

The Economics of Standardisation: Main Issues and Policy Tools.

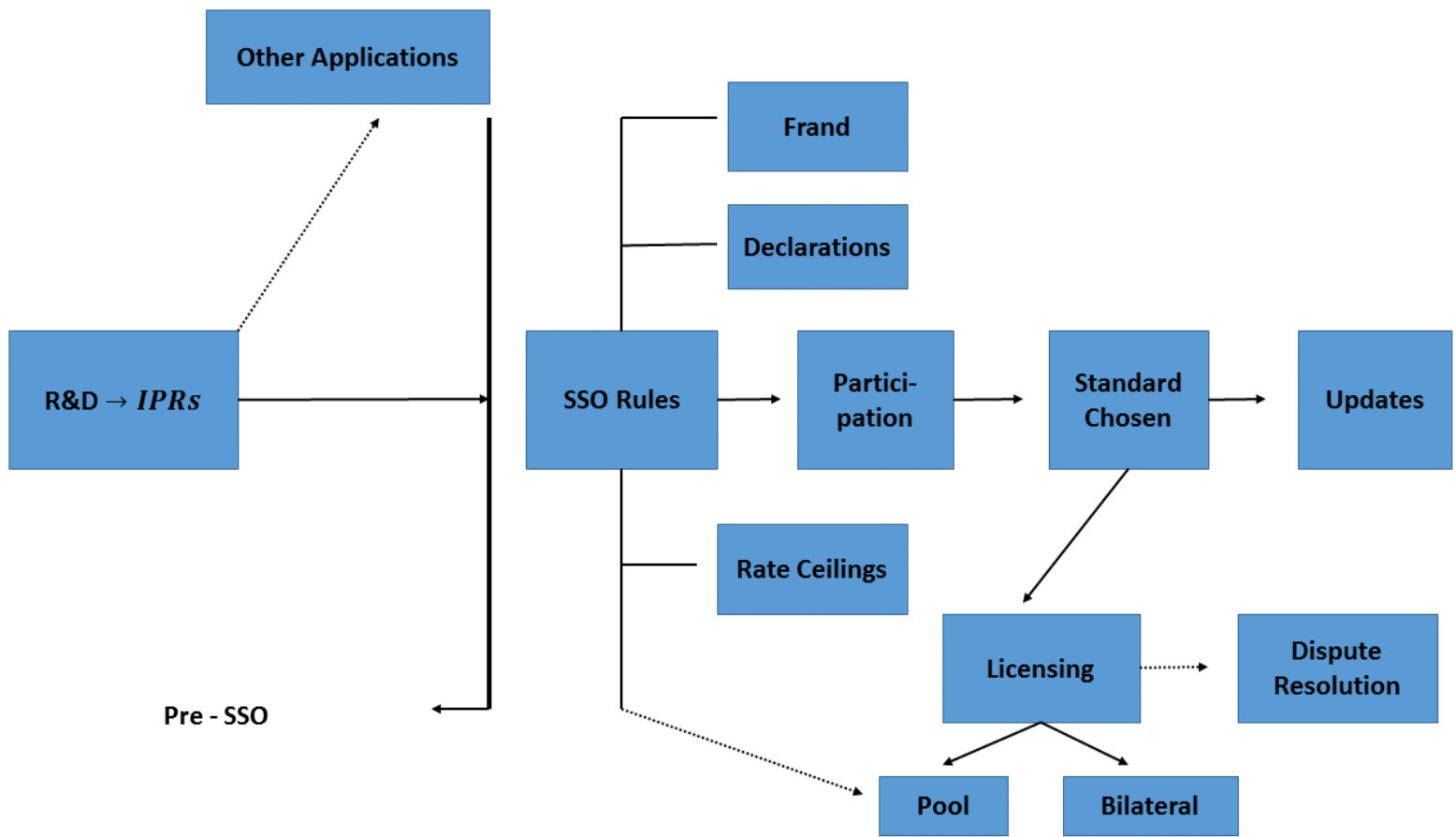


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Three Main types of Standardisation

- De Facto Standardisation: the design of a firm or group of firms becomes dominant. May be faster than SSOs but risks of dominance, stranded users and convergence on an inefficient standard. More readily updated.
- Standard-Setting Organisations: joint development by a not-for profit organisation with membership open to all. better chances of choosing the right design, usually slow, still the possibility of international “forking”, dominance is less of an issue, updates might be sluggish.
- Open standards: draw on a large pool of talent, favours continued innovation and minimises risk of dominance. However incentives to invest might be limited, risk of forking and risk of capture by a dominant firm once successful.



