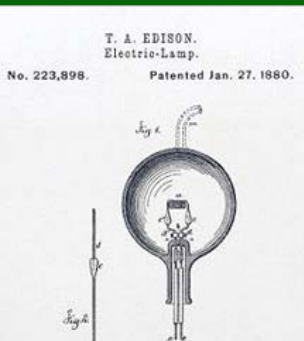
Goal: Promoting Innovation



Market Failure I: Appropriability of R&D/Risk

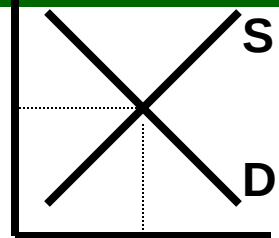


- innovation can be costly
- many innovations directly observable (or $< R\&D$)
- innovation reproducible at much lower cost



Solution to MF I: Intellectual Property

- exclusive rights



Market Failure II: Notice Externalities

- costs of being aware of potential encumbrances on R&D projects
 - direct costs – search and validity
 - risk costs – assertion of unknown claims

Solution to Market Failure II: ??????

Real Property Development and Notice



Deed

Legal
Description

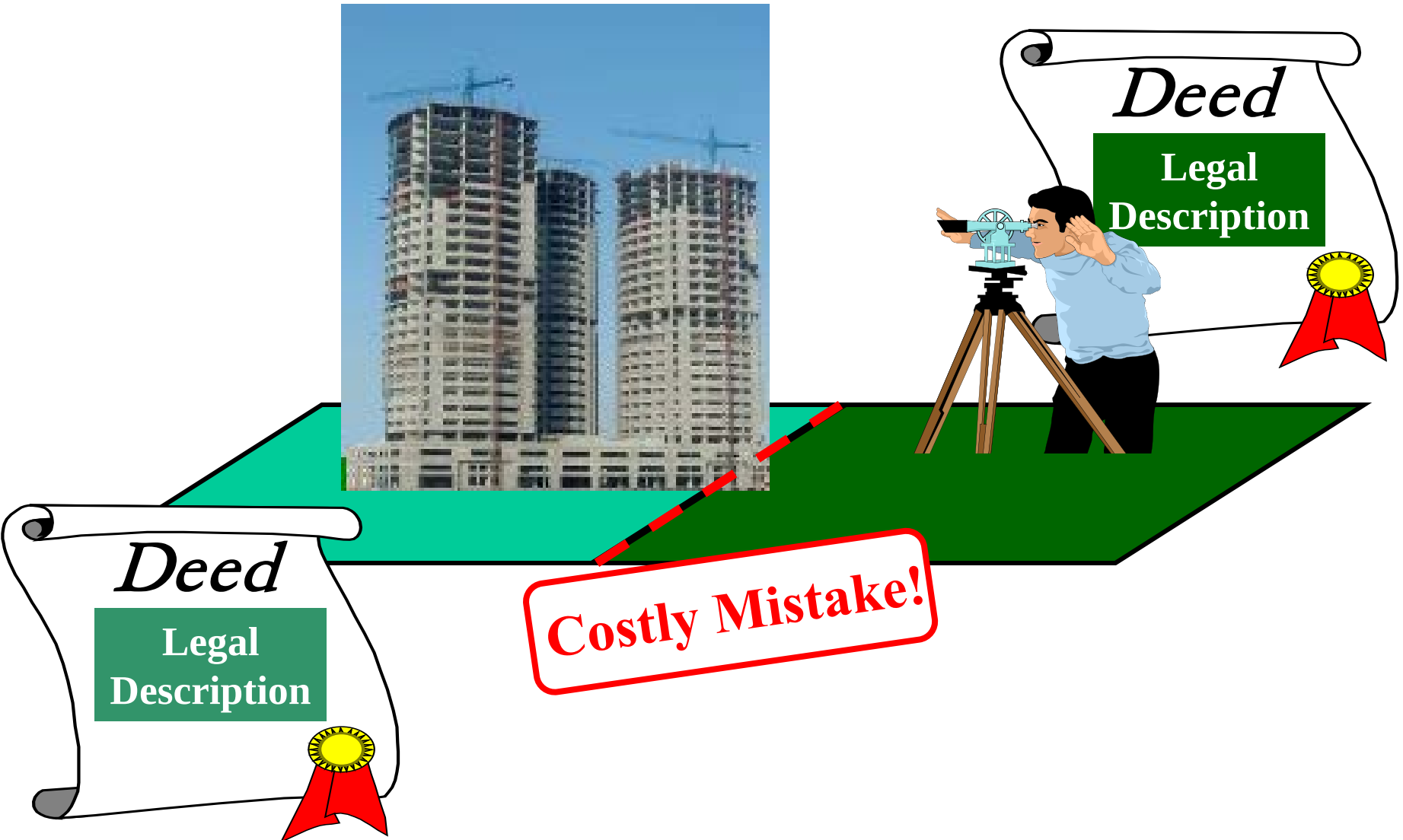


Deed

Legal
Description



Irresponsible Real Property Development



Resource Development and Notice

- **Reduces costs of assessing development opportunities**
- **Eliminates risk of “building” on encumbered resources**
- **Promotes coordination of resource owners and developers**
- **Obviates dispute resolution**

Elements of Resource Notice

- **Boundaries**
- **Owners**
- **Rights**

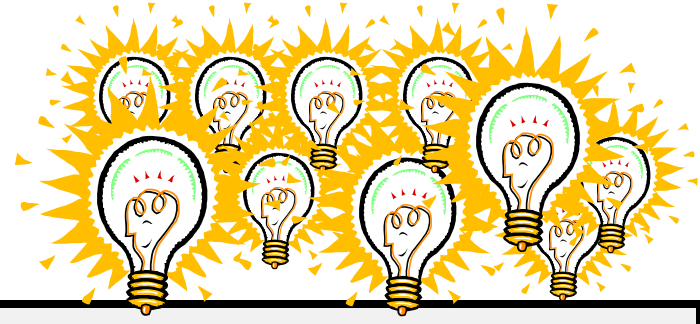
