

Empirical Evidence about Software Patents

by James Bessen

Are software patents
just like other patents?

Claim:

Other techs had initial problems

PTO is adapting to software

Unique opposition

computer co.'s in 60s & 70s

most SW co.'s in 90s

software developers

Software developers supporting patents for...

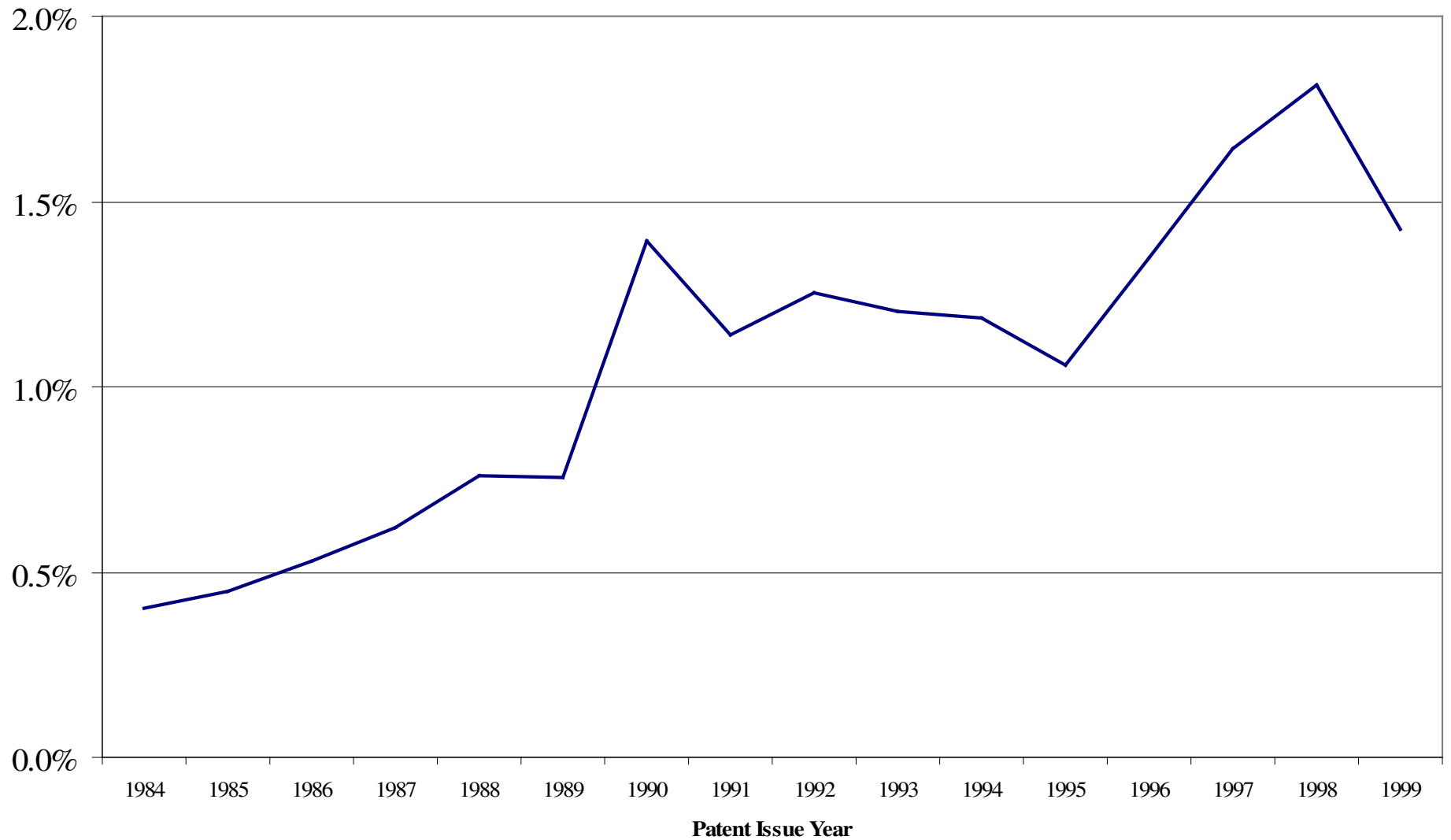
	1992	1996
Source code	2%	4%
Object code	2%	4%
Pseudocode	1%	10%
Module design	9%	11%
Algorithms	12%	28%
User interface commands	1%	0%
Icons	0%	0%
User interface layout	1%	2%
User interface sequence	1%	2%
Look and feel	0%	--
User interface functionality	4%	6%
Computer generated images	1%	0%

Technology Differences

	Probability patent in suit	Mean patent value (\$92)
ALL	2.0%	\$78,168
Chemical	1.1%	\$332,790
Complex	2.0%	\$52,024
Other	2.2%	\$79,570
Software	4.6%	\$55,421
business methods	13.7%	

Adapting?

