

Global Standards Collaboration (GSC) 14

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TD-SCDMA Standard Evolution and Industry Development

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Highlight of Current Activities(1)

- Continue standard evolution in 3GPP
 - The first version of Long Term Evolution (LTE) was full finished and frozen by 3GPP in Rel-8 at the end of 2008, TD-LTE is a part of 3GPP LTE(LTE TDD Mode).
 - In parallel, work on LCR TDD HSPA+ is also finished in 3GPP Rel8 in March, 2009. CPC, CELL_FACH enhancement, HOM, MIMO are included in this study.
 - LTE-advanced is an ongoing study item and prepare for ITU-R submission on Oct 2009.
 - Further investigation of HSPA+ for TD-SCDMA in 3GPP Rel-9.
 - Working closely with globe partners in 3GPP.

Highlight of Current Activities(2)

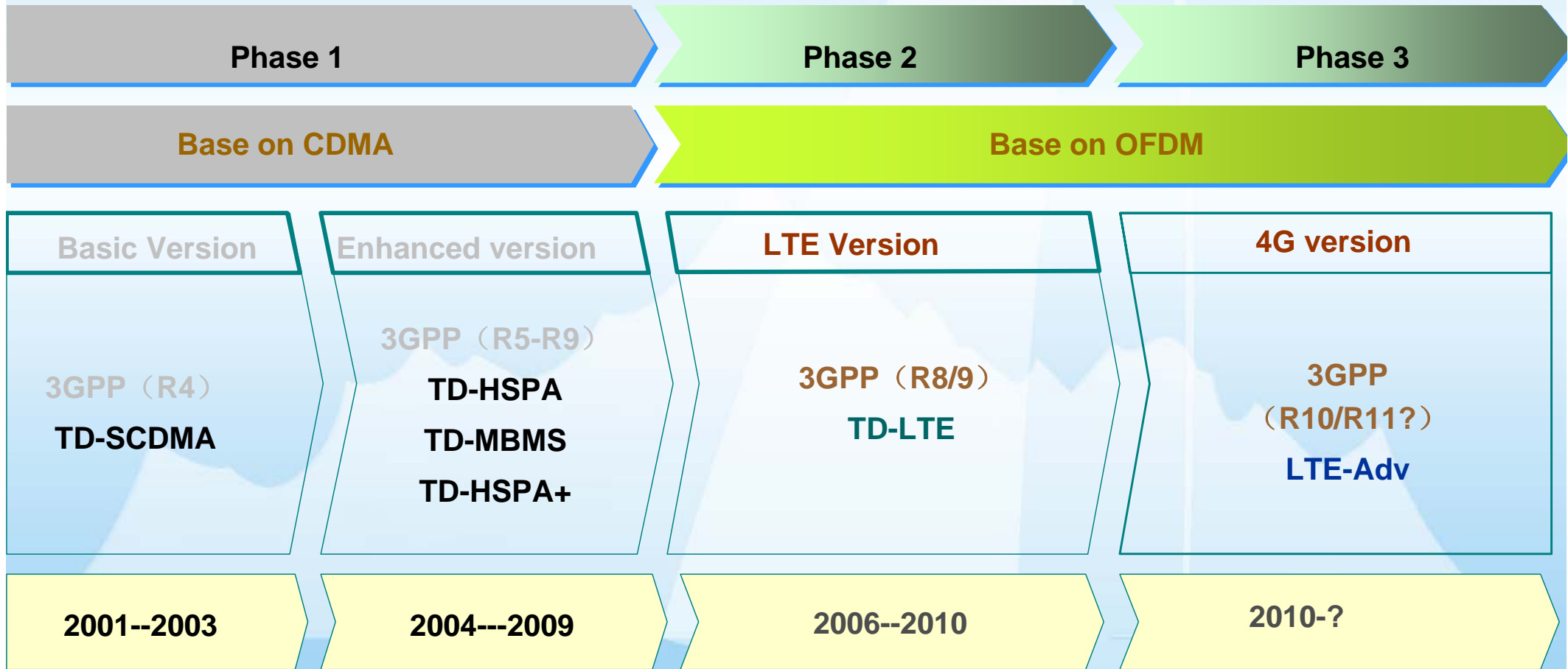
- Continue standard evolution in CCSA
 - The TD-SCDMA Industry Standard Phase 4 is working in CCSA TC5 WG9. It will be finished at the end of 2009. TD HSPA+ will be included as main feature in this version.
 - Many TD-SCDMA further enhanced solution is under study in CCSA TC5, e.g. positioning, high speed train, Antenna technique etc.
 - TD-LTE technique report will be started at latter half of this year.