Institutions

- **Recordation**
- **Pre-clearance**

Nature of the Resources

Notice Costs

**Low Cost/
Highly Effective**



1. Search Costs

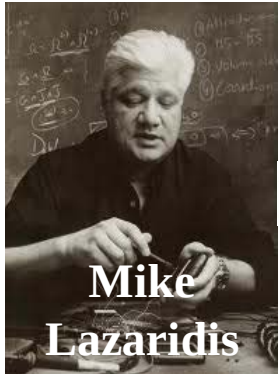
- land registry/
inspection/ survey
- two dimensions
- defined neighborhood
- physical inspection

- patent records
 - problem of unpublished apps
 - 18 month delay
- multi-dimensional
 - fuzzy, overlapping boundaries
- potentially broad
- varies significantly
across art fields

2. Validity Costs

- title report
- zoning application

- opinion letters
- claim construction
 - fuzzy boundaries
- varies significantly
across art fields



Mike Lazaridis

Partnership to develop a wireless email system

ERICSSON



Anterior Technology

NTP Inc.

Patent holding company founded by Campana (inventor) and Stout (patent attorney)

Contract
Investigate wireless digital network systems being developed by
ERICSSON
ROGERS™
Paging and Cellular

Patent Application

Electronic Mail System with RF Communications
Campana

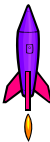
US Patent
August 1995
Electronic Mail System with RF Communications
NTP Inc.



