



## Case Study: Cisco in China



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# Agenda

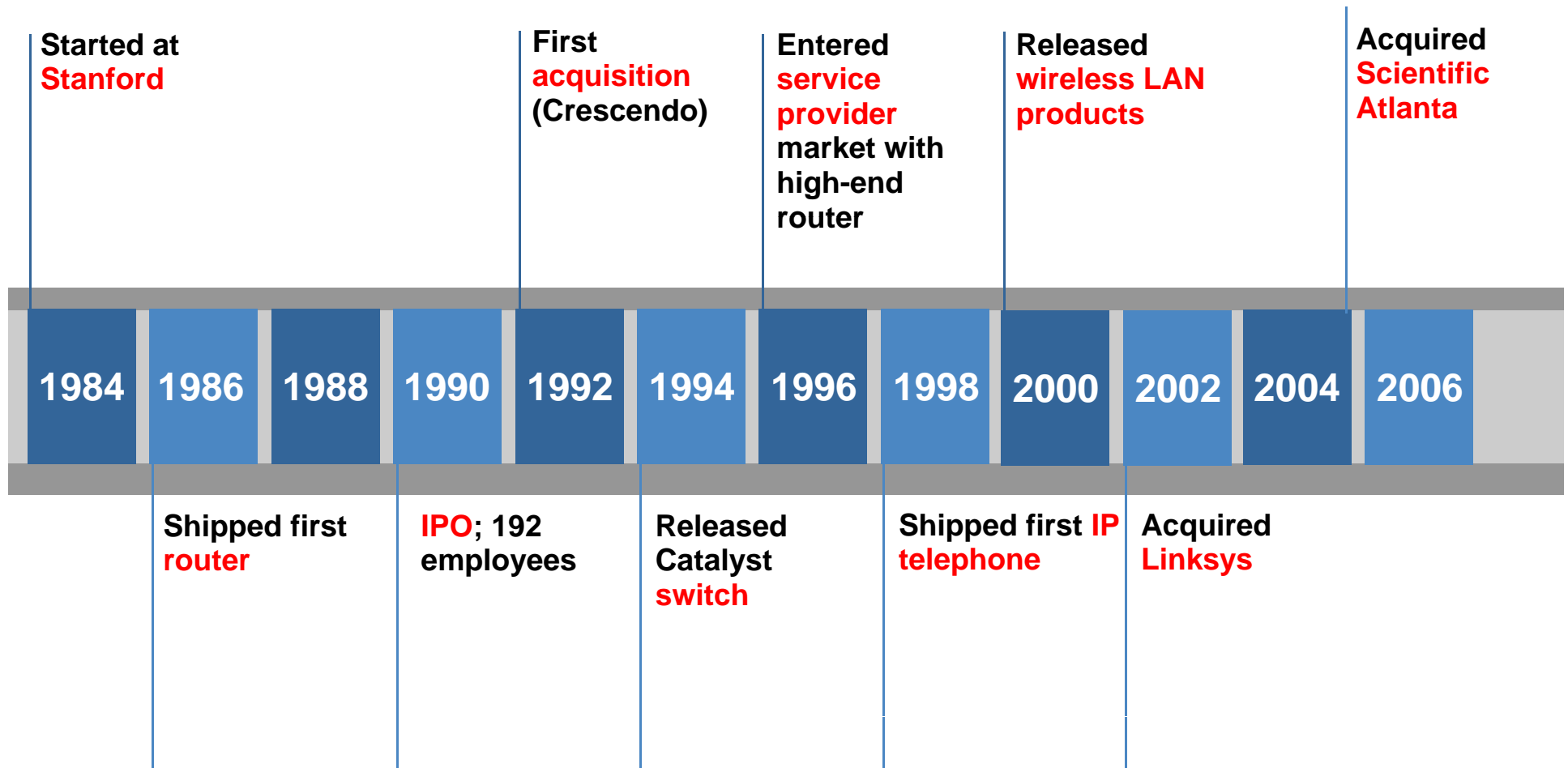
- Introduction to Cisco
- China Research & Development Center
- Investments
- Trademark (counterfeiting)
- Standards (AVC, wifi)

