

The Development of TD-SCDMA

TDIA

April 27th, 2009



- **China 3G Market Overview**
- TD-SCDMA Latest Development
- TD-SCDMA to TD-LTE

CDMA2000 WCDMA TD-SCDMA



		New China Mobile	New China Telecom	New China Unicom
subscriber	Mobile (,000)	477164	4310	12543
	Fixed line (,000)	2100	21629	10870
	Broadband (,000)	500	3836	2212
	Mobile ARPU (,000)	82	53	44
	mobile WOU (,000)	481	238	242
Capacity	Base station (,000)	30	9	15
	frequency (,000)	320	24	80
	Mobile data	Whole GPRS, part EDGE	Whole CDMA 1X	GPRS in 221 cities
	Indoor coverage	300000	45000	53000
Spectrum	800MHz		15M	
	900MHz	19M		6M
	1800MHz	25M		15M

Strategy for 3G network construction and marketing

CMCC

- Deploy TD network in big and middle cities in the first phase;
- Promote TD market with deep customization and outside sales channel;
- Build convergence 2G and 3G network for better services;

China Telecom

- Start equipment purchase from last July;
- Deploy EVDO network in major cities;
- CDMA – EV – DO terminal centralized purchase for promotion;
- Provide mobile and fixed convergence services;

China Unicom

- Add 30billion RMB GSM investment in 2008
- Start WCDMA network planning in July 2008;
- Plan to finish the network construction in first half 2009;
- Marketing terminal with centralized purchase and outside sales channel;



- China 3G Market Overview
- TD-SCDMA Latest Development
- TD-SCDMA to TD-LTE

Rapid TD-SCDMA Industry Development



2002 MII specified TD spectrum
TD-SCDMA Industry Alliance was
formally established.

In 1998, TD-SCDMA was submitted to
ITU and was approved by ITU and
3GPP as one of the 3G mobile
communications standards in 2001.

2004 TD-SCDMA
industry was
basically formed

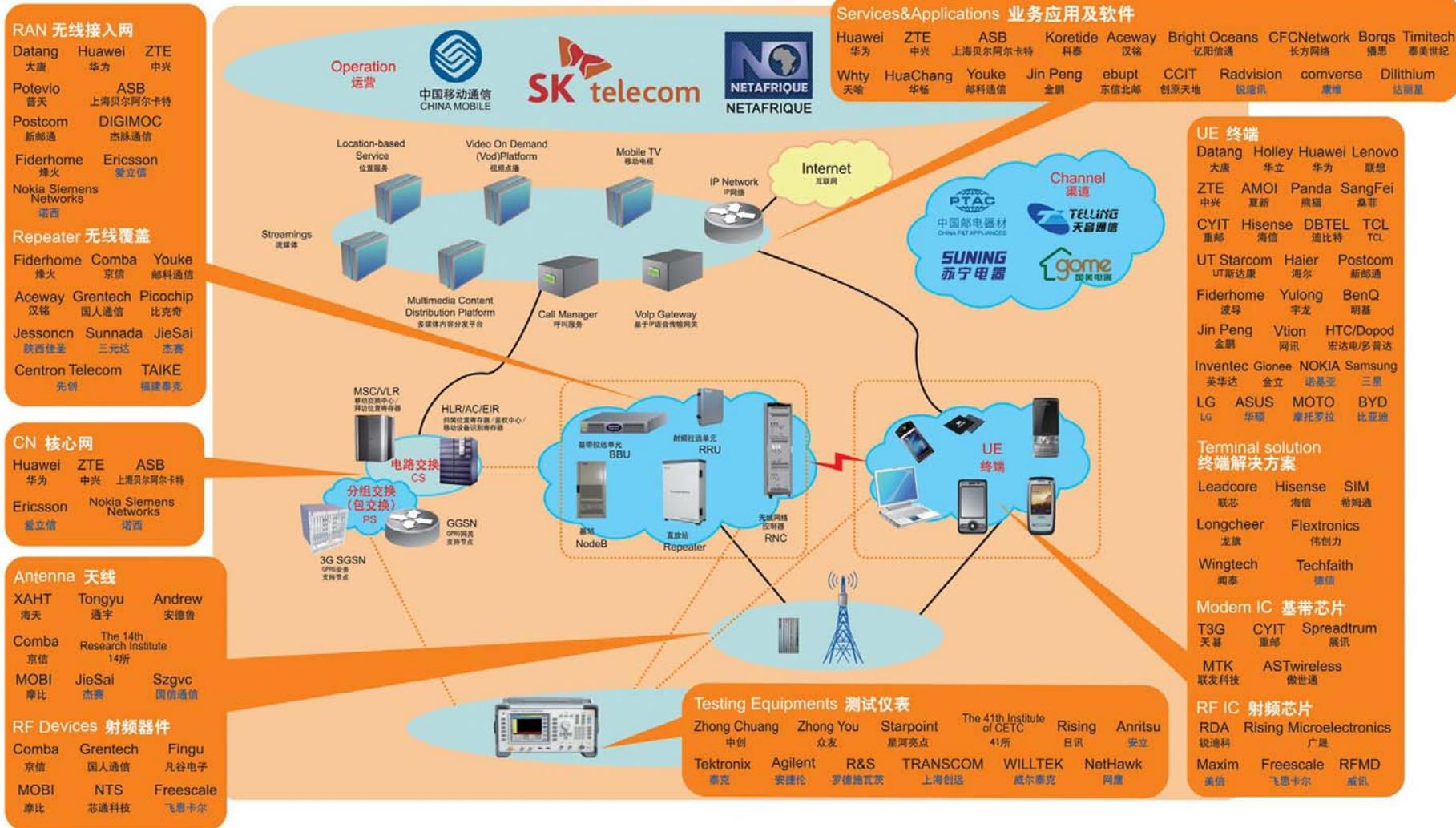
Mar 2007 10 cities TD
trial networks were
began to construct.

