



Standardization As Industrial Policy: A Natural Extension

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Overview

- Standardization: If and When
- Limitations and Dangers
- Opportunities
- Using Open Source as Policy Tool
- Participation Patterns as an Example of Informal Industrial Policy

WHETHER TO STANDARDIZE

- State and type of technology being standardized
 - Stable, evolving, or needing stability
- State of the market using the technology
 - Forcing or adaptive standardization
- Political and economic concerns
 - WTO or trade agreements impacted?
 - Standardizing for internal or external results?
 - Laws and legal environment
- Infratechnologies (basic technologies)
- State of national industries

WHEN TO STANDARDIZE

- Timing in Standardization Cycle
 - Technology - Between “stopping innovation”(too early) and “standardization wars”(too late)
 - Political – To accomplish defined goal
 - Economic – Externalities and network effects
 - Social – Definition of need and benefits clear
- As industrial policy, when intervention is needed or required
 - Balancing between government grant and market forces
 - Question of leading or following the market
- Complex issue requiring knowledge and skill

OPEN SOURCE AS POLICY

- Standards should specify interfaces
 - Can be royalty free or encumbered
 - Standards should specify interface for implementation
- People implement standards in one of two ways
 - Proprietary (owned and licensed or sold)
 - Open Source – freely available to all
- Open Source is a different economic/legal model
 - Assumes that dividends are gained in other ways than paying for code
 - Assumes strong IPR rules in place
- Can be used to develop internal industries

KEY SOCIAL CONCEPTS

- Standards are “Impure Public Goods”
 - Standards have long term social impact
 - The Government MUST manage them to:
 - Prevent private sector from exploiting power
 - Prevent markets from being regulated too much
 - Comply with International trade agreements
- Standards Must Serve Society
 - Permit and encourage societal growth
 - Encourage sharing and spur innovation and economic growth
 - Strengthen National growth and industrial development

“The noisiest of those competitive battles will be about standards. The eyes of most sane people tend to glaze over at the very mention of technical standards. But in the computer industry, new standards can be the source of enormous wealth, or the death of corporate empires. With so much at stake, standards arouse violent passions.”

The Economist, 27 February 1993

ICT Standardization

- Information and Communications Technology
 - ICT is “different” from other environments
 - High rate and speed of change
 - Little regulatory use of specifications
 - ICT impacts every industry, every market
- Multiple Standards Setting Organizations
 - Different types of SSOs
 - Different rules and processes
- Very little Government involvement
 - Private sector has the experts
 - Private sector has the motivation

THE DISCONTINUITY – WHAT CHANGED?

- A massively connected world started
 - In the last 10 years, standards and standardization have become important to everyone
 - Interoperation/interconnection are required
- There is no longer the opportunity to “opt out”
 - 3 million people a day “join the Web”
- Now - Millions of devices will be joining the Web
 - “The Internet of Things”
 - 1000 devices per person by 2010
- Based on standards and standardization

WHAT HAPPENED TO STANDARDS

- With standards as the basis of ICT, they became valuable
- ICT Standardization was captured by large vendors
 - Vendors needed to control what happened in SDOs
 - SDOs didn't meet needs
 - Needed faster, easier, better standards
 - Needed like minded companies (partners) at table
- Began to invent new forms of standardization bodies
 - All forms responded to market needs – but which market or whose market
- I believe that this is where the whole system broke

WHAT HAPPENED TO STANDARDS?

- No coordination between organizations
 - Specification may (or may not) interoperate
 - No control of who does what with what
- No common philosophy of management
 - IPR is left to discretion of participants
 - Unfettered capitalism
- No common vision or strategy -Private or public sector
 - Social impact not understood
 - Government role deliberately minimized (US)
 - Government role focused on social issues (EU)
 - Chinese Government's Role – being determined

WHAT HAPPENED TO IPR?

- All IPR in standards is RAND
 - The only question is what “Reasonable” means
- In “Ambiguous RAND”, “Reasonable” is whatever the lawyers and courts decide it means
- In ex ante RAND, it means you know before you have to make a decision
- In Royalty free RAND, it means that you don't need to care unless you abuse the grant
- All apply; ex-ante and Royalty free seem to be better for most standards situations

CONCLUSION , PART 1

- Standards are not about technology
 - They are societal and policy impacting tools
 - They need governmental management to prevent abuses from continuing
- As standards become a policy tool, societal and policy needs will triumph over technology
- New visions are needed – “business as usual” will fail
- Standards are about cooperation, not competition

CONCLUSION, PART 2

- China has the opportunity to redefine:
 - What is “reasonable”
 - When can royalties be claimed in a standard?
 - Does the IPR have value if it's not standardized?
 - How do you determine if IPR is essential or non-essential
 - Does a royalty claim override societal good?
 - Should companies be allowed to compete on standards creation (IPR insertion, proprietary lock ins) or only on implementation of the standard?
 - What is a legitimate standardization organization?
- **China has the opportunity to lead and determine these answers both for China and the world.**

Thank You

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