Inter@ctive Pager



ED Virginia
NTP)
v.) complaint
RIM)
Patent Infringement



ED Virginia

NTP)
v.) complaint
PTM)

PTM

Int Request for reexam

Affirmed

Stay

PTM **NTP**



Court of Appeals Federal Circuit

Patents valid and infringed
Damages = \$23.1m

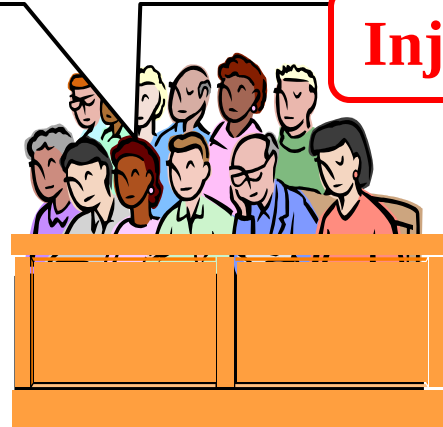


Supreme Court

Stay Denied

Settlement \$612.5m

Injunction



UNITED STATES PATENT AND TRADEMARK OFFICE

Final Rejection
1 of 5 disputed patents

PTM **NTP**

UNITED STATES PATENT AND TRADEMARK OFFICE

BPAI
2200 claims rejected;
67 claims confirmed

PTM **NTP**

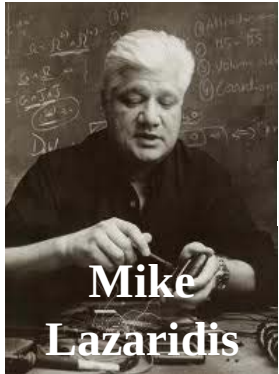
ED Virginia

NTP)
v.) complaint

Apple **Sprint**
hTC **T-Mobile**
Microsoft **LG**
MOTOROLA **palm**

Patent Infringement





Partnership to
develop a wireless
email system

ERICSSON



Anterior
Technology

NTP Inc.

Patent holding
company founded
by Campana
(inventor) and
Stout (patent
attorney)

C\$30,000,000



Inter@ctive Pager



Contract

Investigate wireless
digital network systems
being developed by

ERICSSON

ROGERS™
Paging and Cellular



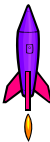
Patent Application
Electronic Mail
System with RF
Communications
Campana

US Patent
August 1995
Electronic Mail
System with RF
Communications
NTP Inc.

ED Virginia

NTP)
v.) complaint
RIM)