Apr 1st 2008 TD-SCDMA trial
use has been formally
launched in 10 Olympic
cities

2009 Commercialization
Aug-Sep 2008, TD
successfully served the
Olympics.



Mature Industry Chain of TD-SCDMA



TDIA members are the backbone of TD industry development

Various TD-SCDMA Terminals

By the middle of April 2009, there are already more than 94 TD-SCDMA terminals from 24 companies obtained the network access licenses issued by MIIT. This means the commercialization of TD-SCDMA is commencing in a large scale.

ZTE U85 / U980 / U981 / U860 / MU318
 Huawei S220 / S330 / S660 / ET608
 Datang DTM5722 / DTM5731 / TG1000 / TG2000
 Newpost N268 / N268a / N269 / N270 / H301
 Samsung L288 / i688 / H128
 LG KD876
 Moto L800t
 Philips TM700
 Dopod S700
 UT D60
 Vtion TG1906
 Changhong TG3288 / TG3188



CYIT TCN230
 Yulong 6260 / 6268
 Lenovo TD800 / TD900
 Hisense T66 / T68
 Amoi T5 / HS300
 Panda TD988
 Huali 8310
 TCL U398
 Longcheer TD290
 Haier T300
 Potevio CT8
 Yongsheng DD1



Implement the initial plan for TD services

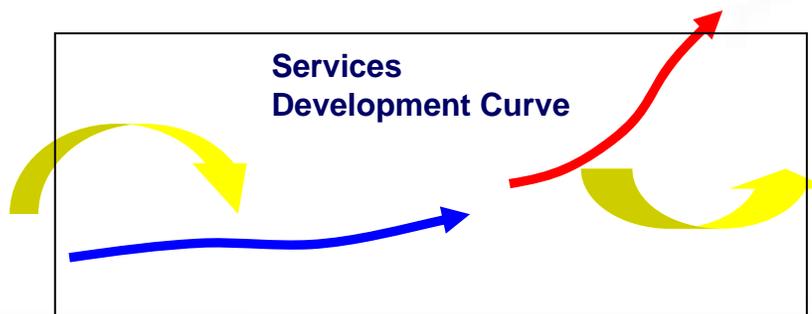
Special for
3G

Improve
users'
Experience

Satisfy users'
requirements

Categories	Specific Services
Specific for 3G	Video Call, Multimedia Download, Video Meeting, Multimedia Cellphone Ring, Video Message, Mobile TV
Enhanced services for 2.5G	Multimedia Message, Mobile Newspaper, Streaming media Services, PoC, Mobile Game, Music Download, Music Club, WAP, Mobile Search, Mobile Map, Mobile Navigation, Feixin, Mobile Mailbox, Push Mail and etc.
Identical Services as 2G	SMS, Cellphone Ring Download, Mobile TV, Mobile Purse, Mobile Pay, Mobile Stock, 12580 Information Hotline, 12582, 12586 Mobile Salon, 12590 Magazine, Weather Forecasting...

