

# *The Development of ZTE & PHS*

*Linqiang*

*General Engineer of PHS Handset*

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**ZTE CORPORATION**

## *Outline*

*I. Introduction of ZTE*

*II. The development of PHS in China*

*III. The Development of ZTE PHS Handset*

*IV. conclusion*

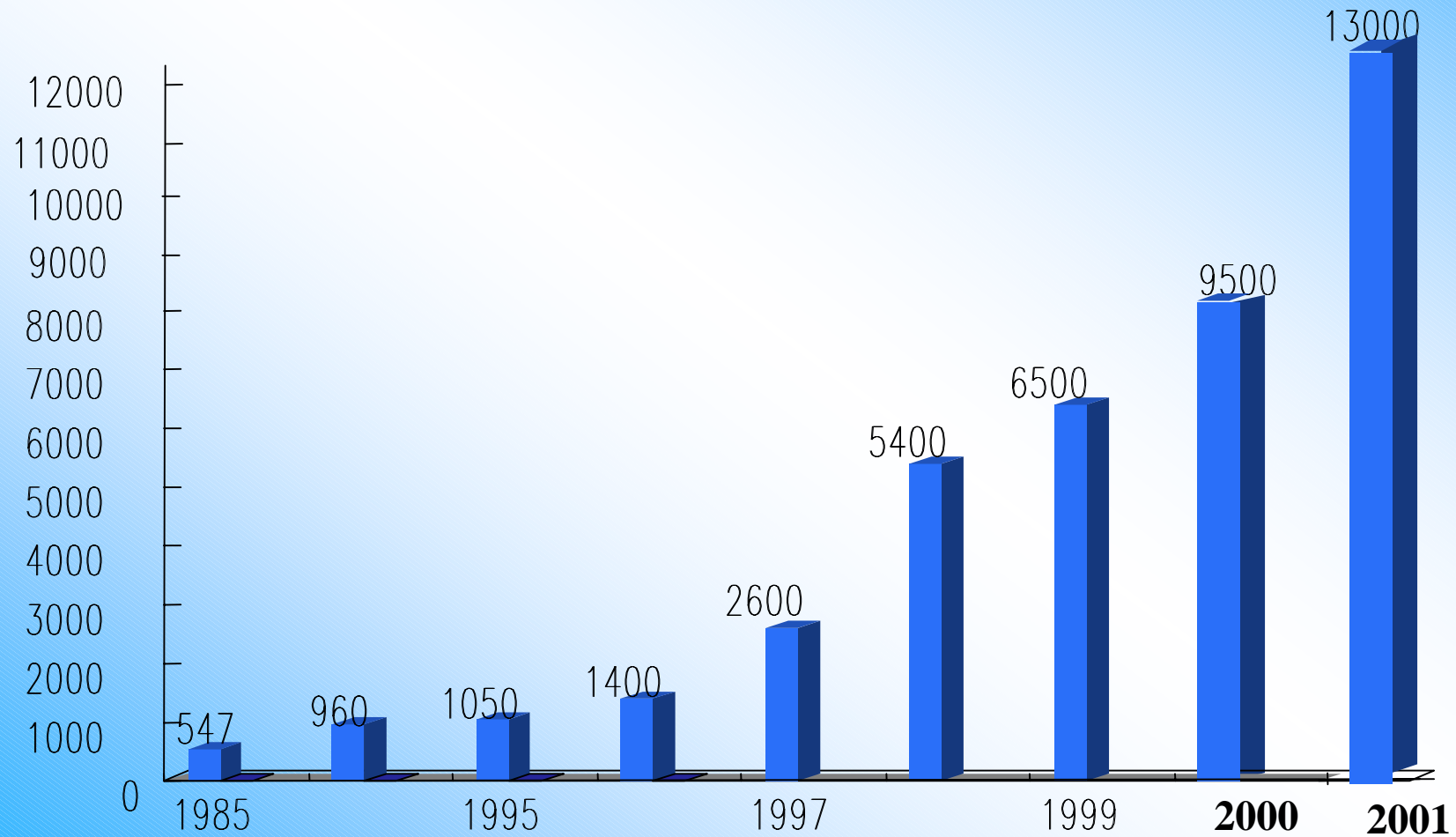
## 一、 Introduction of ZTE

### 1、 Main ideas:

- *With independent intellectual property rights, ZTE is one of the largest listed telecom manufacturer*
- *one of the 520 key state-owned enterprises acknowledged by the State Council*
- *ZTE A stock was traded at Shenzhen Stock Exchange in Oct, 1997.*
- *In 2001, the contracted revenue achieved 14billion RMB.*