Patent
Infringement



1984

1987

1991

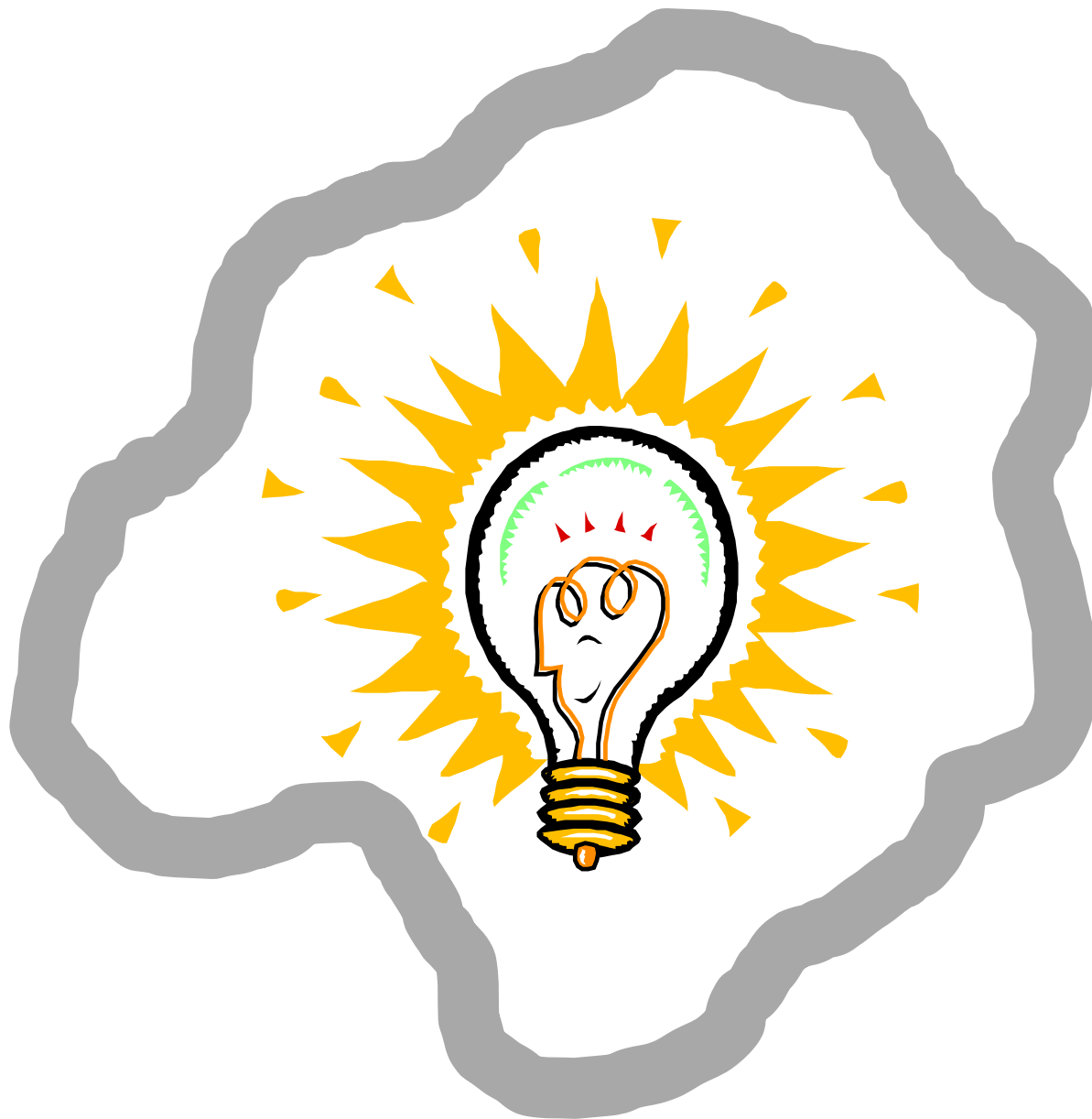
1992

1995

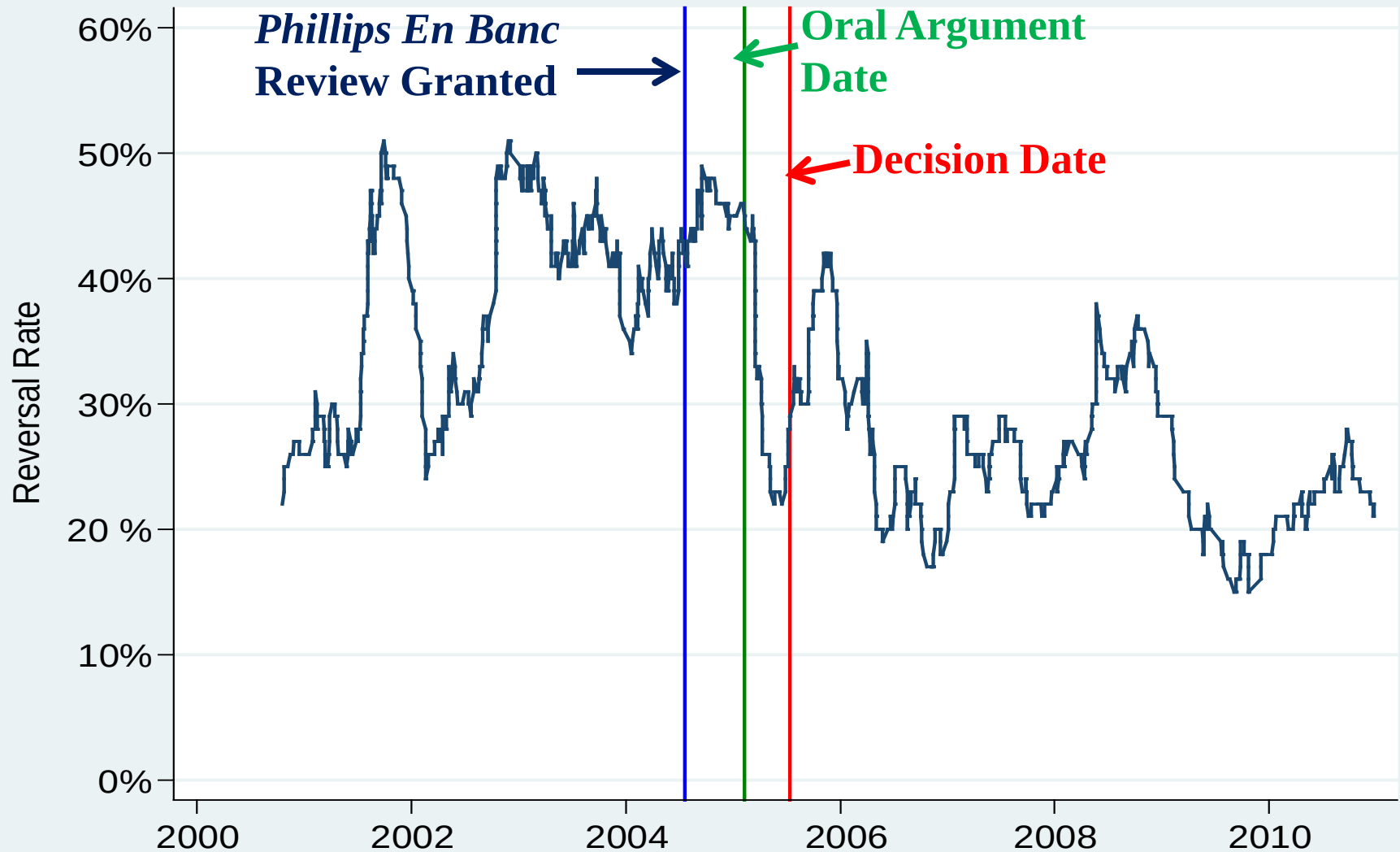
1996

1998

2001



Claim Construction Reversal Rates: 2000-2011



Source: Anderson & Menell, From *De Novo* Review to Informal Deference An Historical, Empirical, and Normative Analysis of the Standard of Appellate Review for Patent Claim Construction

Claim Construction Simulations



Lux v BrightBlue	Eyebeam v Optiflex	Mangosoft v Oracle
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“Inclusion”
Semiconductor fabrication

“local”
Computer-Related

Means + Function

Fall 2010 FJC Program	Lux v BrightBlue				Eyebeam v Optiflex				Mangosoft v Oracle				
	confidence	High	Med	Low	Total	High	Med	Low	Total	High	Med	Low	Total
170 other													
107 other													
111 other													
Total													

Fall 2010 FJC Program	Lux v BrightBlue				Eyebeam v Optiflex				Mangosoft v Oracle				