Marketing activities promote the increase in user number



The increase in users number will influence the market trend.

TD Successfully Served the 2008 Olympics



- TD-SCDMA has successfully met the goal of “Technology Olympic” and served over 10,000 subscribers.
- Serving the Olympics is the best opportunity for TD-SCDMA development and the services offered by TD are appreciated by users from other countries.

TD Terminals Favored Beijing 2008 Olympics Organization & Management



Olympic Committee Officers



**2008 Olympic
Organizing Committee Officers**



Olympic Working Staff

Beijing 2008 Olympics website mobile version, Olympic instant wireless information, POC, Visual Telephone , Video Conference, Vehicle Scheduling, Olympic SMS

Olympic Volunteers



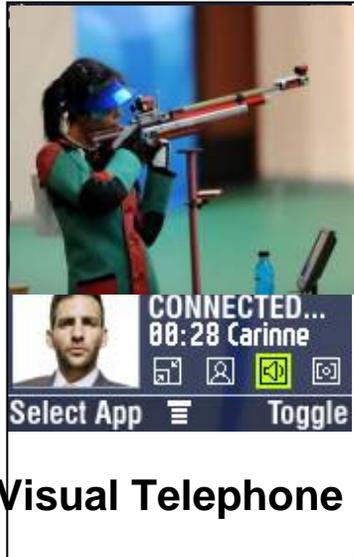
Olympic Journalists



**Policemen and
security guards**



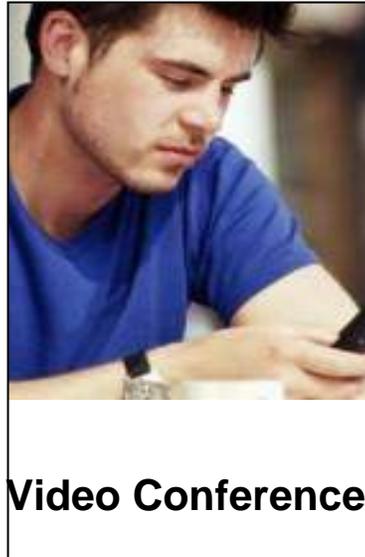
TD terminals distributed the Olympic information



Visual Telephone



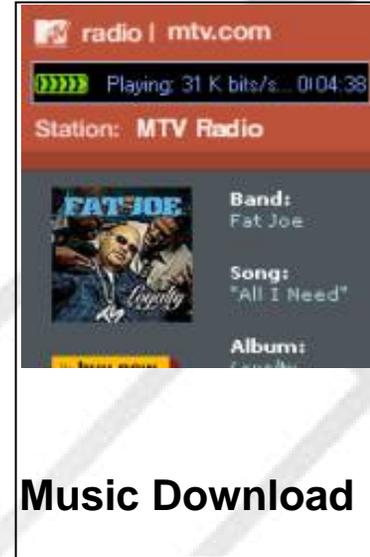
Website Surfing



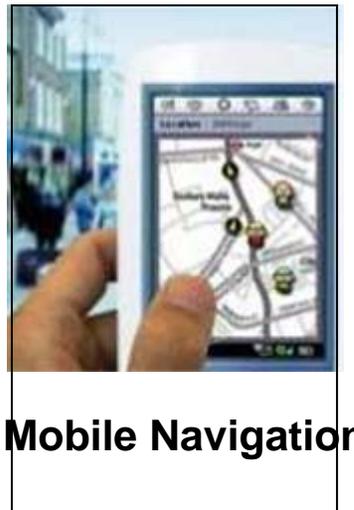
Video Conference



Mobile TV



Music Download



Mobile Navigation



Media Streaming



Reading and Editing



Olympic Information



There are huge potential in TD-SCDMA services!

Operator Actively Pushes the Development of TD industry

“TD发展，有我支持” “I Support TD”

CMCC has completed ten cities TD-SCDMA network construction and launched trial use.