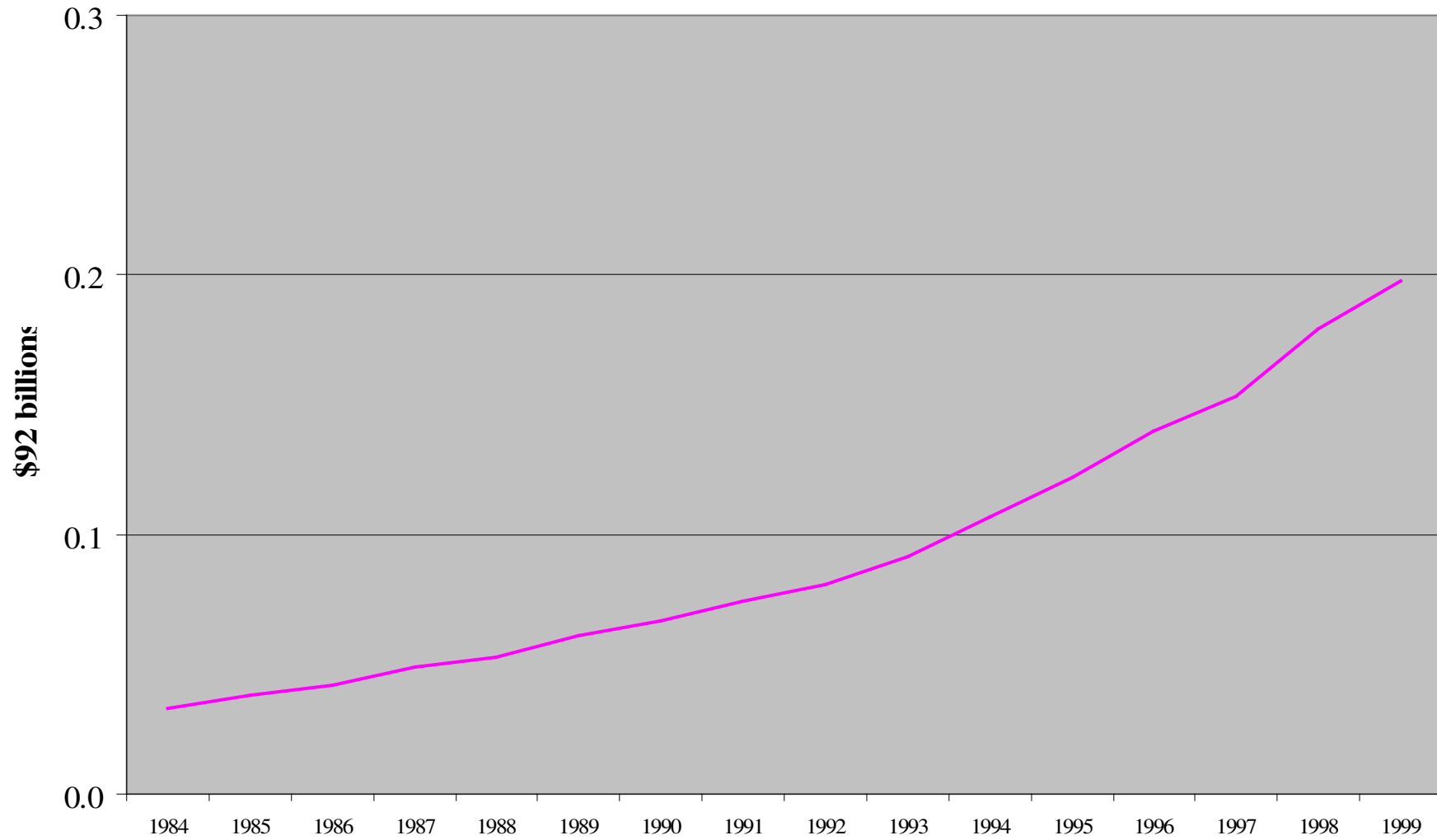
Probability software patent in suit within 3 years of issue



What's right about SW patents?

SW patent value (US public firms)

Rents from US SW patents



Private value \neq innovation

Anything wrong with SW patents?