DG Growth Study

“CRA Report on Transparency, Predictability and Efficiency of SSOs-based Standardisation and SEP Licensing”

By R. De Coninck, P. Régibeau and H. Zenger
Available at

http://ec.europa.eu/growth/tools-databases/newsroom/cf/itemdetail.cfm?item_id=9028&lang=en

Methodology

- Review of Existing Practices
- Review of Economic Literature
- Stake-Holders: interviews, workshop, questionnaires

Table 4: Participation in the Consultation, Interviews and Workshop

Type of Stake-Holder	Sector	Consultation**	Interviews	Workshop
Industry	ICT	15	18	10
	Automotive	0	4	0
	Machine Tools	0	2	0
	Miscellaneous	2	2	0
SSOs		4	6	3
Patent Pool		0	1	1
Academic		1	3	2
Trade/Lobbying Associations		10	0	0
Public Authorities		3	0	1
Patent Offices		2	0	0
Misc.		3	0	0
TOTAL		40	36*	17*

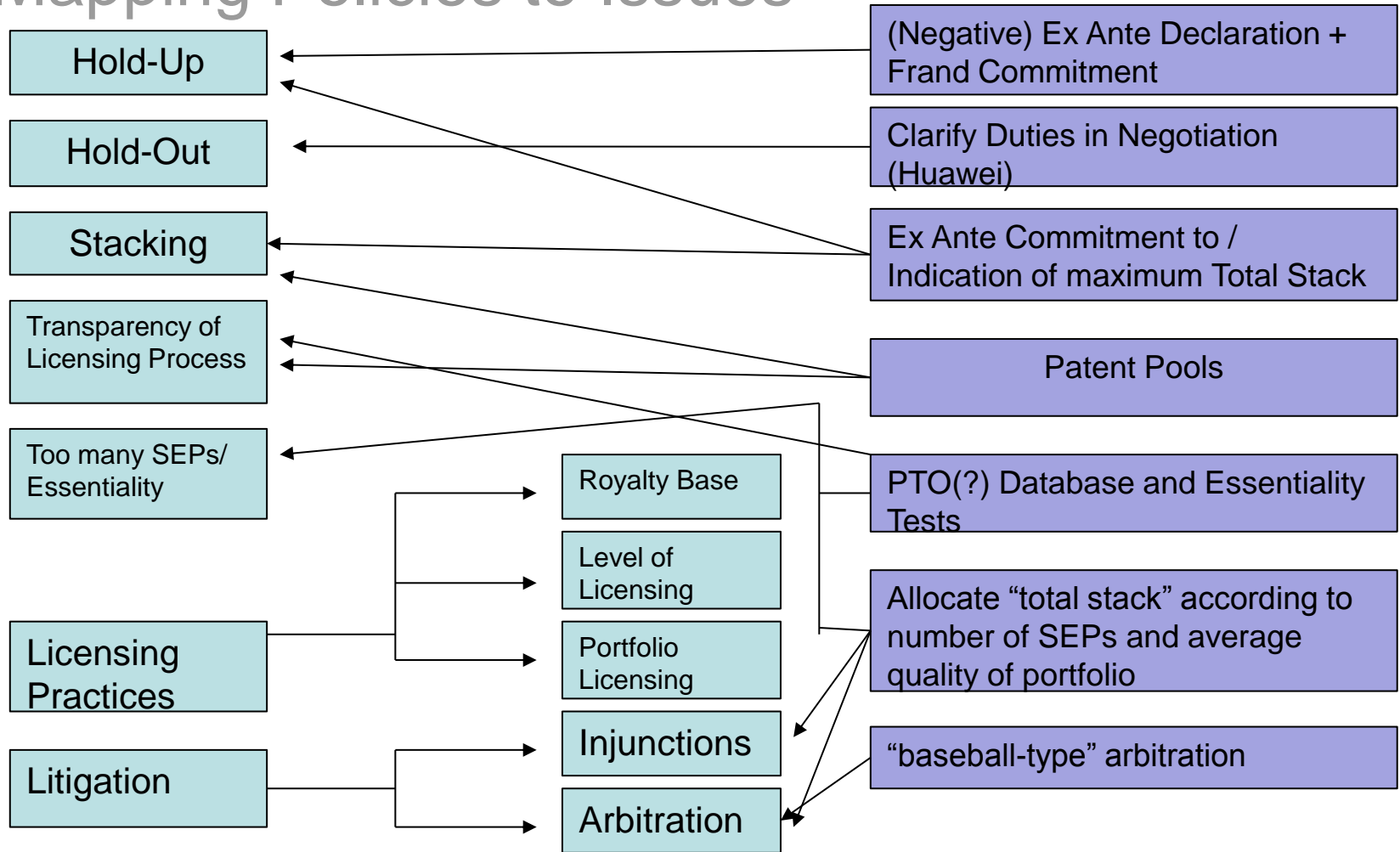
The “Spirit” of the Study

- This is not about “who should get the rents” → Try to propose a “package” of measures that overall makes all parties better off, not compared to their own preferred scenario but compared to the status quo.
- Keeping things simple.
- Tension between consistency of the “package” and the need to allow for different approaches in different industries.
- Guidance rather than formal obligations.

Main Issues:

- Hold-Up/Hold Out: disagreement about their prevalence → measures that would limit hold up/out *if it would otherwise be an Issue* and would not be too costly *if it is not an issue*.
- Royalty Stacking.
- Transparency: who owns what? Which Patents are actually “essential”? Do I pay more than others?
- Transaction costs: how to minimise the costs of transparency? Who should bear these costs? How to minimise the costs of reaching licensing agreements? Are there too many declared SEPs?
- Litigation: judicial review versus arbitration. Which type of arbitration?
- Licensing Practices:
 - *Royalty Base*
 - *Appropriate Level for Charging Royalties within the Value Chain*

Mapping Policies to Issues



The Need for a Coherent “Package”

- Interdependent parts: e.g. ex ante and ex post declaration.
