Presented to:

APEC INFO SUMMIT MEETING

CHINA TELECOM REVOLUTION

A ROAD to BROAD BAND STRATEGY

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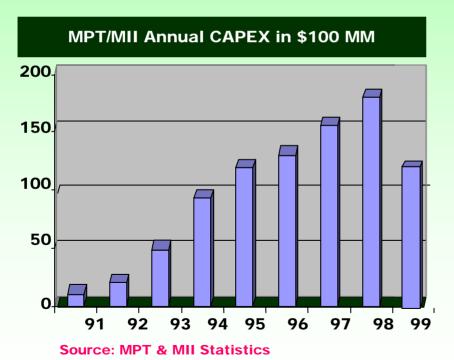
NOVEMBER 17, 1999





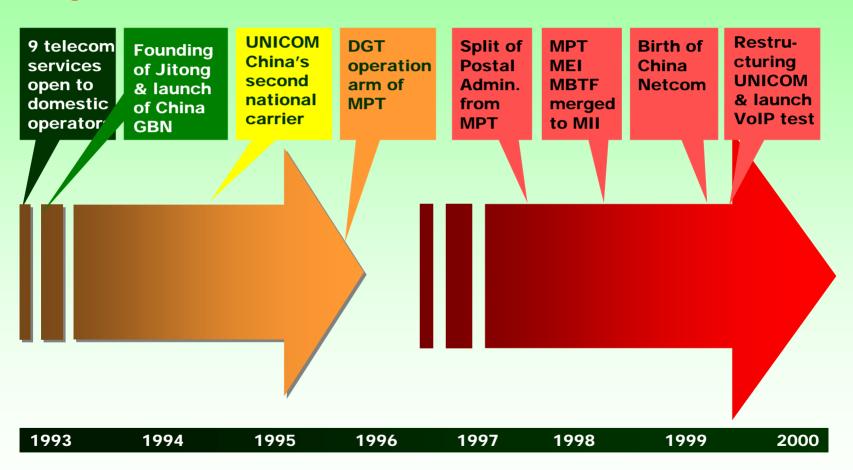
Economic Growth & Heavy CAPEX

- ▶ A decade double digits growth and survived 7-8% facing Asian crisis
- ▶ CAGR 50% & 30% in the past 8 and 5 years respectively
- ▶ Big drop in capital investment according to MII statistics in Sept.,99
- ▶ Telecom investment accounts for 6.1% of GDP versus the added value it creates contributes 4.9% to GDP growth in 1998





Deregulation Process





Technological Advancement

- Switching technology
- > Transmission technology
- Wireless communication technology
- Data communications, packet and IP technology
- CPE & Terminal equipment

PSTN equipment (SPC) price erosion due to innovative technology, vendor competition and localized production

Digitized transmission technology-digital microwave, optic fiber and satellite-make it possible to upgrade legacy network Voice & data Terminal equipment

Lower cost
High capacity
High quality
High reliability
New Services
Easy provision
Legacy bypass

PBX/PABX/KTS

Wireless technologycellular(TACS/GSM/CDMA) trunk radio, paging, VSAT, WLL bring easy entry for competitive operators

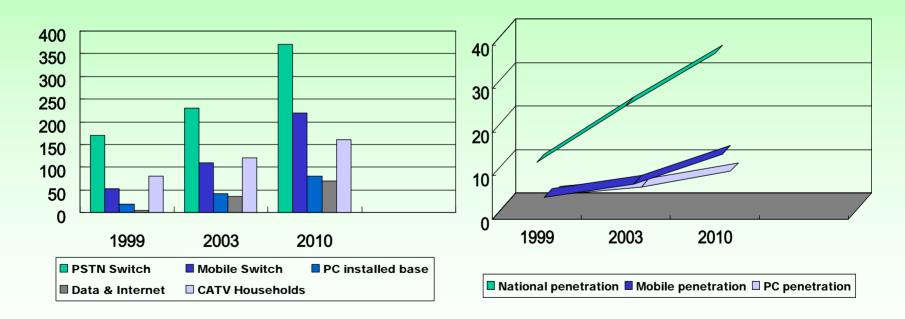
Data communication technology-packet switch DDN, frame relay, TCP/IP, Internet, & other LAN/WAN solution-makes the first 2 in 1 convergence





Major Forecast

- MII set 10 years long term target for fixed & mobile voice
- ▶ Deploy SDH/DWDM/ATM backbone to merge voice and multimedia
- Data subscribers & market growth will grow at a CAGR of 60-80%
- > Further deregulation due to equal access demand and WTO entry



