Lecture Note I- 9
Standards Wars

- Classification of standards wars
- Tactics for standards wars

Standard Wars

- Two new incompatible technologies struggle to become a de facto standard
- Examples
  - North v. South (in railroad gauges)
  - Edison v. Westinghouse (in electricity)
  - NBC v. CBS (in color TV)
  - 3Com v. Rockwell/Lucent (in modem)
  - United States v. Japan (in HDTV)
- Wars can end
  - A truce (as with modems)
  - A duopoly (as in video games) : Nintendo v Sony
  - A fight to the death (as with VCRs)

Recent Standards Wars

- AM stereo
  - mutually destructive
  - Auto industry invested, radio didn't
- Digital wireless phones
  - two incompatible technologies
    - Europe: GSM Global system for Mobile Communication), 108 countries adopt
    - US: GSM, TDMA (cousin of GSM), CDMA compete
      - TDMA: 5 million
      - CDMA: 2.5 million
      - GSM: 1 million
- 56 k Modems
  - resolved through a standard agreement
    - US Robotics x2 attempted preemption
    - Rockwell/Lucent K56 Flex
    - Compromise standard ITU V.90

Classification of Wars

	Compatible	Incompatible
Compatible	Rival Evolution	Evolution v. Revolution
Incompatible	Revolution v. Evolution	Rival Revolution

Examples

- Rival evolution
  - DVD v. Divx, 56k modem, various flavors of Unix
- Rival revolutions
  - Nintendo 64 v. Sony PlayStation
- Evolution v. Revolution
  - Spreadsheet (Lotus 1-2-3 v Excel), database (dBase IV v Paradox)

Key Assets in Network Markets

- Control over an installed base
- Intellectual property rights
- Ability to innovate
- First-mover advantages
- Manufacturing
- Strength in complements
- Reputation and brand name

Two Basic Tactics

- Preemption
  - Build installed base early for positive feedback
  - But watch out for
    - rapid technological progress
    - Imperfect Quality
- Expectations management
  - Manage expectations
  - But watch out for vaporware
    - Announce an upcoming product so as to freeze your rival's sales

Once You've Won

- Staying on your guard
  - Offer a migration path fend off challenges from upstarts
  - French's Minitel system (1980, online transaction system)
- Commoditize complementary products
  - Retain franchise as the market leader but encourage a competitive market for complements
- Competing against your own installed base
  - Durable goods monopoly (Intel again)

Once You've Won (cont')

- Protect your position
  - Attract important complementors
- Leverage installed base
  - Expand network geographically
- Stay a leader
  - Develop proprietary extensions

What if You Fall Behind?

- Adapters and interconnection
  - Target a market niche or interconnect with the larger networks
- Survival pricing
  - Hard to pull off
  - Different from penetration pricing
- Legal approaches
  - Renege the openness promise

Battle of the Browsers: Microsoft v. Netscape

- Characteristics
  - Rival evolutions
  - Low switching costs
  - Small network externality
- Strategies
  - Preemption in distribution
  - Penetration pricing
  - Expectations management
  - Alliances

Summary

- Understand the type of war
  - Rival evolution
  - Rival revolution
  - Revolution v Evolution
- Strength depends on 7 critical assets
- Preemption is a critical tactic
- Expectations management is critical
- When you've won the war, don't rest easy
- If you fall behind, avoid survival pricing