- Ensure that the costs and benefits of the proposed policies are equitably distributed.

The Light Touch Package

Issue	Policy	Comment
Ex Ante Declaration	Negative Declaration	
Ex Ante Commitment	FRAND	
Ex Post Declaration	Identify Patent Families	
Public Database (EPO)	V	If number of patent is large.
Essentiality Check	X	
Patent Pools	X	
Terms of Licensing Public	X	
Dispute Resolution	Voluntary Arbitration	“baseball” type is best.
<i>Portfolio Licensing</i>	X	
<i>Royalty Base</i>	X	
<i>Level of Licensing</i>	X	

The Best Seller

Issue	Policy	Comment
Ex Ante Declaration	Negative Declaration	
Ex Ante Commitment	FRAND <i>Indicative Total Stack</i>	
Ex Post Declaration	Identify Patent Families <i>Mapping Families to Aspect of the Standard</i>	These are <u>not</u> claim charts.
Public Database (EPO)	V	If number of patent is large.
Essentiality Check	V	
Patent Pools	<i>Encouraged</i>	
Terms of Licensing Public	X	
Dispute Resolution	Voluntary Arbitration <i>Courts: Use Indicative total stack</i>	“baseball” style is best Courts should use a combination of apportionment rules and comparators. A “Georgia Pacific” approach?
<i>Portfolio Licensing</i>	<i>Optional parts of the standard severable</i>	Separation SEPs/ non-SEPs on request?
<i>Royalty Base</i>	X	
<i>Level of Licensing</i>	X	

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The Full Monty

Issue	Policy	Comment
Ex Ante Declaration	Negative Declaration	
Ex Ante Commitment	FRAND Total Stack	
Ex Post Declaration	V	
Public Database (EPO)	V	If number of patent is large.
Essentiality Check	V	
Patent Pools	SSO involves a PP management company from the start	The formation of a pool remains optional
Terms of Licensing Public	V	
Dispute Resolution	Voluntary Arbitration "Baseball" Style Courts: Use committed stack	Courts should use a combination of apportionment rules and "Georgia Pacific" approach
<i>Portfolio Licensing</i>	Separation SEPs/ non-SEPs Optional parts of the standard severable	Separation SEPs/ non-SEPs on request?
<i>Royalty Base</i>	X	
<i>Level of Licensing</i>	X	

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Who Pays for What?