Source:MII & BDA forecast



Positive Drivers

Re/Deregulation

China Telecom Law
Spin-off of telcos
Equal access
Competitive environment
Privatization
Direct foreign equity

Technology

IP/SDH/ATM/DWDM
Gigabit routing switch
Gigabit Ethernet
HFC/XDSL/LMDS
GPRS/CDMA/3G
Lower equipment cost

Demand

Recovery in Asia
Sustained 7% growth
Government spending
SOEs restructuring
Competitive edge
E-biz & E-commerce
Lower tariff & cost
Internet consumer wave

Supply

High-tech investment
Domestic venture capital
Restructuring Unicom
Entry of new players
Consolidation of ISPs
New service & biz model



Negative Barriers

High marginal saving propensity
Low capital investment
SOEs fail to be streamlined
Continuous depression
Low entrepreneur morale

Vertical monopoly by sectors Cross-subsidization Equal access not enforced Re-regulation postponed



Immature capital market
Hostile competition & tariff
erosion
Negative effect by CCF
Incumbent's inertia to change
Near term cash flow pressure

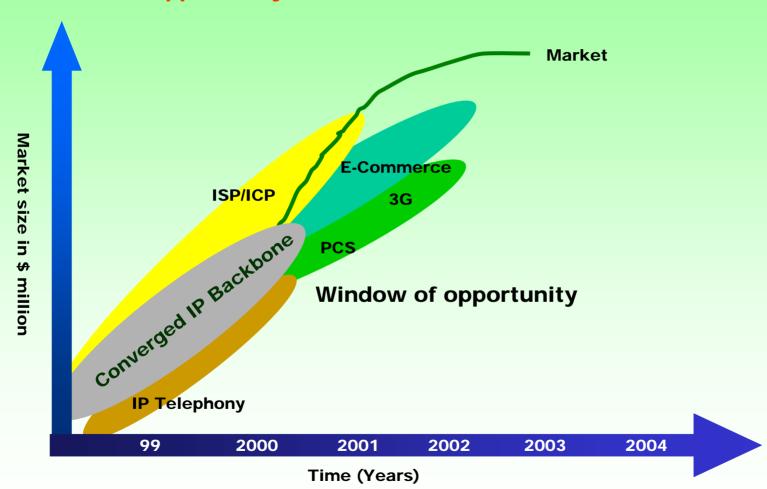
Technological dilemma(ATM)

Near term & long term solution
Incumbent's care of legacy asset
Interconnection & interoperation
Competitive QOS & provisioning



Opportunity For Start-Up

Window of Opportunity

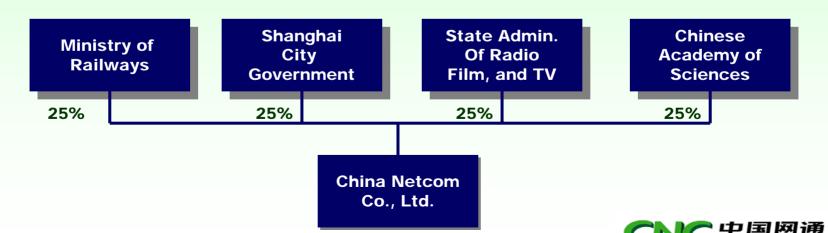






Existing Shareholders & Structure

- Chinese Academy of Sciences
 - → Technology, R&D and Internet backbone with biggest subscriber base
- Ministry of Railways
 - → Nationwide inter/intra provincial FO and ROW backbone
- > State Administration of Radio, Film and Television
 - → Nationwide FO backbone with most valuable last mile access broadband
- Shanghai Municipal Government
 - → Pilot municipality for intra-city FO access network infrastructure



Mission & Goals

- Become the leading independent developer and operator of converged telecom services provider in China
- ♦ Maximize return on shareholder's investment
- ◆ Provide role model for China's SOE reform by both technological and organizational innovation within an environment of knowledge based society and telecom deregulation
- ♦ Create a pool of talent for China's telecom industry in next decade



Environment

- ◆ Telecom deregulation and re-regulation expected to firm up in China before entering into new century
- **♦** Emerging convergence of telecom, computer and CATV network
- ◆ Voice traffic will dominate the market while data and Internet related business will be fully geared engine for growth

Privatization of state own enterprise sector, explore new way of management of human resources intensive companies