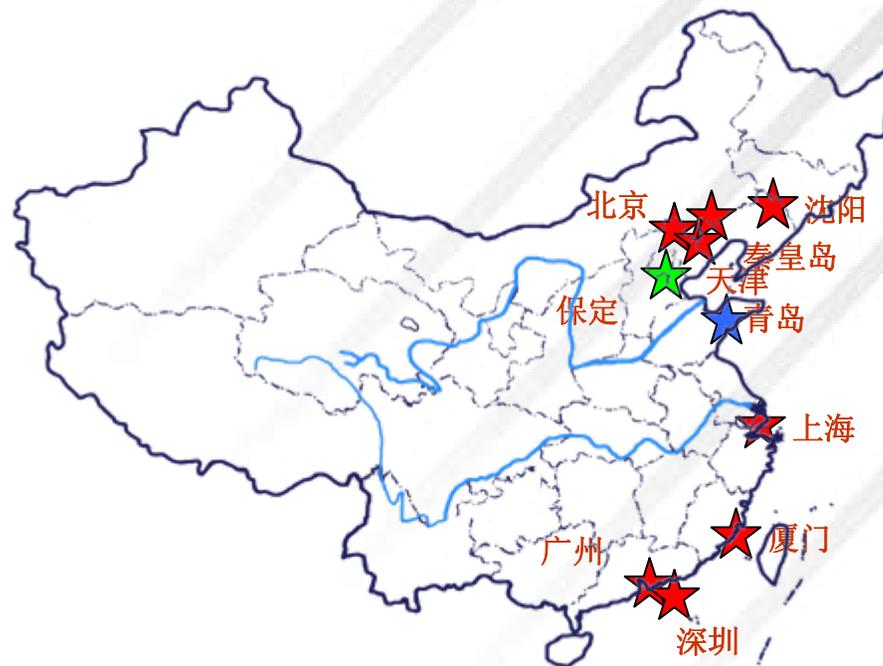


CHINA MOBILE
TD-SCDMA

TD发展 有我支持

TD-SCDMA社会化业务测试及试商用正式启动

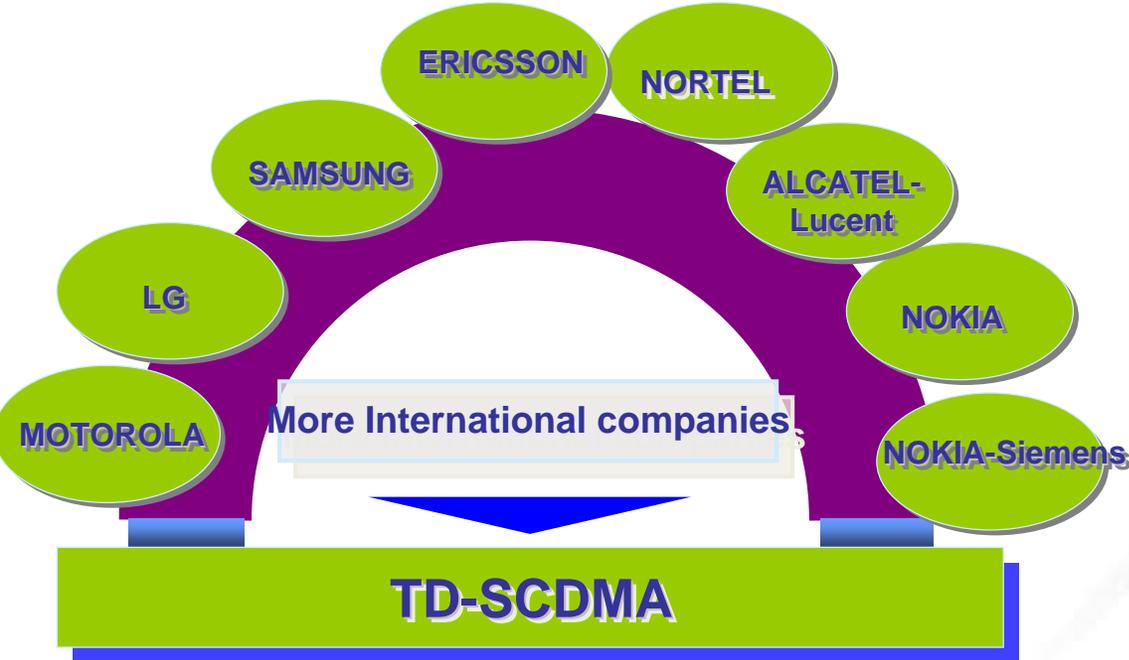
一个振奋人心的时刻，现已到来，请您莅临。
一直以来，中国移动都为承担TD试验网任务不遗余力，全力推动TD产业的发展，
2008年4月，拥有自主知识产权的TD-SCDMA社会化业务测试及试商用正式启动。



