

Economics of ICT standards and government procurement

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Role of ICTs

- ICT increasingly essential for government and citizens' participation in public life
- Technical standards now part of the process of government
- Technical standards and software define citizens' access to government

Equitable access

- Access for citizens with disabilities
- Access for citizens speaking different languages
- ...equitable access based on citizens needs
- But also: access for citizens *regardless of the software* they use

Economics of standards

- Network effects can form entry barriers for new technologies
- Path dependence, QWERTY, intel 8086, linux/unix...
- Natural monopolies to maximise welfare from network effects
- Monopolies can capture the profits from network externalities, so consumers don't benefit

Economics of standards

- Alternative approach: separate technology from producer
- *Interoperable standards* allow natural monopolies of technologies (standards) while providing for competition among *vendors*

Types of standards

- Proprietary (“standard”?) technologies
 - Natural monopoly in technology leads to natural monopoly in market for products and services based on that technology
 - Results when access to the technology is available only to the rights holders
 - the natural monopoly in the technology combined with the state-granted monopoly of IPRs leads to a *double monopoly* on the technology

Types of standards

- (“Semi-open”?) Standard technologies
 - Natural monopoly in technology arises (*de facto*) or is defined (*de jure*) but some competition provided for in market for products and services
 - Results when access to the technology is available to players other than the rights holders/originators, *perhaps retaining advantages for the rights holders*
 - still possibility of a *double monopoly*

Types of standards

- Open standard technologies
 - Natural monopoly in technology arises (*de facto*) or is defined (*de jure*) but *full* competition ensured in market for products and services
 - Results when access to the technology is available to all (potential) players on equal terms providing *no a priori advantages based on ownership of rights, or definition of the technology*

Economic effect of policy

- Relationship between the natural monopoly of the technology and the extent of competition possible among suppliers of the technology
- Policies towards technologies and standards can achieve different economic effects
- For policy makers it is useful to distinguish between types of standards and the economic effects they can achieve

Policy strategies

- Interoperability is theory maybe ineffectual – many customers prefer “compatibility” in practice, which is anti-competitive and costly in the long term
- Interoperability with software from multiple vendors should be the sole “compatibility” criterion for (public) software procurement

Policy strategies

- standards used in public procurement, and *de jure* standards, may result in *double monopolies*: public recognition reinforces the monopolies of IPR already granted by the state
- when the monopolies are held by firms in some countries, this could form a non-tariff trade barrier

Findings on current procurement

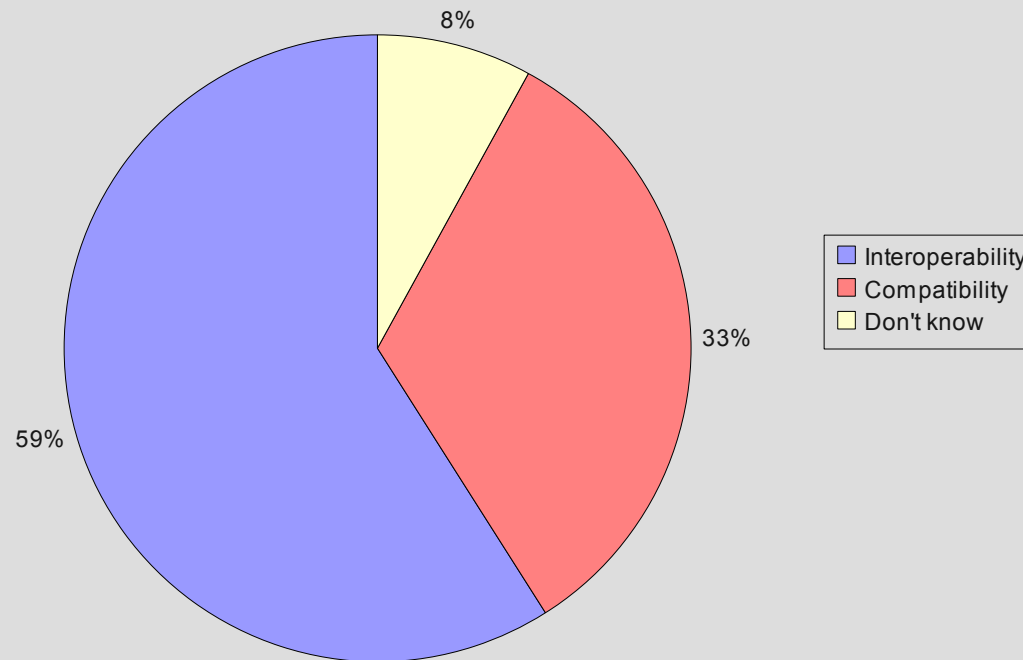
- No “level playing field”
- Widespread bias in favour of proprietary software and specific vendors
- “Poor practices” - discriminatory, non-transparent, anti-competitive procurement

Findings on current procurement

- Implicit vendor lock-in
- Explicit bias in tenders
- Tenders not defining user needs, but brands

Implicit vendor lock-in

Which is more important for new software?



(Source: FLOSSPOLS survey of EU government authorities, 2005)

Interoperability = ability to work with software from other producers
Compatibility = ability to work with previously procured software

Explicit bias in tenders

- Of 3615 software tenders (Jan 06-Aug 08), 16% explicitly name top 10 software vendors
- Shares of citations among tenders citing top 10 vendors: Microsoft 36%, Oracle 20%, IBM 12%, SAP 11%, Adobe 10%

More information

EC FLOSSPOLS report (including “An economic basis for Open Standards”):

<http://flosspols.org/deliverables.php>

OSOR Guidelines for OSS Procurement:

<http://osor.eu>

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