Vertical and Horizontal Strategies in Converging Ecosystems

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Agenda

• Evolving Ecosystems and Value Chains
• Technological Convergence
• Vertical and Horizontal Strategies
Digital Convergence

• Convergence: when technologies become similar, functionalities of different products can merge

• Uniting the functionality of computers, TVs, and telephones.

• Implication: digital content changes value creation
  – New S-curves create new markets
  – Faster and higher market evolution curves
Problem with Convergence: everyone knows it’ll happen, but when, where, and how?!

- Most predictors of convergence have been wrong!
  - …we’ve been predicting it since the 1960s!
  - Failed to see massive managerial creativity and inter-firm coordination barriers
  - Convergence may be non-linear and partial (some parts converge while other do not) because it is a 2-sided market:
    - Requires content to develop to make the products worthwhile!
Be Vertical if you Can...it Creates Value that you can Capture

• Customers want full solutions
  – Cross the chasm with complete bundles of product and service

• Components not widely available
  – Lack of modularity
  – Difficult to transact with suppliers and complements

• Hold-up problems
  – Small number of suppliers can extract all of the value
  – High transaction costs to coordinate with suppliers
The logic of vertical solutions

• Vertical also works if:
  – Tight integration between layers produces superior performance
    • Game machines
      – hardware is highly optimized for specific applications (graphics and visuals)
  – Razor & blades business models
    • Give away hardware (software) to sell the complement
      – iPod (“give away” the music to drive hardware sales)
      – Game machines (subsidize the hardware to sell software)
Vertical Examples

• Ford Motor Company
  – Backward integrated into rubber and steel to ensure high quality supply
• IBM
  – Largest manufacturer of ICs from 1960s to mid-1980s
• AT&T
  – Made everything from ICs to service for all customers

...BUT NOTICE THAT THEIR VERTICAL STRATEGIES ALL DISAPPEARED...
Be Vertical if you can...but it is hard to be Vertical forever!

• Customer’s needs change, and your solutions aren’t as desired...
  – Disruptive technologies
• Uniqueness is eventually imitated
• Complementary assets become less tightly held
• Scale and Scope economies can become really important in one of the horizontal layers...
  – E.g., Microprocessors, Operating Systems, Genomics
• Potential Worst Case Scenario: convergence allows a large firm from another ecosystem to come and eat your lunch!
  – e.g., Apple and Google invade Nokia’s space!
Why go horizontal?

H=Horizontal Solutions

- Huge scale in components has led to horizontal solutions in computers
  - CPUs--- $1 billion to design, $3 billion to build
  - LCDs--- $1 billion million to build
  - OSs--- $1+ billion and 4 yrs to design, $100 million/yr to support
    - No company can internalize the scale requirements
- Availability of credible suppliers, declining transactions cost (facilitated by IT), growing modularity, makes horizontal strategies feasible
Horizontal: Advantage to those solving the problems

- Coordination is still a nightmare in the horizontal model
  - Who is responsible?

- Competitive advantage comes from:
  - Dominant scale & solving coordination problems
    - Common interfaces/ plug & play
    - Opportunities for coordinators & contractors
      - Business process outsourcing
    - Accenture, IBM Global Services, Wipro
Solve horizontal problems through: Externalities & Standards

• Standards & network effects generate Lock-in & Lock-out:
  – Lock-in:
    • customer sinks so much investment in complementary assets, it is cheaper to stick with known migration path than switch to (even) superior technology
  – Lock-out:
    • exclusion from a standard can be very difficult to reverse

• Standard setters can change the direction of their industries
Scale & Scope=
The Incumbent Advantage

Start-ups pioneer

But scale and scope allow incumbent firms to imitate and overwhelm

Incumbents grab the advantage by exploiting their advantages in size (scale) & their advantages of breadth (scope)
Advantages from Scale & Scope

**Scale** is only an advantage if managers will:

- cannibalize themselves
  - E.g., will Microsoft drive virtualization?
  - E.g., will Oracle drive on-demand CRM?
- cross-subsidize
  - Internet Explorer vs. Netscape Navigator

**Scope** is an advantage if there are opportunities to:

- bundle
  - Microsoft Office
  - Intel – Centrino & WiFi
  - IBM - Linux
Looking forward

• Read the Nokia case and Phone article packet
• Next session: Last IT/Communications Case:
  • Apple, Google, Nokia Phone Strategy Comparison