China Mobile gets the TD-SCDMA license

- ✓ Second phase network deployment has started, and 38 cities will be covered by the end of June, 2009
- ✓ Third round equipment bidding will be initiated soon, 58.8Billion total investment and 238 cities will be covered





Promote TD-SCDMA Global Cooperation

TD-SCDMA Globalization marketing promotion

- ❑ SKT trial network in Korea
- ❑ Cyberport TD-SCDMA Coverage in Hongkong
- ❑ Canada TRLab Test System
- ❑ MY WIVE trial network in Italia
- ❑ Ghana TD commercial network in Africa
- ❑ Myanmar trial network
- ❑ And others are in process now...

3G development of CMCC

Integrated network layout:

Extend 2G network advantages and utilize special 3G features

- Shared core network, supporting systems and business platforms
- 3G dual-mode handset realizes inter-operability with 2G
- Lease 3G network capacity from the Parent company and the leasing fee is calculated based on actual utilization

Innovative marketing strategy:

Economical and convenient 3G services for customers

- Expedite tapping into 3G arena by using wireless broadband as an entry point
- Integrated marketing system realizes subscription without changing SIM card, mobile number or re-registration
- Existing brand structure unchanged, with the launch of unique 3G logo

Integrated terminal strategy:

Provide wireless broadband service via dual mode terminals

- 3G dual mode handset
- 3G dual mode data card
- Netbook/Notebook equipped with 3G data module
- 3G home wireless gateway and information terminal



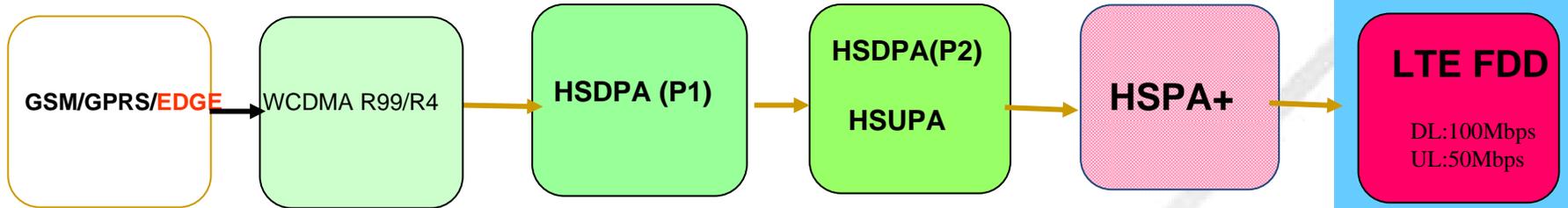
引领 3G 生活



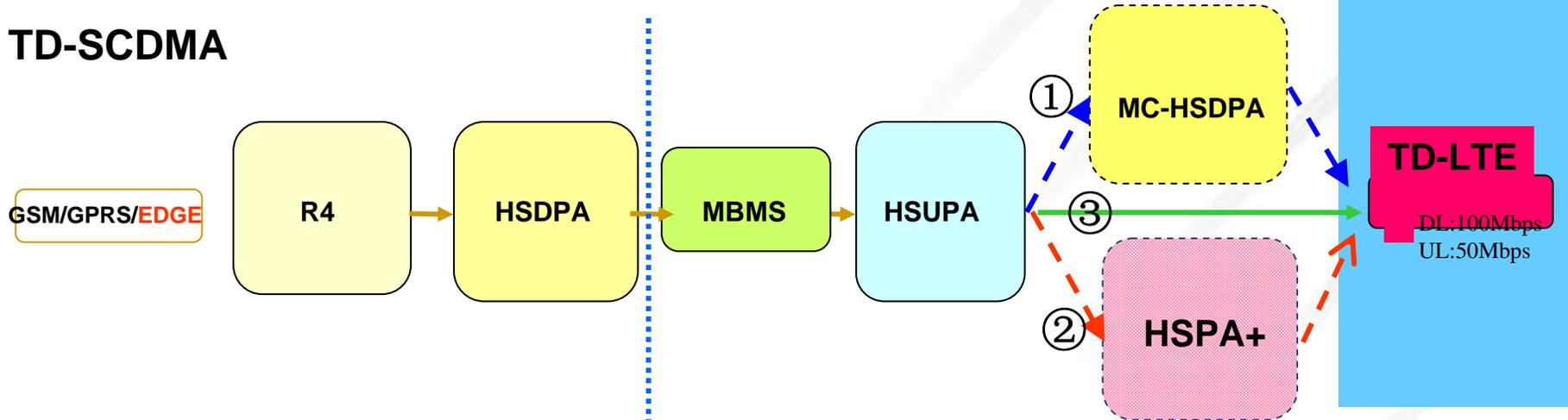
- China 3G Market Overview
- TD-SCDMA Latest Development
- TD-SCDMA to TD-LTE