## 一、 Introduction of ZTE

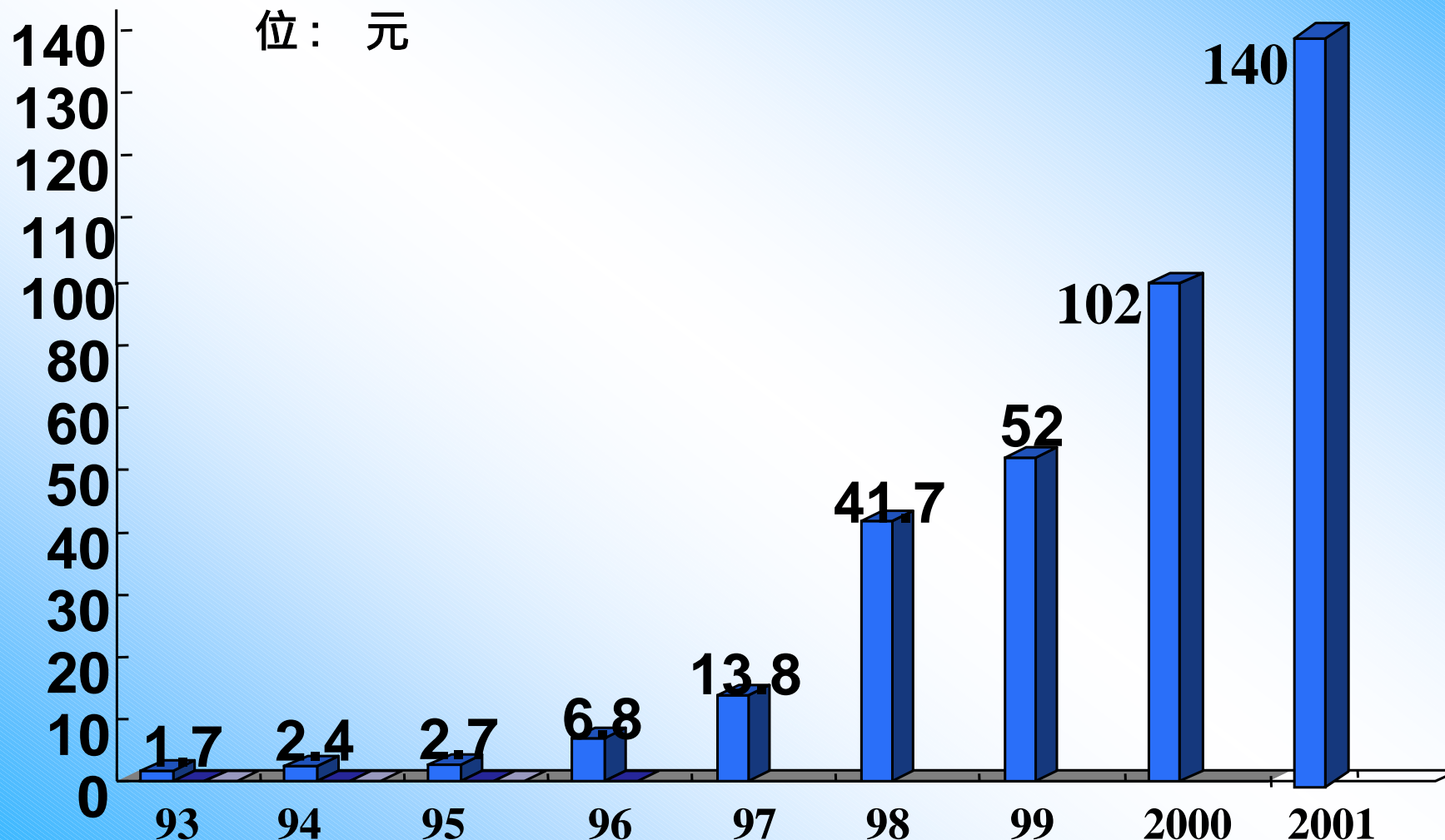
### 2、 The development of ZTE - Increase in staff



