Opposition and Post-Grant Patent Reviews

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A look at the European experience

Summary of empirical results

- frequency
- duration
- outcomes
- costs
- case select

Among EPO patents granted 1980-1995

• opposition rate	7.9%
• appeal rate	31.7%
• patent revoked	33.2%
• patent amended	32.6%
• opposition rejected	27.4%
• opposition closed	6.8%

Interpretation

Third pa
frequent

Valuable p
review) tha

and asymmetric information
- high impact/close to market
- valuable patents

A look at the European experience

Subsequent German invalidity and infringement suits

≈ 269,760 EP grants with DE designation (1986-1995 grant date)

valid after opposition
97.3% of grants

Oppositions
(7.5% - 20,150 cases)

rejected
amended
revoked

≈ 249,610 EP grants without opposition

2.3%	2.5%	2.7%
≈6,190	≈6,680	≈7,280

invalidity suits

485 patents attacked
(0.2%)

198 patents
(1.5%)

43% 57%

Invalidity challenge rate 0.25%

A look at the European experience

Subsequent German invalidity and infringement suits

- Invalidity filing rate (EP patents) in Germany: 0.3%, infringement filing rate (EP patents) 0.9%.
- Overall national filing rate in the US: 1.9% (Lanjouw and Schankerman 2003) or higher
- Filing rate for EP patents in Germany is considerably lower although estimates for Germany are biased upwards
  - only EPO-granted (relatively valuable) patents considered
  - invalidity suits can be filed independent of infringement cases
  - litigation in Germany is less expensive than in the US.
  - litigation court proceedings are resolved faster in Germany than in the U.S.

Key design parameters (1/2)

Who hears the case?	SPECIAL BOARD
Which time period after grant?	SHORT (3 months)
Allow cases under threat of suit?	YES (with time limit)
Who can challenge the grant?	ANY THIRD PARTY
Which issues?	VALIDITY ONLY
Which grounds?	PATENTABILITY REQUIREMENTS
Amendment of claims allowed?	YES (but only narrowing)
Discovery	NO – NO!!!

Key design parameters (2/2)

Time limit expedition?	YES (great – EPO should have that)
Settlement allowed?	NO
Appeal possible?	YES
Legal status of patents during review?	VALID
After revocation, before judicial review?	INVALID

Personal View

Here is an opportunity for improving the US patent system.

The institution of a post-grant "Open Review" process as proposed in the NRC study is likely to generate high welfare gains.

Backups – please do not distribute

A look at the European experience

Outcomes of EPO examination – by technical field

Technical Field	Non-US Grant Rate*	US Grant Rate**	D
Electrical	69.7%	57.8%	11.9%
Instruments	67.0%	60.1%	6.9%
Chemicals	68.4%	56.7%	11.7%
Processes	68.4%	61.7%	6.7%
Mechanical	70.4%	61.7%	8.7%
Construction	62.9%	51.6%	11.3%
All Fields	68.3%	58.4%	9.9%

Application years 1990 and earlier. Grants include grants after appeal.

* Grant rate for EPO applications with non-US priority

** Grant rate for EPO applications with US priority

A look at the European experience

Incidence and Duration of Opposition

Technical Field	Opposition Rate*	Duration Opposition	Appeal Rate**	Duration Appeal
Electrical	5.3%	2.1 yrs	27.0%	1.8 yrs
Instruments	7.1%	2.0 yrs	34.7%	1.9 yrs
Chemicals	9.1%	2.1 yrs	32.3%	2.6 yrs
Processes	9.7%	1.7 yrs	32.5%	2.3 yrs
Mechanical	7.7%	1.7 yrs	30.5%	1.9 yrs
Construction	7.2%	1.7 yrs	32.3%	2.0 yrs
All Fields	7.9%	1.9 yrs	31.7%	2.1 yrs

* Share of all patents granted between 1980 and 1995 (N=327,328)
** Share of all opposition cases (N=25,499)
Duration data are median values. The duration of opposition is net of the 9-month opposition period.

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Outcomes of opposition

Technical Field	Patent Revoked	Patent Amended	Opposition Rejected	Opposition Closed
Electrical	37.3%	31.0%	26.0%	5.8%
Instruments	32.7%	33.3%	26.7%	7.4%
Chemicals	35.4%	34.6%	24.3%	5.8%
Processes	32.1%	31.7%	28.0%	8.1%
Mechanical	30.3%	31.7%	31.6%	6.4%
Construction	27.7%	30.3%	33.3%	8.8%
All Fields	33.2%	32.6%	27.4%	6.8%

Based on all opposition cases for patents granted from 1980 to 1995 (**N=25,499**)
All outcomes after appeal if an appeal had been filed. Cases still pending in 2001 (4.6%) excluded.

A look at the European experience

Empirical evidence on selection of cases

- new technical fields with uncertainty and asymmetric information
- high impact/close to market
- valuable patents

Third parties contribute information.

Valuable patents are given more attention (2nd round review) than is possible in a standard process.

A look at the European experience

Subsequent German invalidity and infringement suits

- 1986-1995: ≈269,760 patent grants with DE designation
- 1986-1995: ≈20,150 opposition cases ⇒ opposition rate 7.5%
- Invalidity suits under §81 PatG (German Patent Code) may result from infringement litigation or be filed independently.
- 1993-2002: 796 invalidity suits against 683 EP patents ⇒ filing rate 0.30%
- estimated filing rate for infringement suits against EP patents: 0.90%

A look at the European experience

Relationship between opposition and litigation

- 29.9% of all EP invalidity cases at the Federal Patent Court were preceded by an opposition. 25.7% of infringement cases at the Landgerichte were preceded by an opposition (Cremers 2003).
- In 10.5% (83 filings over 10 yrs) of all EP invalidity suits, the plaintiff had been the opponent in a preceding opposition case.
- Outcomes of EP invalidity cases: 46% rejected or withdrawn, 18% invalid, 17% partially invalid, 8% settlements, 11% other outcomes.