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

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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)
- Commodify 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 complements
- 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
  - Reneg 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