Highlight of Current Activities(3)

- In 2008, the expanded large-scale TD-SCDMA commercial network was kicked off in 38 big cities in China including Beijing, Shanghai and Guangzhou and will deploy in more than 200 cities in 2009. (See slide 13)
- International Cooperation was made between China and Korea. (See slide 12).
- TD-SCDMA Network: as a part of High tech Olympic to successfully serve the Beijing 2008 Olympic games (See slide 14).
- Chinese government announced 3G license in china on Jan 7, 2009
- China mobile uses trademark G3 for TD-SCDMA service for consumer.
- More and more interesting companies have joined TD-SCDMA and TD-LTE industry (See slide 15-16).
- TD-LTE network service demo is preparing for Shanghai Expo 2010 (See slide 17-19).

Strategic Direction

TD-SCDMA Standard evolution



Challenges

- An expanded large-scale TD-SCDMA network cover the whole country is expected.
- TD-SCDMA terminal development falls behind network development and the choice for users is still less than WCDMA.
- Much more international cooperation in marketing is expected.

Next Steps/Actions

- Complete CCSA TD-SCDMA industry standard Phase 4(HSPA+) .
- Complete TD-SCDMA and TD-LTE work in 3GPP R9.
- Continue LTE-Advanced study in 3GPP and complete ITU-R submission for IMT-Advanced.
- Finish TD-SCDMA commercial network Phase 3 building in more than 200 cities and initiation next phase construction.
- Continue to work cooperatively with external organizations.

Proposed Resolution [optional]