## 一、Introduction of ZTE

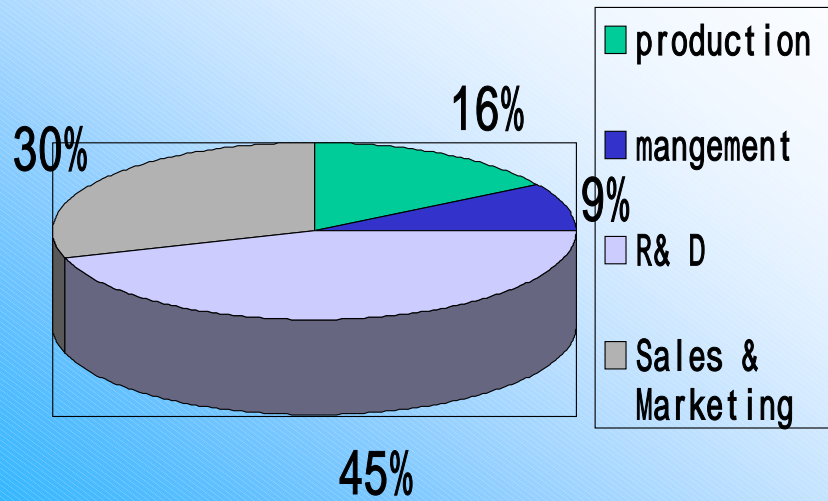
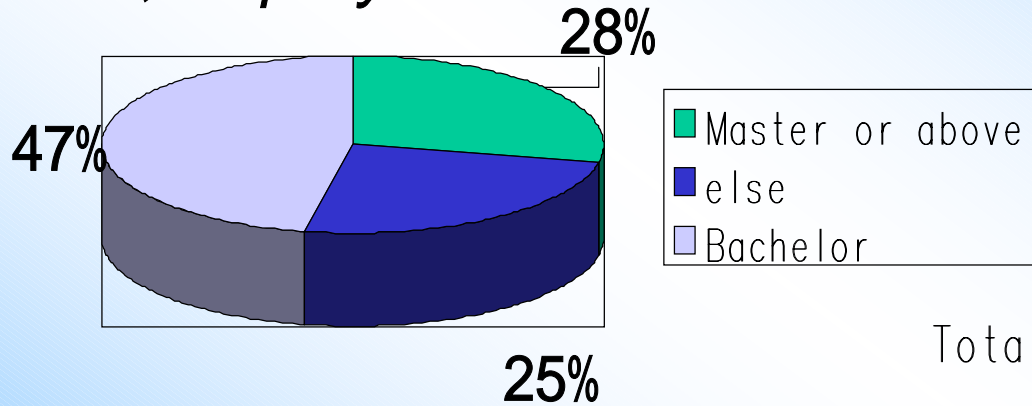
### 2、中通的展 —— Increase in revenue

位：元



# 一、Introduction of ZTE

## 3、employees



Total staff number: 13,000

Average age: 27

Doctor, post-doctor : over 300

Master : 3,700

Senior or middle key staff: 75%

Bachelors or above : 85%

## 一、Introduction of ZTE

### 4、Talents Strategy

- *Attracting talents with good treatment and career prospect*
- *Fully exerting talents with belief and performance approval*
- *On-Job Training for future challenge*

## 一、 Introduction of ZTE

### 5、 Research and Development

*R&D Institutes .*

#### **1 Shenzhen R&D Institute**

*Set up in 1986, mainly engaged in research and development of SDH transmission series, videoconferencing system, telecom power supply, centralized monitoring system, automation of electric substation and production testing equipment.*

*2. Nanjing – engaged in switching system, data network, network value-added service products and network core equipment*

*3. **Shanghai R&D Institute I** - set up in August 1994; mainly engaged in research and development of access network .*

