Development of IT Standards

--Introduction--

Kai Reimers

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Objectives

- Ability to analyze IT standardization processes from an economic and institutional perspective

- Ability to evaluate IT standardization processes from a business and a policy perspective

- Understanding of legal and technical contingencies of IT standardization processes

Questions to be Addressed

- What are IT standards?

- What are costs and benefits of IT standards?

- Which types of standardization processes are usefully distinguished?

- What are the dynamics of standardization processes?

- How effective are different forms of standardization processes?

Theories for Studying Standardization Processes

- Theory of public and collective goods

- Theory of positive network externalities

- Transaction cost theory

- Industrial economics

Cases of Standardization Processes

- Wireless LAN/Wi-Fi (IEEE 802.11x)

- Bluetooth

- Standardization of Mobile Communications systems by regions and 'generations' (NMT, GSM, IMT-2000)

- In addition (for tutorials): various cases of standards battles such as Blu-ray vs. HD-DVD

Course Components

- Theories of standardization processes, including an empirical assessment of their applicability and reach (7 sessions)

- Cases of standardization processes (6 sessions)

- Use of published material on iconic cases to recapitulate theory (6 tutorial sessions)

Organization of Course

- Presentations

- Tutorials

- Online resources (L2P, Forum)

- Literature

- Teams

Earning Credits

- Written exam (70%), open book

- In-class presentation (30%)
  - ~20 minutes
  - In teams or individual
  - Brief presentation of case
  - Your analysis
  - Open discussion

- If you need 6 ECTS: colloquium

Practical Issues

- Reader

- Language

- Access to online resources

- Dates of tutorial

Schedule: Lectures

- Oct. 20: Introduction
- Oct. 27: What is a standard? Costs and benefits of standards
- Nov. 3: Dynamics of market-based standardization processes
- Nov. 10: Dynamics of committee-based stand. processes
- Nov. 17: Effectiveness of standardization processes
- Nov. 24: No class
- Dec. 1: Summary: Types of standardization processes
- Dec. 8: Empirical assessment of positive network hypothesis
- Dec. 15: An integrated view of standardization processes
- Dec. 22: Case WiFi
- Jan. 12: Case: Bluetooth
- Jan. 19: Case: 1G/2G Europe
- Jan. 26: Case: 1G/2G US
- Feb. 2: Case: 1G/2G Asia
- Feb. 9: Case: 3G global

Schedule: Tutorials

- Nov. 12: Definition, Costs and Benefits of Standards
- Dec. 10: Definition, Costs and Benefits of Standards
- Jan. 14: Game Theory and Standardization
- Jan. 28: Sponsored Standardization processes
- Feb. 4: Physical vs. Institutional View
- Feb. 11: Trial exam

Literature

- Interesting background literature; available for short term lending in our institute: Gawer, A. and Cusumano, M.A. (2002) Platform Leadership -- How Intel, Microsoft, and Cisco Drive Industry Innovation, Harvard Business School Press, Boston, MA.