■ N/A



Supplementary Slides

TD-SCDMA Industry Development in China

TD-SCDMA
NEW MOBILE LIFE



expanded large-scale TD-SCDMA trial in 2007

large-scale TD-SCDMA trial in 2006

Industry chain formed in 2004

Technical certification programs in 2002

Established standards and improved it in 2000

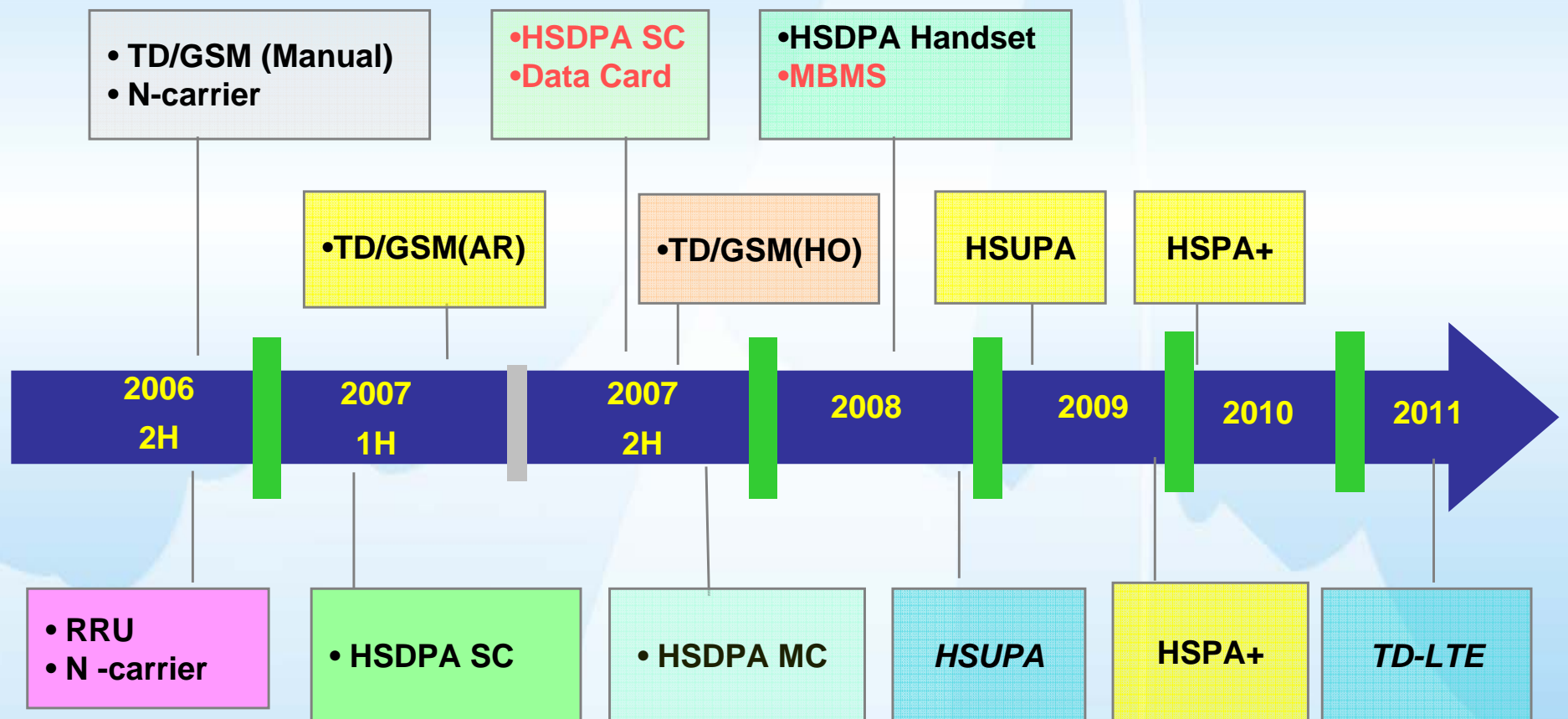
Geneva, 13-16 July 2009

Fostering worldwide



TD-SCDMA Industry Development in China

Terminal



Network

International Cooperation



During the journey of Korean President Lee Myung Bak in China in May 2008, he visited the TD-SCDMA cooperation project of SK and Datangmobile.

The first inter-system of TD-SCDMA and CDMA2000 international video call was made in the world.

TD-SCDMA Network in China



- **2007: Starting TD-SCDMA network construction in 10 Olympic cities (Phase 1);**
- **2008: Success support Beijing Olympic Games;**
- **June, 2009: Provide 3G commercial service for 38 main cities (Phase 2).**
- **2009 Q4: Cover 238 main cities in China (Phase 3)**
- **2010, Cover all east county seat and west cities (Phase 4)**

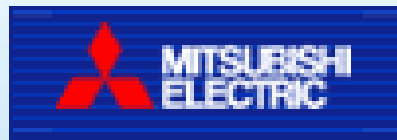
TD-SCDMA : Part of "High-Tech Olympic"



- **2008 Beijing Olympic: TD-SCDMA network, Mobile, Data card increment service**
 - 1000 thousand TD-SCDMA mobile phone donate towards China delegation.
 - Successful connection rate: over 95%
 - More than 200 thousands of users enjoyed mobile TV service at opening ceremony.