#### **4. Shanghai R&D Institute II**

*Set up in July 1997; engaged in research and development of mobile communication system.*

#### **Beijing R&D Institute**

*Set up in October 1998, engaged in research and development of WDM and new generation of optical transmission system.*

*6. **Xi'an R&D Institute** - Set up in April 2000, engaged in research and development of wireless communication technology.*

## 一、 Introduction of ZTE

### 5、 R& D Institutes (continuous) :

6. **Chongqing R&D Institute** - et up in September 2000, engaged in research and development of intelligent services and network management products. .
7. **Shenzhen TI-ZTE DSP Joint Lab** -Set up in September 1998, engaged in tracing and introducing the latest DSP technology and training R&D presonnel.
8. *American R & D Institute . In Silicon Valley, New Jersey and San Diego, three American research carters are responsible for New technology tracing and developing .*
9. Set up in July 1999, ZTE Korea FutureTel Co., Ltd. is engaged in the research of CDMA handset
10. **ZTE Post Doctoral Station** - Set up in November 1998; has presented 10 R&D projects and come to over 20 cooperation agreements with key universities and domestic research institutes.

## 一、 *Introduction of ZTE*

### 6、 *Total Solution Products*

ZTE Corporation is China's largest listed telecommunications equipment manufacturer specializing in providing customized network solutions for telecom carriers worldwide. The company develops and manufactures telecommunications equipment for fixed, mobile, data and optical networks, intelligent networks and next generation networks.

ZTE currently owns some 700 patents, with more than 87% of these being original innovations.

## 一、 Introduction of ZTE

### 7. Development Strategy :

- *Total “Mobile Solution”*
- *GSM. Intelligent Network→GPRS→3G.*
- *CDMA. IS-95A→CDMA2000 1XRTT→CDMA2000 3XRTT*
- *IMT2000. CDMA2000+WCDMA.*
- *PHS: PHS + Mobile Switch→Valued Added Service→WPCS*

## 一、 *Introduction of ZTE*

### 8、 *International Strategy*

*As the international telecom network solutions provider, ZTE provides telecom system equipment, engineering installation, network maintenance, service development, technology support and training for network operators*

*ZTE provides timely and efficient services for customers home and abroad through domestic and overseas marketing & engineering network.*

*ZTE offers support for customers through cooperation agency, engineering contract, network optimization and financing service etc.*

*Cooperation on International Technology and Investment*

## 二、 *PHS In China*

Since 1999, PHS system was commercially applied in China. After 4 years development, the network scale increased rapidly. By latest resources, except for Shanghai, Beijing, PHS has been covered all the provinces with 20 million lines capacity, the subscribers were over 15 million. It's expected that in 2003, the new-added capacity will be over 10 million lines .

Now, China telecom and China Netcom are two big operators to provide PHS services in China. PHS is also called as Wireless City Phone.

Three major equipment providers are Utstarcom, Lucent (China) and ZTE CORPORATION.

## 二、*PHS In China*

As one of the three major providers, ZTE provided their ZXPCS personal wireless communication system based on PHS technology in 1999 and the first 100,000 lines was successfully on market that year.

Up till now, ZXPCS has been applied in more than 120 municipal cities, with over 9 million lines of the total network capacity, spreading in those provinces such as Guangdong, Guangxi, Fujian, Guizhou, Hunan, Jiangxi, Anhui, Sichuan, Hebei, Shandong, Qinhai, Inner Mongolian, Liaoning, Jilin, etc,

## 二、PHS In China

Some recent application examples :

1 million lines in Anhui province (with 17 municipal cities including Hefei, Anhui province capital city) ; Jilin ( 300,000 lines in Changchun, 200,000 in Jilin city) , Guangzhou City (1.3 million lines), Hunan Province( 1 million lines) are on construction.

In few cities, the scale of network construction even surpassed that in Tokyo. As to total amount, China has exceeded Japan, as a Japanese friend said,

*PHS was born in Japan, but it grows up in China.*

## 二、*PHS In China*

In China PHS positioned its markets on most popular groups. Those users like as the base of pyramid, stable and loyal, who motivate the sustaining development of PHS.