- The *additional* cost imputable to “rules” must be assessed with respect to a normal “unregulated” licensing situation.
- → mapping from families to standard is incumbent on patent-owners
- external essentiality testing: benefits both sides as it reduces risk of litigation, replaces licensor’s own efforts to assess the strength of its portfolio and avoids duplication of effort across licensees. Overall, with enough potential licensees, licensors should pay less than half of these costs.

Allocating the Stack

There are T firms, each with a total number of N patents which *Might* be essential. Patents differ in the probability that they would be found essential \rightarrow distribution $F(p)$ with expectation $E(p)$.

For each portfolio, the “weight” received, w_i , is some average of N and $E(p)$. Each firm receives:

$$\text{Stack} \frac{w_i}{\sum_{j=1}^T w_i}$$

Over-declaration

- With “count the patents” or “jewels in the Crown” licensing, over-declaration is not a huge problem in itself.
- But it gets in the way of some of the suggested reforms, increasing the cost of essentiality testing, database maintenance and so on
- Declaration fees? [Note: the cost of essentially testing would already act as such a fee]. Creates a problem of balance of rents between patent-owners and implementers.
- Fee-less systems; tie royalty payments to the quality of the declared portfolio.

Fee-Less System

Each firm receives:

$$\textit{Stack} \frac{w_i}{\sum_{j=1}^T w_i}$$

$$w_i = \alpha N + (1 - \alpha)E(p) \rightarrow \textit{All firms declare } N \textit{ SEPs}$$

$$w_i = N^\alpha E(p)^{1-\alpha} \rightarrow \textit{\# of patents declared decrease with } \alpha$$

Fee-Less System

Proportion of Portfolio declared

	$\theta = 1$	$\theta = 0.9$	$\theta = 0.75$	$\theta = 0.6$	$\theta = 0.5$
0	0	0.2	0.5	0.8	1
0.25	0	0.2	0.508	0.8	1
0.5	0	0.2	0.515	0.8	1
0.75	0	0.21	0.525	0.8	1
0.9	0	0.21	0.53	0.8	1

Unwired Planet Vs Huawei

Uniqueness of FRAND

Not only a unique rate for a given set of conditions but a unique combination of rate and conditions.

Setting FRAND terms in practice

Rate: combine top down (allocation of ex ante stack) and ex post comparators.

Conditions??

Competition Law Vs Contract Law

Duties under contract law and competition law are not the same. Under contract law there is one set of FRAND terms. Under competition law, abuse requires a significant departure from these terms.

Non-Discrimination

Under contract Law, this is inseparable from the FR part of FRAND

Abuse requires anti-competitive effect in downstream markets

BUT the ex ante benchmark itself does not exclude all forms of discrimination, so is there still room for ND as an *additional* requirement?

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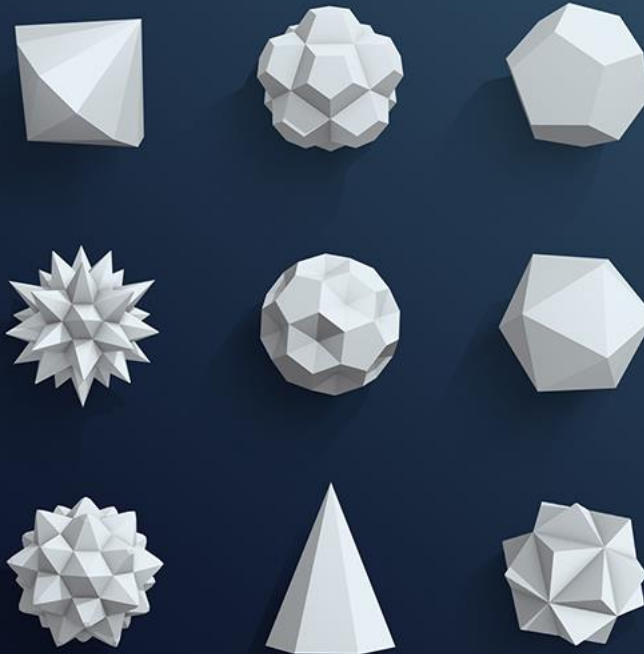
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