



# Telecommunication Roadmap

By CK Wong 2006.04.12

<http://www.ck-wong.ca/China/telecommunication%20roadmap%2020060412.pdf>

## Introduction

Twenty years ago, in mid 1980's, with the open door policy, China started import telecommunication equipments. With very limited foreign exchange, the evolution to the digital switch was slow. This unexpected hindrance created the biggest advantage for this sleeping dragon. It leaps forward bypassed the complete digital voice switches and leap forward to the wireless. Let's imaging what would be the next step of China's telecommunication evolution.

## Telecommunication Progression

All began with wire. The cable was relying on a single copper wire next to the railway. The Moss code ruled most probably half a century before Maconi invented the wireless cable. Then there is Alexander Graham Bell's phone. It took almost three quarter of a century to evolve from what was called the analog telephone switch to the stored program digital switch. The progression was slow because the investment was huge and the technologies were complex. Bell in Canada and in States spent unheard hundreds of millions (then money equivalent to trillion now) to create the infrastructure and the undersea cables around the world to complete the world telephone network. Satellite joined the network. But the 11 year sun spot knocked out the communication satellite periodically makes the satellite unreliable in some way. Nonetheless we were all land bound until the first wireless phone.

## Chinese Version of Progression

With the growth of the business and industry in China, the demand on phone explodes exponentially starting the mid-1990. To satisfy the requirement one has to come up with the huge upfront capital to deploy the landline (that is the copper from the nexus to you home). A lot of wire has to be laid no matter anyone want it or not because it is ever economical unviable by doing one wire by one wire. Capital was not easily available at that time. Under such situation, the simplest solution is to avoid the wire as much as possible. It is no doubt that industry and business parks and modern residential areas will be equipped with wireline (copper or optical). The existing housing area (some of them would not even have the real-estate for underground or aerial wiring) for the wireline phone. The result promotes the adoption of wireless phone in China in urban and rural area.

Further to the complexity, the west, the south west, the northwest are low population density even in Western standard. The wireless phone again comes to help.

## Services

Other than voice communication, SMS is a better service than voice because it is visual, it could intermixed with graphic (the emotion icons), and it could provide real-time and non-real-time communication. It has the lower overhead (i.e. addressing) than email and best for the young people. The single child policy has created a new noble class. The parents offer best and most to these prince and princess (much less). So the wireless device becomes a very large piece of jewel. The tycoon in the business world learned the power of email. A hand held PC is their proud jewel. After office time, the huge Chinese chat and blog community further accelerates the growth of the hand held devices. Once you have a wireless hand held device, you can kiss your cellphone good bye because the CPU is so powerful that it could do phone and mail functions. This created a vicious circle to feed the demand and supply.

Palm, Treo or Blueberry are mature technology. They are not high tech anymore because the memory is abundant and CPU is fast, specialized hardware is reduced to be minimal. Everything is either in software or firmware (still a specialized software). I have not check the origin of these palm PC but very possibly that all assembled in China. So it would not be surprise to see the push mail service RedBerry (China Unicom's version of BlackBerry service which is offered by China Mobile).

## Strong Sign of Huhg Consumer Market

The RedBerry does not make a milestone in the telecommunication industry. We should see it as the mature of the China consumer market on electronic, merchandize business and online transactions. For that 1.2 billion population, a 1% take-on of the service will mean 12 million users. This device will in time replace the 400+ million wireless subscribers which keep on growing.

I could not find the price of the RedBerry device yet. However, according to the CTV news report, the monthly service charge would be \$1. This has two very strong implications. First when Motorola, Nokia, Palm and RIM try to penetrate the Chinese market, the product has to be lower than the RedBerry. The price of the hand held is about 30-40 times of the monthly charge, I would be surprise if the RedBerry is more than \$100. Without any further product description, I could not say the price is high or low. If it is a hand held web browser (i.e. a NetPC), it is not a bad price. Most of the other scheduler, Microsoft Office suite functions are just not needed if the server can offer the equivalent. The NetPC model has a significant meaning. With all the free service offered by the web, who really need another cellphone. Skype for RedBerry will replace cellphone.

The second implication is that when the RedBerry leaves China, it could easily rule the world because of its low cost.