Rob Merges:

“...software professionals such as Dan Bricklin and the members of the League for Programming Freedom were mostly, but not completely, wrong about the prospects for software patents. Patents have not killed the software industry; they have not led to a slowdown in entry; and they do not appear to have had much if any effect on industry structure.”

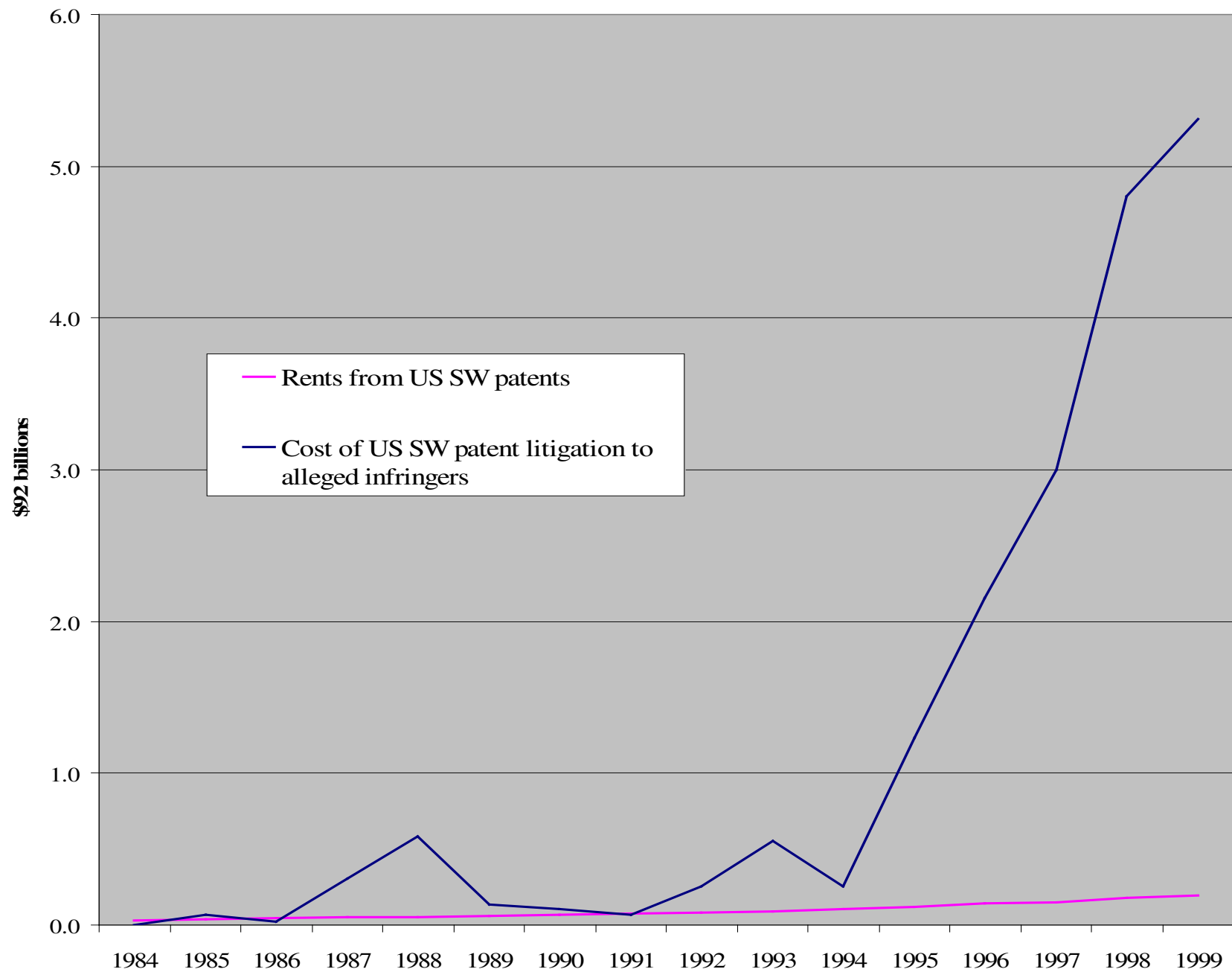
Few SW firms patent
< 25%

Do SW patents contribute to “thickets”?