TD-LTE Manufacture

RITT

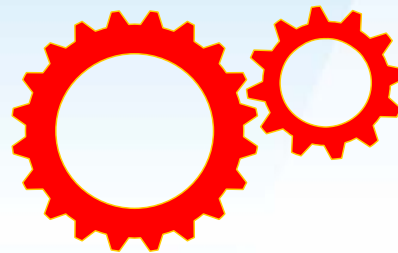


TD-LTE Development



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

Shanghai Expo 2010



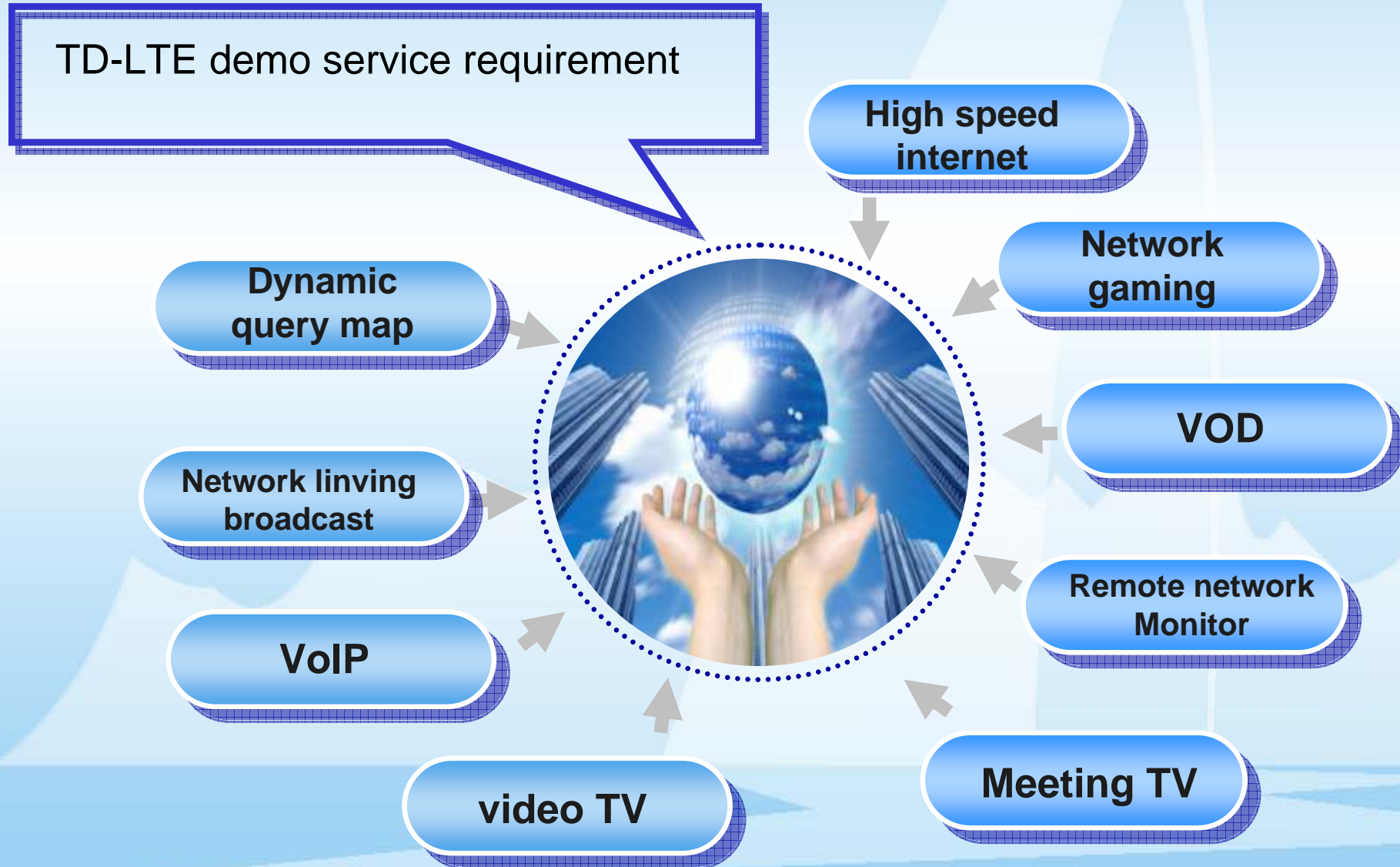
Date: May 1, 2010- Oct 31, 2010

Location: Shanghai city center, between nanpu bridge and lupu bridge

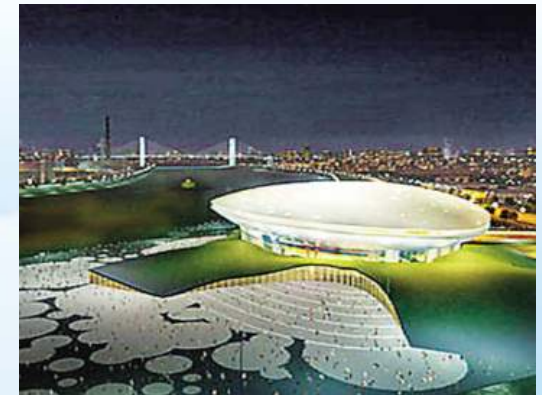
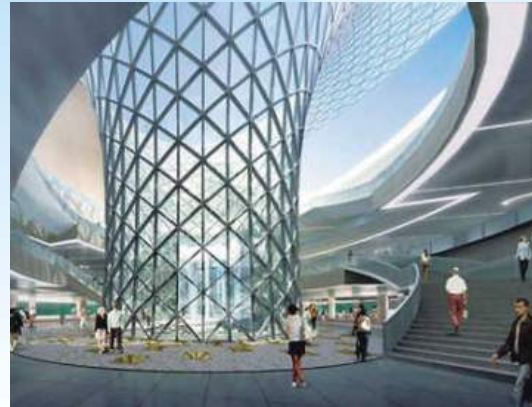
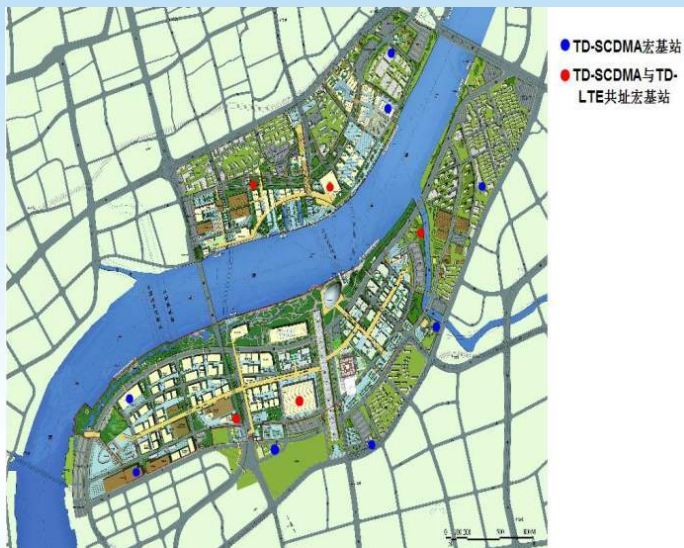
Subject: Better city, better life

Target: More than 200 Nations and international organization, 70 million attendee

Shanghai Expo TD-LTE demo service



Shanghai Expo TD-LTE network layout



- ❑ Outdoor: TD-LTE co-location with TD-SCDMA.
- ❑ Indoor: TD-LTE co-antenna feeder with TD-SCDMA.
- ❑ 5 TD-LTE macro base stations: outdoor continuous coverage.
- ❑ 20 TD-LTE micro base stations: indoor data service.



Thank you!