TD-SCDMA Technology Evolution Roadmap

WCDMA



TD-SCDMA



We are here



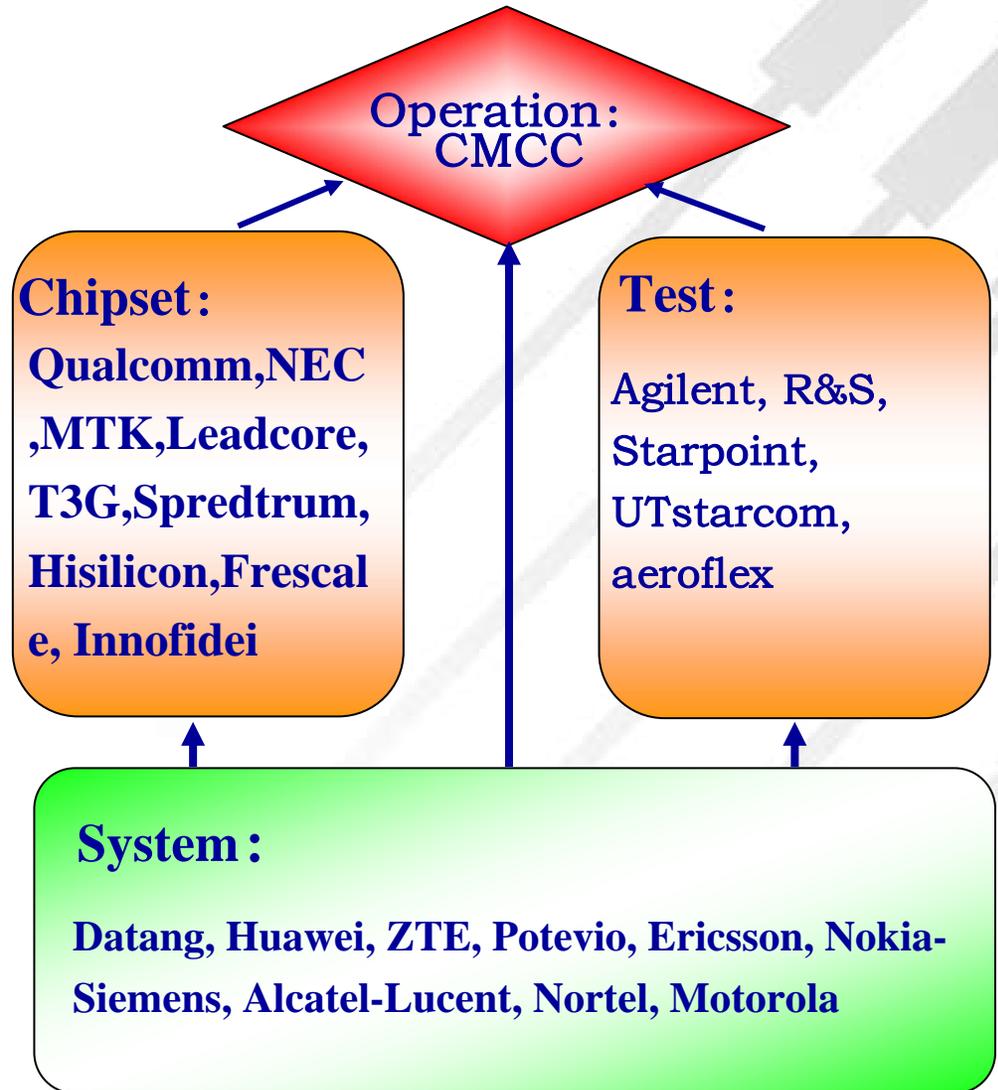
TD-LTE
Broaden your world

Not enough frequency band to provide excellent mobile broadband services



Visit us on Stand **AV21** in Central Avenue

TDIA, founded in 2002, is the independent Industry&Standard organization who committed to develop a more advanced TDD mobile telecommunication system. Our mission is to realize popularization and commercial application of TDD technology in china, as well as all over the world... Today, TDIA consists of 65 members.