	confidence	High	Med	Low	Total	High	Med	Low	Total	High	Med	Low	Total
Π 170 Δ other	1	2	3	6									
	0	2	0	2									
	0	0	0	0									
Π 107 Δ other													
Π 111 Δ other													
Π Total Δ other													

Fall 2010 FJC Program	Lux v BrightBlue				Eyebeam v Optiflex				Mangosoft v Oracle								
	confidence	High	Med	Low	Total	High	Med	Low	Total	High	Med	Low	Total				
Π 170 Δ other	1	2	3	6													
	0	2	0	2													
	0	0	0	0													
Π 107 Δ other	2.5	.5	0	3													
	1	1	2	4													
	0	1	0	1													
Π 111 Δ other																	
Π Total Δ other																	

Fall 2010 FJC Program	Lux v BrightBlue				Eyebeam v Optiflex				Mangosoft v Oracle				
	confidence	High	Med	Low	Total	High	Med	Low	Total	High	Med	Low	Total
170 Π Δ other		1	2	3	6								
		0	2	0	2								
		0	0	0	0								
107 Π Δ other		2.5	.5	0	3								
		1	1	2	4								
		0	1	0	1								
111 Π Δ other		0	3	1	4								
		0	1	2	3								
		0	0	0	0								
Total Π Δ other													