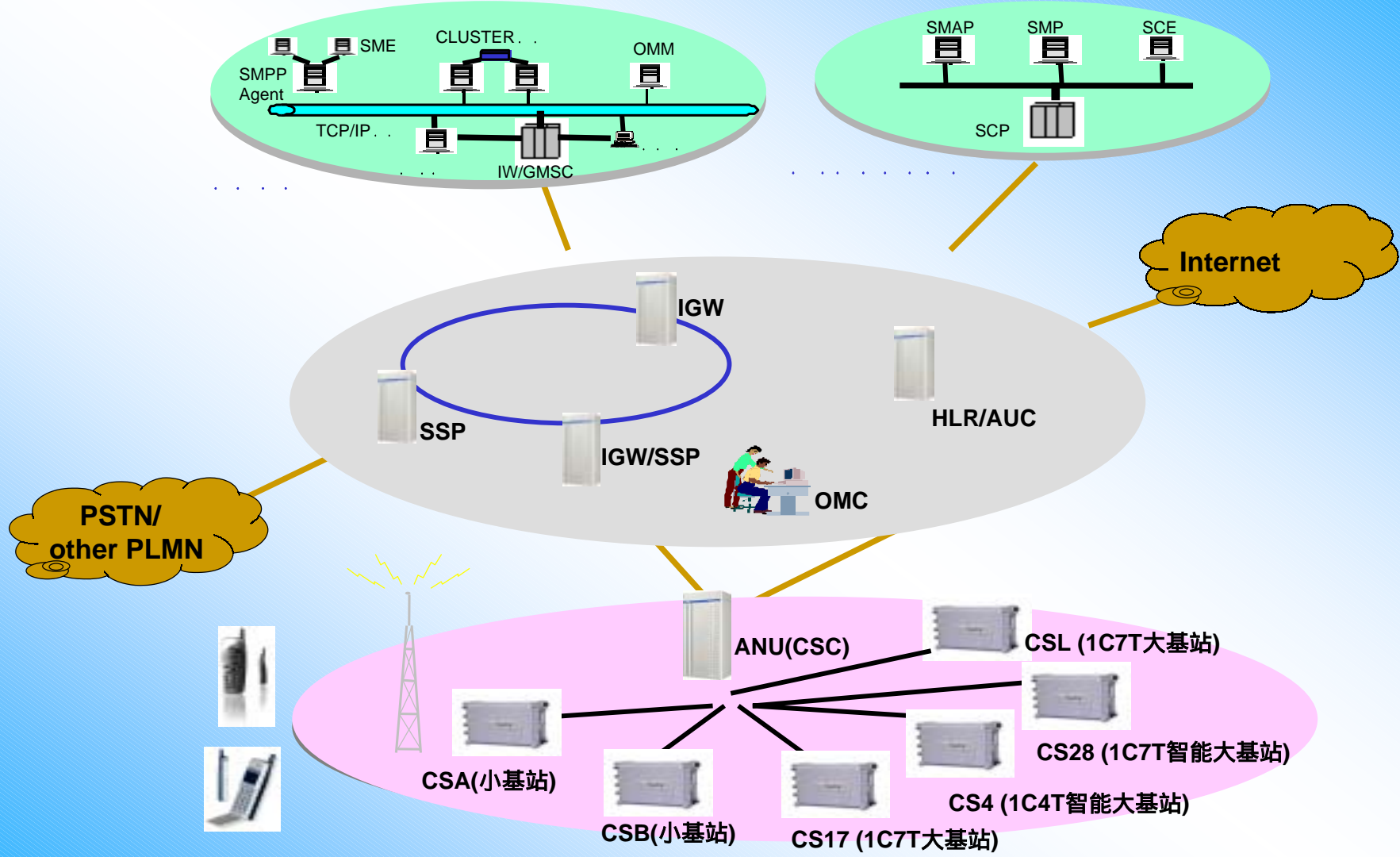
Due to the rigid investment management of operators, PHS features low network investment and rapid return. Average speaking, it's possible for operators to take to pay back their investment within 2 years.