# Introduction to Cisco



Subtitle

# Innovation Evolution



# Cisco Worldwide



- 2006 revenue: \$28.5B
- \$3.22B spent on R&D
- 49000 employees in 77 countries
- 40% Engineering/IT, 30% Sales, 30% all others
- > 1,100 issued patents

# Introduction to Cisco

- Network is the focus, but increasingly diversified
  - High end routers, switches
  - Networking and security software
  - Home networking, entertainment devices
- Increasing consumer focus
  - Linksys, Scientific Atlanta



# Cisco in China

- Huge market
  - 1.3 billion people, GDP growth 7-9%
- High technology adoption
  - Broadband easier to obtain in many Chinese cities than in US
  - Innovative technology efforts
    - CERNET – tens of millions of users, often 90% utilization
    - IPv6 network funded by government
- Still many challenges
  - Still immature and emerging (GDP/capita: US\$1,728 in 2005)
  - Huge investment to raise China to developed countries level

# China Research & Development Center (CRDC)



Subtitle



# CRDC Mission

**Localize** existing Cisco products



**Design**, develop, test and support  
Cisco products sold worldwide

Maintain **close relationships**  
with government and  
academia

# CRDC History

- **Sept '04 – Cisco announces \$32M investment establishing CRDC**
- **Jan'05 – Est. 2<sup>nd</sup> Shanghai Branch of Cisco Systems (China) Networking Technology Co, Ltd**
- **Jan'05 - First local staff hired**
- **Aug'05 – Est. Cisco Systems (China) R&D Co, Ltd**
- **Aug'05 – Move to Shanghai Caohejing Hi-Tech Park**



# CRDC Overview

- Diversified development activities
  - Even division between hardware and software development
  - More design-oriented (versus maintenance)
  - Bottoms-up approach towards selection of development projects
- Continued strong growth
  - Currently 360 employees, doubling each year
  - Hiring rate impossible in US
- Wholly owned subsidiary
  - JV no longer required
  - Avoid technology transfer issues

# Benefits of China Development

- Engineering talent pool
  - China graduates more engineers than US
  - Attrition rate comparable to Silicon Valley
  - Still low cost relative to US
- Create governmental good will
  - Local government important for operations, enforcement
  - Central government connections important for sales, policy
- Proximity to manufacturing
  - Benefits hardware development

# IP Protection Issues in Development

- Generally

  - Distinguish counterfeiting vs. leakage in operations

  - IP risk not necessarily greater than elsewhere

- Protection

  - Address cultural issues through education

  - Need to know access

  - Partition IP based on sensitivity

- IP law uncertainties

  - Moral rights can't be waived

  - First to file regime for patents – favors local companies

## Other Challenges

- Management pool developing
  - Expats higher percentage of managerial team than individual contributor level
- Strong executive sponsorship essential
- Export Control
  - US – may restrict what technology you can bring to China
  - Chinese – requires enumeration of what sub will do
- Incorporation in China expensive
  - Up to \$60K

# Investments



Subtitle

# Overview

- Lots of optimism in China
- Innovation, but not yet technology-based
  - Successful ventures based on business model, not core technology
  - Relationships often important
- Significant increase in number of deals across the board
  - More funds actively investing in China market
  - VCs are under pressure to invest, resulting in more but smaller bets
  - Competition leads to more earlier stage investment