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170 Π Δ other		1	2	3	6																																
		0	2	0	2																																
		0	0	0	0																																
107 Π Δ other		2.5	.5	0	3																																
		1	1	2	4																																
		0	1	0	1																																
111 Π Δ other		0	3	1	4																																
		0	1	2	3																																
		0	0	0	0																																
Total Π Δ other		3.5	5.5	4	13																																
		1	4	4	9																																
		0	1	0	1																																

Fall 2010 FJC Program	Lux v BrightBlue				Eyebeam v Optiflex				Mangosoft v Oracle							
	confidence	High	Med	Low	Total	High	Med	Low	Total	High	Med	Low	Total			
Π 170 Δ other					.33	.83	2.33	3.5								
					1	2.5	0	3.5								
					0	2	0	2								
Π 107 Δ other					0	0	2	2								
					1	2	2	5								
					0	0	0	0								
Π 111 Δ other					0	1	1.5	2.5								
					1	1	2.5	4.5								
					0	0	0	0								
Π Total Δ other					.33	1.83	5.83	8								
					3	5.5	4.5	13								
					0	0	0	0								

Fall 2010 FJC Program confidence	Lux v BrightBlue				Eyebeam v Optiflex				Mangosoft v Oracle			
	High	Med	Low	Total	High	Med	Low	Total	High	Med	Low	Total
Π 170 Δ other									0	1	0	1
									3	3	0	6
									0	1	0	1
Π 107 Δ other												
Π 111 Δ other												
Π Total Δ other												

Fall 2010 FJC Program	Lux v BrightBlue				Eyebeam v Optiflex				Mangosoft v Oracle			
	High	Med	Low	Total	High	Med	Low	Total	High	Med	Low	Total
confidence Π 170 Δ other									0	1	0	1
									3	3	0	6
									0	1	0	1
confidence Π 107 Δ other									2.5	2.5	1	6
									0	1	0	1
									0	0	0	0
confidence Π 111 Δ other												
confidence Π Total Δ other												

Fall 2010 FJC Program confidence	Lux v BrightBlue				Eyebeam v Optiflex				Mangosoft v Oracle			
	High	Med	Low	Total	High	Med	Low	Total	High	Med	Low	Total
Π 170 Δ other									0	1	0	1
									3	3	0	6
									0	1	0	1
Π 107 Δ other									2.5	2.5	1	6
									0	1	0	1
									0	0	0	0
Π 111 Δ other									0	2	1.5	3.5
									1	1	.5	2.5
									0	1	1	2
Π Total Δ other												

Fall 2010 FJC Program confidence	Lux v BrightBlue				Eyebeam v Optiflex				Mangosoft v Oracle			
	High	Med	Low	Total	High	Med	Low	Total	High	Med	Low	Total
Π 170 Δ other									0	1	0	1
									3	3	0	6
									0	1	0	1
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									0	1	0	1
									0	0	0	0
Π 111 Δ other									0	2	1.5	3.5
									1	1	.5	2.5
									0	1	1	2
Π Total Δ other									2.5	5.5	2.5	10.5
									4	5	.5	9.5
									0	2	1	3

Fall 2010 FJC Program	Lux v BrightBlue				Eyebeam v Optiflex				Mangosoft v Oracle				
	confidence	High	Med	Low	Total	High	Med	Low	Total	High	Med	Low	Total
170	Π	1	2	3	6	.33	.83	2.33	3.5	0	1	0	1
	Δ	0	2	0	2	1	2.5	0	3.5	3	3	0	6
	other	0	0	0	0	0	2	0	2	0	1	0	1
107	Π	2.5	.5	0	3	0	0	2	2	2.5	2.5	1	6
	Δ	1	1	2	4	1	2	2	5	0	1	0	1
	other	0	1	0	1	0	0	0	0	0	0	0	0
111	Π	0	3	1	4	0	1	1.5	2.5	0	2	1.5	3.5
	Δ	0	1	2	3	1	1	2.5	4.5	1	1	.5	2.5
	other	0	0	0	0	0	0	0	0	0	1	1	2
Total	Π	3.5	5.5	4	13	.33	1.83	5.83	8	2.5	5.5	2.5	10.5
	Δ	1	4	4	9	3	5.5	4.5	13	4	5	.5	9.5
	other	0	1	0	1	0	0	0	0	0	2	1	3

"This thing you call language, though . . . most remarkable. You depend on it for so very much, but is any one of you really its master?"