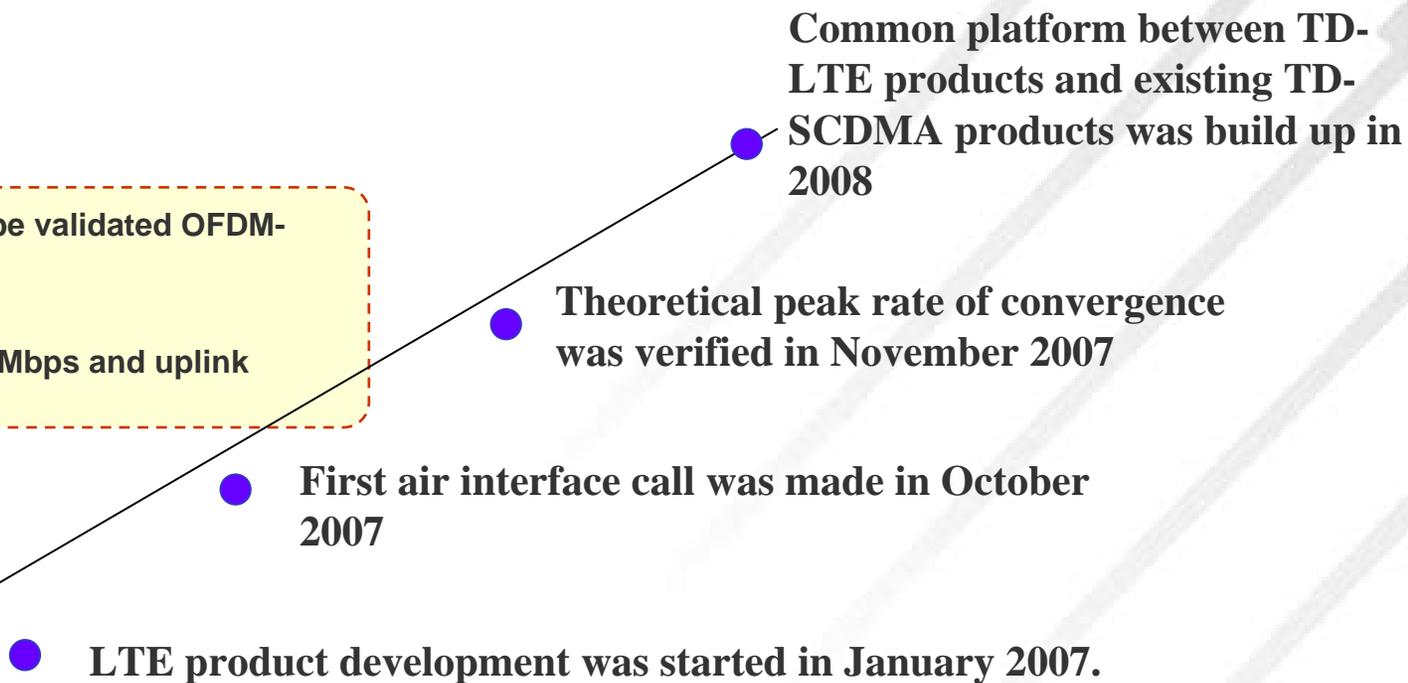


- “Mobile World Congress 2009” was held by GSMA in Barcelona from Feb 16-19.
- “LTE TDD/FDD Summit 2009 Barcelona”, held by China Mobile, Vodafone and Verizon, endorsed by GSMA and TDIA, was held successfully, and LTE got strong support from the industry
- TDIA presented TD latest development which supported by China mobile, Datang Mobile and ZTE etc.. The exhibition shows the TD-LTE sample equipment, Smart Antenna and MIMO technology. The high speed racing game, HD VOD application were also presented.