## 二、 *PHS In China*

Former PHS system adopted V5.2 signaling interface of access network. Gradually, since the different understanding of V5 protocol limited the new services for PHS , so it became a must to update the system. 。

In the earlier 2002, ZTE developed a switch system which was based on V7 signal with M.A.P mobile applied protocol. A system with 600,000 lines only need two coding points (one is from HLR , the other distributed by system), it facilitated the implementation of new services and applying in big cities. In 2002, ZTE upgraded some earlier fields and got good responses from our customers .

## 二、PHS In China



## 二、*PHS In China*

As a pivotal PHS system provider, ZTE will keep on our pursuit of developing PHS technology , providing satisfactory service for our customers and strengthening cooperation with the operators and partners everywhere.

### **三、 *The Development of PHS Handset***

Market:

#### **➤ Market Share of ZTE PHS handsets :**

**Add up to 2 million sets since 1999**

**1 million set (estimated ) shipped in 2002, occupying about 10% or above of market share in China**

**Currently, nationwide capacity is up to over 22 million, subscribers are over 10 million.**

### 三、 *The Development of PHS Handset*

## Goal of 2003

- Order goods : Over 3million sets
- Shipping goods : 3 million sets ,
- Market Share in 2003 :  
30%

### **三、 *The Development of PHS Handset***

## **Service:**

- 1. Voice service of the fixed telephone calling the portable set (PS)**
- 2. Voice service of PS calling the fixed phone**
- 3. Voice service of PS calling PS**
- 4. PS calling DDD, including IDD**
- 5. Emergency call service**
- 6. Special services (call forwarding busy, call forwarding no reply, call transfer, call waiting, call hold)**

### 三、 *The Development of PHS Handset*

## Service:

7.Data service

8.Paging service

9.Short message service

10.Billing (referring to the new value-added services unrelated with LE)

11.Roaming billing between modules

12.Call limitation related with billing, i.e. intelligent billing (prepaid service)

13.Calling number display (this service needs the user to register. To be provided.)

### 三、*The Development of PHS Handset*

New Model 1: C218 (with Kyocera)



### *三、 The Development of PHS Handset*

New Model 2: **fashionable A268、 A268+**

- ✓ **With Big Folder : 75 × 41 × 23mm**
- ✓ **Large LCD , Chinese display : 128 × 96 lattice**
- ✓ **Scene modes**
- ✓ **SMS ( only A268+)**
- ✓ **Li-battery with large volume**
- ✓ **Large capacity Phone book**
- ✓ **Vvibration 、 Clock 、 Alarm 、 Auto turn off / on**

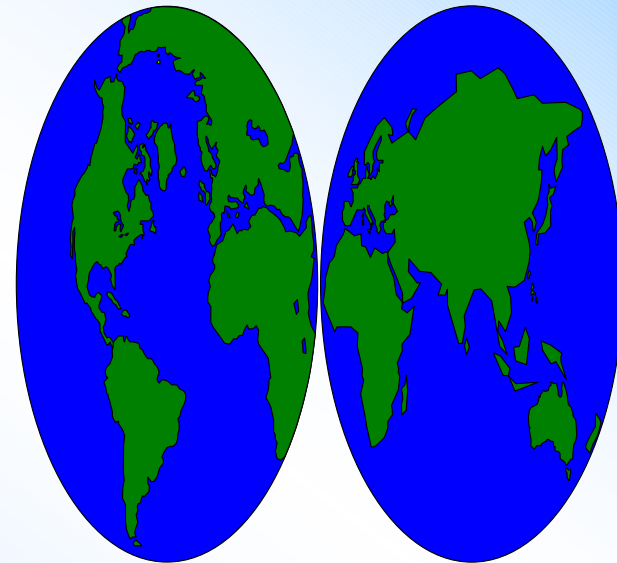


## 四、Conclusion

### *Developing 21<sup>st</sup> Telecom Industry Hand in Hand*

Thanks to the great support from governments and our partners, by unremitting efforts of our staff, ZTE managed to exploit some successful modes in R & D, manufacturing and purchasing, etc.

With the global integration of economic and technology, ZTE also focuses on the international strategy, so we sincerely expect further cooperation from our friends, home and abroad. We believe PHS will have more prosperous future through our concerted efforts .



# THANKS!