- Spock/Kollos (Medussan Ambassador)

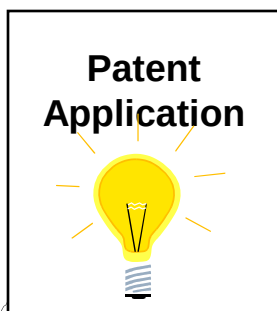
"Is There In Truth No Beauty?"



Notice Provision and Distorted Incentives



An Agency of the United States
Department of Commerce



- but it is not simply a land registry;
the PTO must evaluate patentability
 - costly
 - subjective
 - and dependent upon disclosure
(largely ex parte process)

- Patent applicants earn nothing when better disclosure and clearer claim language help an innovator avoid their patent rights
 - unless they are seeking ex ante funding



Notice Externality Policy Framework

Internalization

- 1. Prices/User Fees**
- 2. Penalties**

Harm-Reduction

- 1. Liability Standards**
- 2. Remedies**
- 3. De-Propertization**

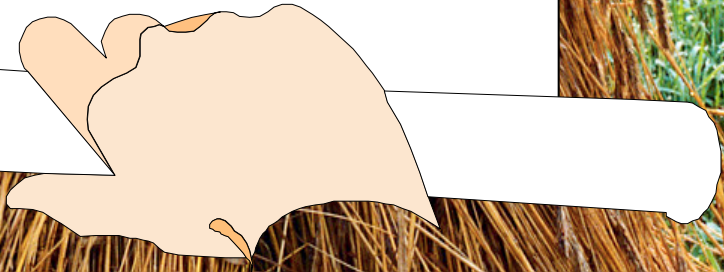
Registry/Quiet Title

- **Comprehensive Registry**
- **Prompt disclosure**
- **Searchability/Accessibility**
- **Marking**
- **Pre-Investment Dispute Resolution**





Identifying Important Patent Needles in the Haystack Act

- **Patentee must declare patent value**
 - **Valuation serves as both:**
 1. **base for “property user fee”**
 - **user fees are calibrated to field-based externalities**
 2. **cap on damages**
- 

Goal: Promoting Innovation



Market Failure I: Appropriability of R&D/Risk

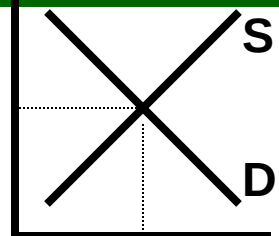
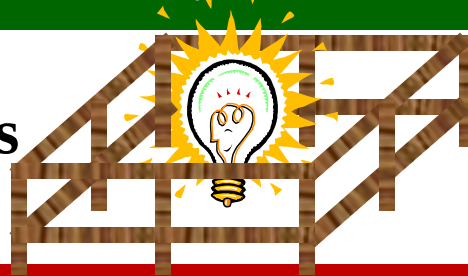
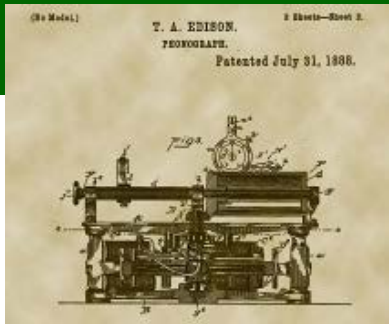


- innovation can be costly
- many innovations directly observable (or $< R\&D$)
- innovation reproducible at much lower cost



Solution to MF I: Intellectual Property

- exclusive rights



Market Failure II: Notice Externalities

- costs of being aware of potential encumbrances on R&D projects
 - direct costs – search and validity
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Solution to Market Failure II: Internalization