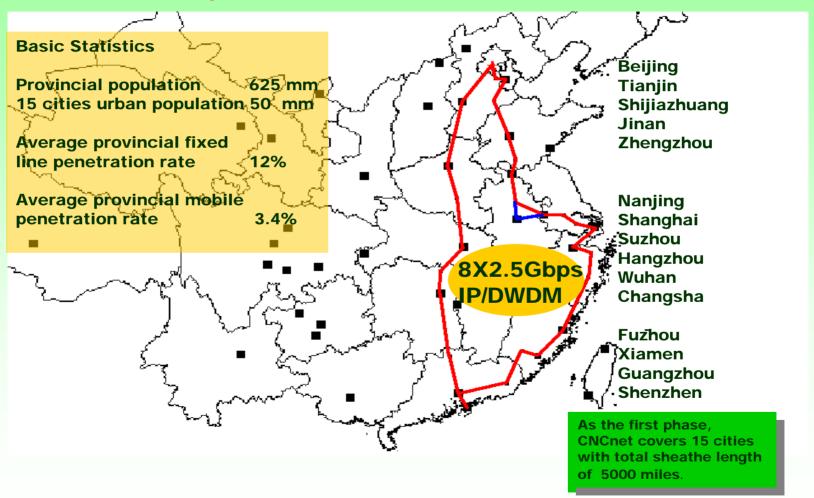


CNC's Business Strategy

- Build, own and operate a nationwide IP/DWDM fiber optic backbone network
- Build, own and operate commercial access networks in major cities of China
- Build, own and operate independent international gateway



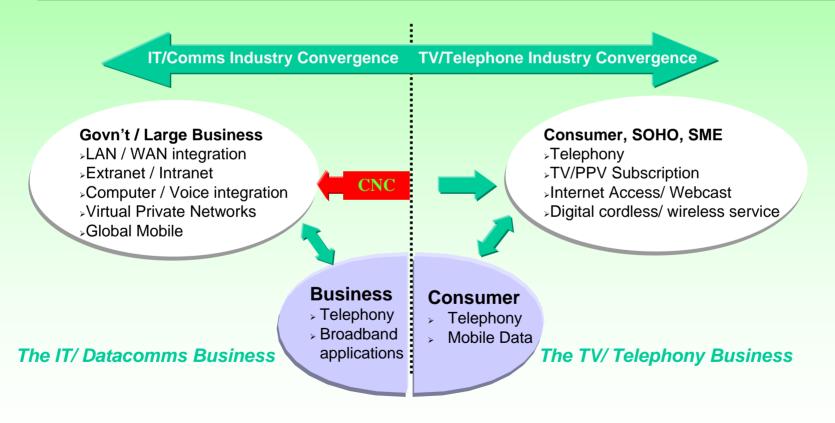
CNCnet™ Roadmap Phase I





CNC Business Model - B to B Focus

Radically different customer requirements combined with the potential for offensive and defensive FMC strategies will drive a much more focused approach to the market





CNCnet ™ Development & Marketing Strategy

> Rapid Deployment

- High population area
- High revenue area
- Launch VoIP for short break even

> Broadband Backbone

- IP over DWDM
- Fiber & Right of way
- HFC/Wireless for local access
- Partnership for expansion
- Capex matches customer growth

> Service Segmentation

- Carrier's carrier wholesale
- Backbone wholesale
- ISP wholesale
- Government & business clients
- Access platform/ISP/Host pooling
- SMEs/SOHO
- E-Commerce

> Target Business Customers

- Competitive differentiation
- Well defined services package
- Competitive pricing
- Focus on customer service

Develop Brand Awareness

- Tailored services
- Targeted advertising and promotion



Key Objectives of CNC in '99 - '00

Construct and operate local access networks in Beijing Shanghai, Guangzhou and Shenzhen for business customers

Complete deployment of 5,000 mile IP/DWDM backbone network and begin to provide broad band wholesale services

Start to offer trial VoIP service in 15 cities

Build up international gateway facilities

Nov.18,99

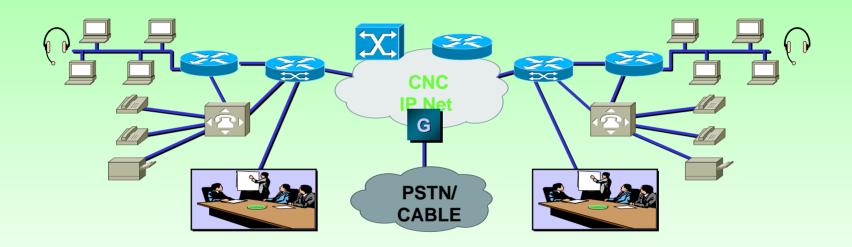
March 1, 2000

July 1, 2000



Network Concept

An Open Telecom Network for an Opened China



Provision of maximum value with a converged IP infrastructure

- The least-cost routing enterprise WAN
- On-Net and Off-Net toll bypass and tandem switch offload
- Integrated full services communications backbone