Platform support TD—LTE

- This principle prototype validated OFDM-TDD system
- Bandwidth of 20MHz
- Rates of downlink 100Mbps and uplink 50Mbps



Function Prototype

- Algorithms implementation.
- Function test.

2008.

Performance Prototype

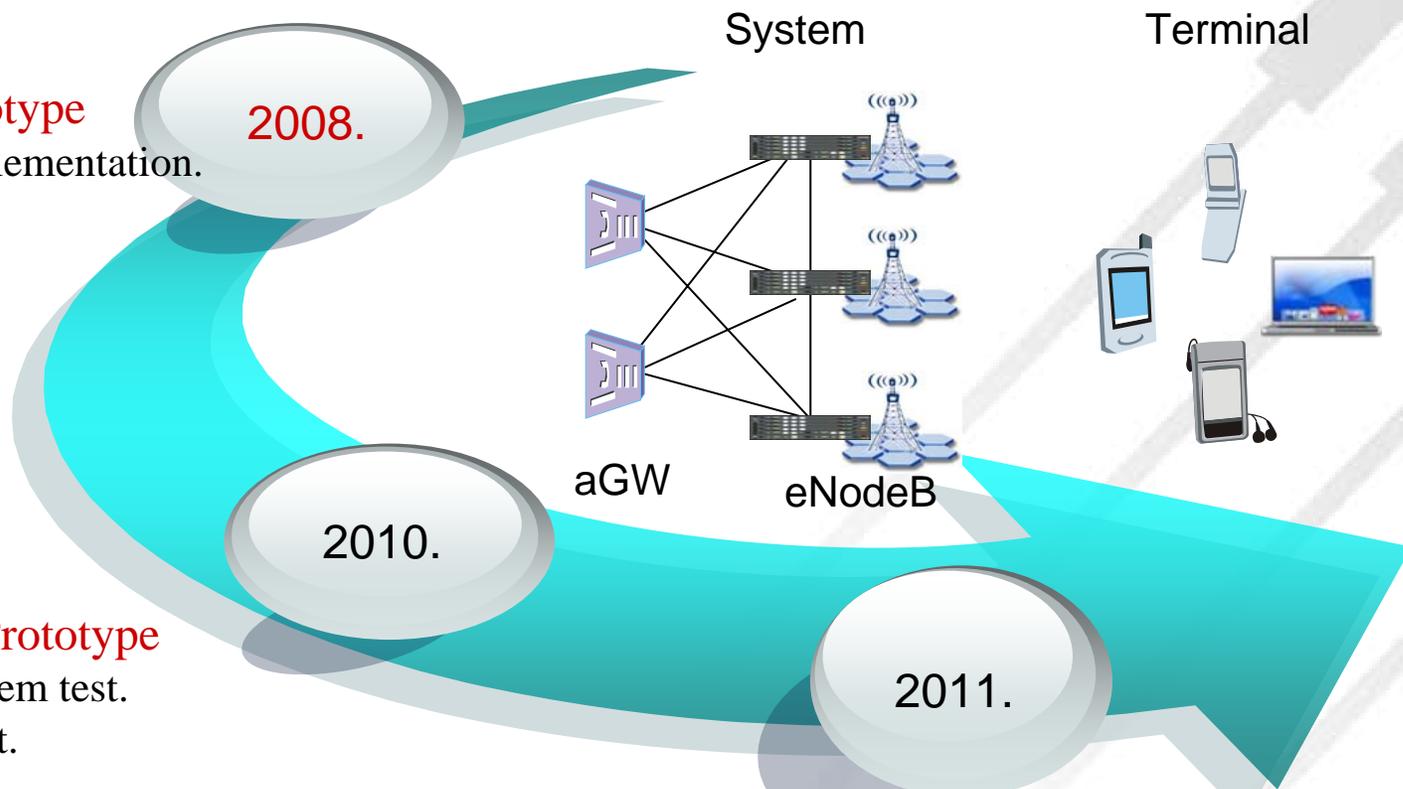
- Small-scale system test.
- Performance test.

2010.

LTE Pre-Commercial Equipment

- Network test and optimization.
- Supporting and improving the industrial chain.

2011.





THANK YOU!