<u>Manufacturing</u>	75%	
Chemicals		5%
Machinery (inc. computers)		24%
Electronics		28%
Instruments		9%
Other manu.		9%
<u>Non-manufacturing</u>	25%	
Software publishers		5%
Software services		2%
Other non-manu.		4%

Issue:
Future of SW industry

Costs & Benefits





“fuzzy” boundaries => inadvertent infringement

Chemicals

“Trans-6-[2-(3- or 4-carboxamido-substituted pyrrol-1-yl)alkyl]-4-hydroxypyran-2-ones”

Software

“point of sale location”

“material object”

“information manufacturing machine”

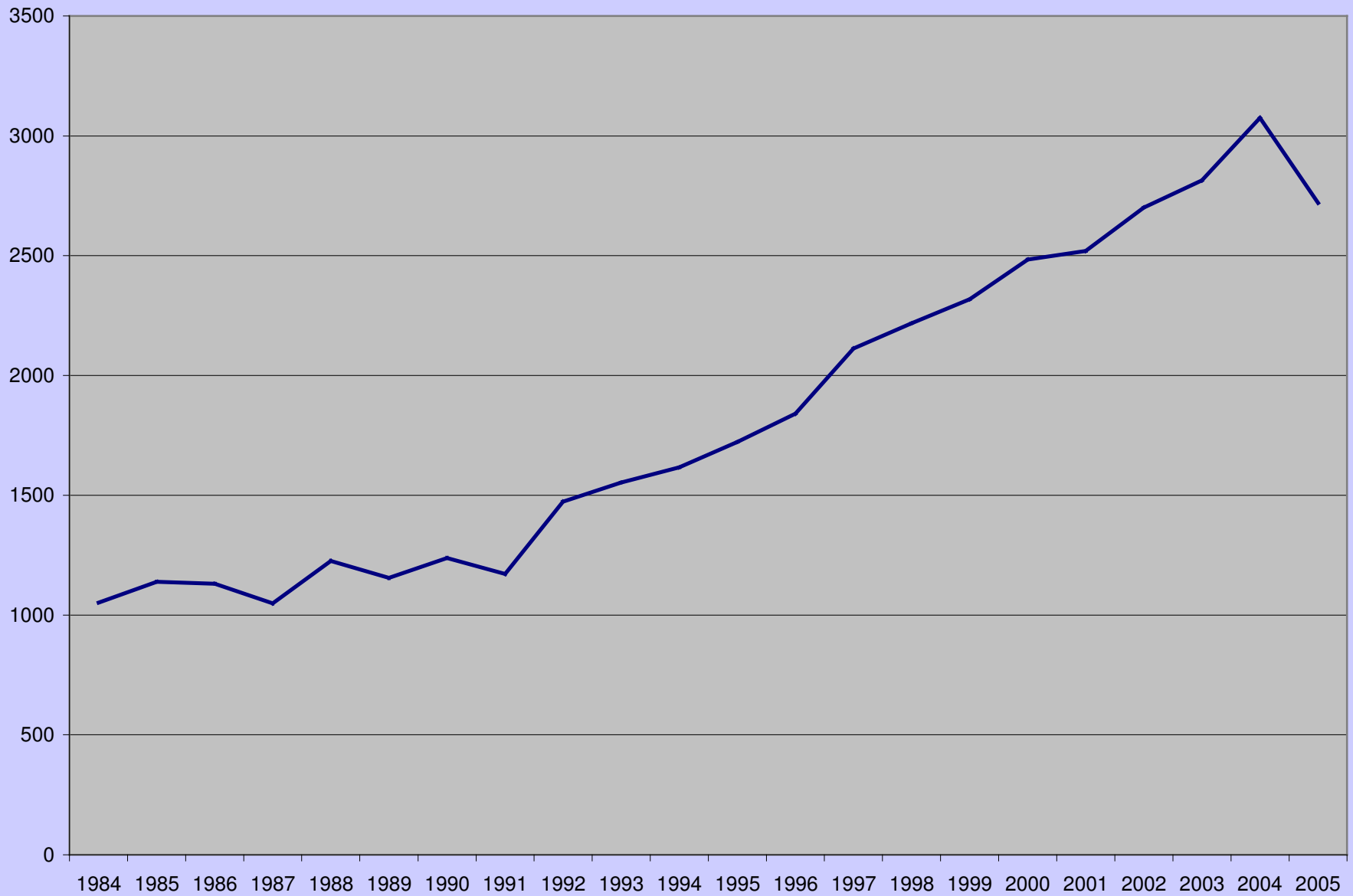
Patent boundaries

	Relative frequency of claim construction appeal
ALL	1.0
Chemical	0.8
Complex	0.9
Other	1.1
Software	2.2
business methods	6.7
Biotechnology	2.4

Inadvertent infringement:

SW patents TAX innovation

Patent Lawsuits Filed



SW patents & patent reform

	Percent of lawsuits (2002)
Chemical	13%
Complex	34%
Other	
Software	26%
business methods	4%
Biotechnology	3%