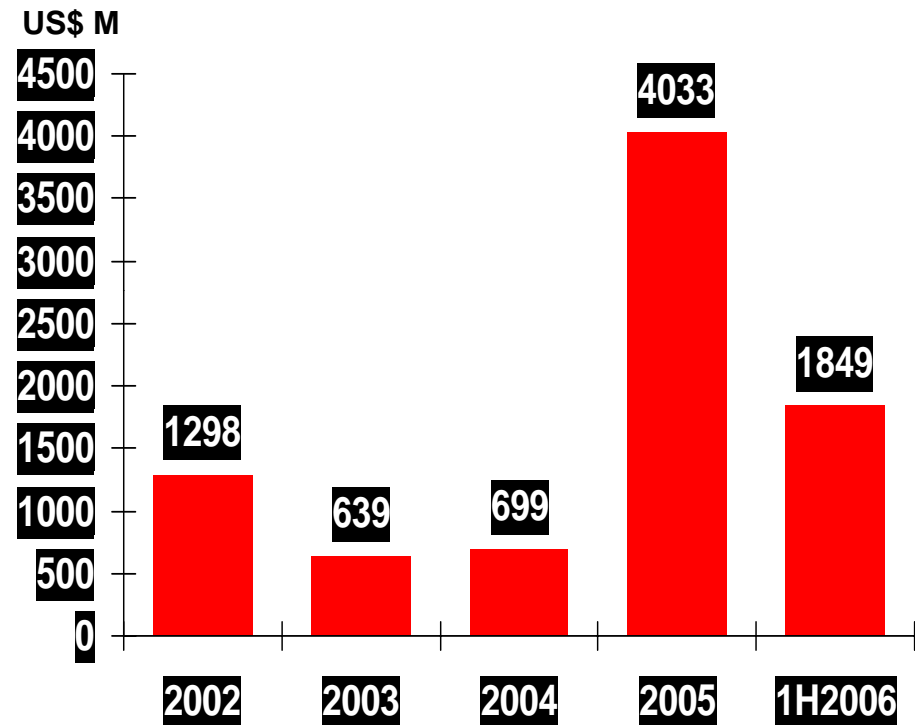


# China Venture Environment

- VC market still very early stage (4 years of history)

Data still incomplete and trends difficult to define

- Fundraising peaked in 05 post successful 2004/2005 exits
- Supply outpace demand
- Not much visibility on exits
- Increased M&A activities



## Slide 17

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CSI 1

What are the units?

What are the exits?

Are returns going to be diminished by the level of investment?

Cisco Systems, Inc., 9/26/2006

# Cisco's Activities

- Cisco is strategic investor
  - Market learning, technology, demand driver
- Primary focus on gaining market learning
  - Increasing M&A presence in China
  - Existing direct, indirect investments
  - Understanding special features of investing in China

# Trademarks



Subtitle

# Background

- Hardware counterfeiting and software piracy: challenges for every tech company with global brand

Software piracy tends to be dispersed worldwide, hardware counterfeiting concentrated in manufacturing centers

Counterfeit/pirated products sold around the world

- Consequences

Revenue impact

Dissatisfied customers

Increased support cost

# Addressing Counterfeiting

- Prevention

  - Support – identifying counterfeits

  - Holographic labeling of components

  - Selection of reputable manufacturers

- Enforcement

  - Cisco participates in industry and US-govt encouraged effort to train local police enforcement on identifying counterfeits

  - Shenzhen and Guangdong anti-counterfeiting police groups

  - Generally, good cooperation, including criminal prosecutions

# Standards



Subtitle

# Standards

- Standards important to interoperability
  - Encourages rapid development
  - Ideally, benefits IP holders and IP users
- Issue of great interest to China
  - Desire to understand how the system works (industry)
  - Desire to understand how governments use standards to benefit local industry (government)
- China has top-down approach towards standards
  - Compare with US – mostly bottoms-up
- Participate in international standards or focus on domestic-only national standards?
  - US has many national standards, in telecom we often bring them to international bodies to encourage interoperability



# AVS Forum

- Driven by negative DVD industry experience
  - Fledgling industry forced to pay royalties to patent holders
- Consortium to create new video compression standard
  - Participation includes major international companies (Sony, Phillips)
  - Currently focused on domestic markets
  - Wuxi suing Phillips for antitrust violations in San Diego
- Advantages in creating standard
  - Huge internal market
  - Dominant manufacturing base
- Components
  - Patent Pool
  - Standard

# WAPI Standard

- Wireless Authentication and Privacy Infrastructure
  - Wireless security standard
- Promoted by Chinese government
  - China announced in 2003 that WAPI mandatory in China
  - Encryption algorithm provided only to 11 domestic companies
  - Foreign companies required to obtain license from domestic companies
  - ISO has rejected WAPI
- Concerns
  - License cost
  - Technology disclosure

## Q and A



