

Democracy, participation and open standards

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Greens/European Free Alliance conference on *“Locked in” at the European Parliament – IT monopolies, open standards, open source and EU procurement policy*, Thursday 17 April 2008



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Democracy and participation

- Two features of Information and Communication Technologies are central in the debate on democracy and participation:
 - Its **network** characteristics
 - The crucial role of technical **standards**
- In broader welfare terms, the widespread access to ICT will bring about transparency:
 - in commercial transactions; ,
 - in personal interactions;
 - in enabling citizens to access public information and public services.



Public services and participation

- The “effectiveness” and “openness” of digital public (e-Gov) services can lead to improved “social connectivity”
 - Enlargement of citizen choices:
 - ICT enables increased value extraction from public sphere.
 - Increased focus on citizens individual needs.
 - Transparency with regard to access, quality and security of public services essential.
 - Strong focus over the last ten years on content improvement of the highly differentiated quality of different government sectors, security and legal access restrictions.
- But there are obvious limits to digital participation...



Network effects

- Network effect: benefits to single user proportional to number of users
- Network externality: added value of network effect
- However, network effects can form entry barriers for new technologies
- As the title of this conference illustrates: IT has been characterized by strong path dependency and “locking in” effects



Network effects and monopoly

- “Natural” monopolies will emerge and actually maximise welfare from network effects
- However, monopolies can also capture the profits from the network externalities, so that consumers don't or only partially benefit from the network advantages
- Alternative approaches: separate the technology from producer
- *Interoperable standards* allow natural monopolies of technologies (standards) while providing for competition among *vendors*



Ownership over standards

- Standards and IPR: rights over a standard (*de jure* or *de facto*) allow control or rent-seeking over the standard, thus reducing the competitive effect
- Standards bodies try to limit this controlling behaviour by rights-holders, e.g. by requiring RAND or royalty-free terms



Economics of standards

- *If* no competitive advantage is held by some players just because they own rights over a standard,
 - *then* a natural monopoly of technology can coexist with full competition in the supply for the technology
- Only such a *different* economic effect deserves a different term: **open standard**



Type of standards: I

- 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: II

- (“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: III

- 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



Standards and innovation

- *Standards inherently limit innovation!*



Standards and innovation

- *Standards inherently limit innovation!*
- This is in the nature of standards:
 - Path dependence
(qwerty; intel 8086; linux/unix; tcp/ip)
 - Natural monopolies and inertia
(technology used by everyone)



Standards and innovation

- *Standards inherently limit innovation!*
- This is also the value of standards:
 - Network externality accrues to a fixed technology
 - Value to customers (network)
 - Value to producers: (large market)



Standards and innovation

- *Standards inherently limit innovation!*
- This is also the value of standards:
 - Standards provide a platform that can be assumed
- *A standard provides a platform above which innovation can take place freely*



Standards and innovation

- *A standard provides a platform above which innovation can take place freely*
- Innovation in the standard itself (*across the network*) is successfully achieved only by controllers of the standard
- This can prevent others from innovating above the standard
- (pulls the rug out from under their feet)



Policy strategies

- Interoperability in 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
- 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



Conclusions

- Open standards are part of the process of government functioning
- Open standards define citizens access to government
- Consumers are not required to buy products from a particular vendor in order to access public services in most areas, e.g. you don't need a Philips TV to watch Dutch public broadcasting, or drive a fiat to use park in an Italian town hall parking lot. but this is often required for ICT and access to e-government services.
- The EU ministerial e-government declaration (2003) that open standards will be used to ensure citizens have equal access to services without requiring them to use software from particular vendors
- Finally open standards promote competition and transparency

