### Sysco or Cisco?

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### Cisco Overview

- 65,000 employees, world wide
- Revenue about $32B this year
- Known for router and switch products
- Now moving into “adjacent markets” with services, communications, data center, and even consumer products
- 133 Acquisitions
Routers

- Cisco’s first product, originally designed to bridge networks from different vendors
- Now almost all networks run TCP/IP, so router’s function has changed:
  - Core internet routing
  - Gateway to internet in enterprise networks
  - Residential internet connection
- Device IP address assigned by network administrator
- Can route between devices with different physical interface types
- Can support networks with billions of end points

Switches

- Steer traffic within a closed network
- Larger networks have thousands of endpoints
- Devices identified by MAC address, assigned by device manufacturer
- Devices typically have the same physical interface type
- Networks relatively easy to set up and administer
Routers versus Switches

- Switches steer traffic based on end point devices' fixed address
  - Non-scalable mechanism, like sending letters without a zip code
- Routers steer traffic based on devices' assigned "geographic" network address
  - Logical address groupings, like ucs.edu and att.net
  - Hierarchical network grouping allow distributed routing
- Routers can send traffic between devices with different physical interface types
- Summary: Switching is fast and simple, but not as scalable as routing

Cisco’s “Market Adjacencies”

- Strategy: Use existing customer relationships and core competencies to move into different markets
- Usually timed with a “market disruption”
- Recent examples:
  - IP Telephony
  - Telepresence
  - Webex conferencing
  - Data center / “Unified Computing”
IP Telephony

- Strategy: Use IP networking expertise to enter the enterprise IP telephony market
- Disruption: evolution from TDM to packet based voice
- Acquire and internally develop the call manager, phones, and voice gateways
- Triggers upgrade cycle of higher capability switches and routers
- Over 7 million phones sold

Telepresence

- Reinvention of video conferencing
  Conference room metaphor - "It's all about the experience."
- Triggers both customer and service provider equipment upgrades

Disruptions:
Disincentives to business travel:
- 9/11
- SARS
- Fuel Costs
- Economic crisis
Conferencing: Webex, and “Software as a Service”

- Unified conferencing: voice, video, document sharing, and other “collaboration tools”
- Platform for partners to develop and distribute applications, such as call center and customer support

Data Center: Virtualization and Cloud Computing

- “The next big thing.” (At least one of them)
- Single network to integrate servers, storage, and network connections
- Scalable “computing on demand”
- Migration to virtual machines reduces hardware costs, administration costs, and power consumption
Unified Computing Architecture

- Fabric
- Chassis
  - Fabric Interface
  - Blade Server
  - Network Intf
- Management Software
- Storage?

Porter’s Five Forces, Cisco 3750

**Supplier Power:**
Suppliers are both partners and competitors. (Broadcom and Marvell)
ASIC

**Barriers to Entry:**
Technical sales force
ASIC expertise
Large software team
Feature velocity prevents commoditization

**Competitors:**
Cisco, HP, 3Com, Nortel, IBM?
Market leaders develop custom ASICs and software
Leverage customer relationships to shape the market

**Substitutes:**
Lower cost unmanaged switches
Commodity copies of older generation products

**Buyers’ Power:**
Many customers & few suppliers
Fortune 1000 enterprises
Government and education
Service providers

**Government:**
Antitrust (Microsoft, Intel, GE)
Feature requirements
Regulation
Tax Policy
Observations on Cisco ERP Case

- Self imposed urgency
  RFP written in ten days!
- Internal customers drove features
- Specified minimal customization
- Heavy use of Oracle consultants despite original plan for no customization
  Sales support application and “data warehouse” architecture added late in the implementation phase. Poor planning but fantastic flexibility.
- Extreme control over suppliers: marquis account
- IT as a strategic advantage
  Investment versus cost

Cisco ERP Case – Marquis Customer

“KPMG came in and saw an opportunity to really build a business around putting in these application. They also saw this as a kind of defining opportunity . . ..”

“Oracle wanted to win this badly. We ended up getting a super deal.”

“. . . the president of the hardware vendor was our executive sponsor. . . . They lost money on this big time. It was great for them to get such a great reference, . . . .”
Cisco ERP Case – Self Imposed Deadlines

“. . . emphasize decision speed, Cisco narrowed the field to five packages within two days.”

“The team spent 10 days writing a Request for Proposal (RFP) to send to the vendors. Vendors were given two weeks to respond.”

“Cisco directed Oracle to compress its normal five-day training classes into two 16-hour days.”

“We thought it really should take 15 months . . . there’s no way we are going to take 15 months to get this done. That’s ridiculous."