

3.5G - Broaden Your Way of TDD LTE

Benkovics László – ZTE Hungary Kft.



ZTE's Investment in LTE



LTE R&D Main Base - Xi'an

Shenzhen HQ 2
Hardware Platform

ZTE invests huge resources to Xi'an R&D base, main next-generation mobile communications manufacture and research center.



SwedenBaseband
Algorithm & PA



USASystem
Algorithm



Shanghai 3 System Algorithm



Nanjing EPC





View of New Xi'an R&D Center

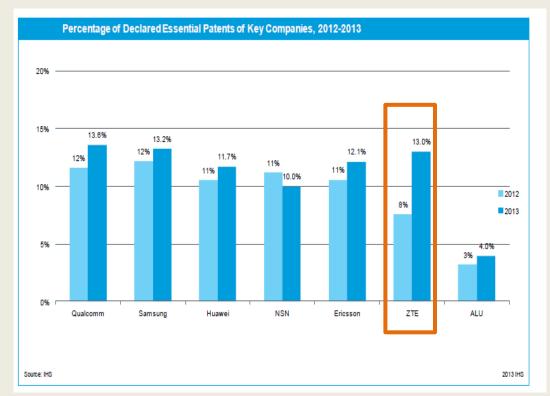
The Largest R&D Center of ZTE

- 6,000,000,000 RMB (**745,800,000** EUR) investment
- Area of **1,332,000** m²
- Built to accommodate 30,000 employees
- R&D center of **3G/4G** systems and terminals



Key Industry Player in Formulation of 4G LTE Standards

- One of the major drafters of the 3GPP standards.
- 815 LTE Essential Patents (EP) in ETSI IPR database, 13% of total.
- Joined in 40+ standard organizations and forums.
- 500+ engineers focus on the key technology research of LTE and its evolution standard.
- 13,100 3GPP proposals, 8700
 SAE/LTE proposals and 2850 have been admitted.
- 43 editor positions of the 3GPP standard projects and technical specifications.



Source: HIS Global LTE Market Analysis Q1, 2014



LTE Partnership with ZTE



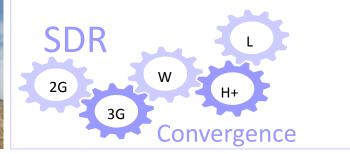
146 LTE/EPC Commercial Contacts, The Largest LTE Provider in China



Unified SDR Technology

—— Ensuring Multi-Mode/Multi-Band Convergence







Software Solution

Based on unified IP platform with MCPA

- •Smart software supports LTE evolution
- •Smart configuration supports different systems



Define Designed

New generation multi-mode/multi-band base station

- •Same base station supports different systems
- •Software upgrade supports different evolutions



Radio

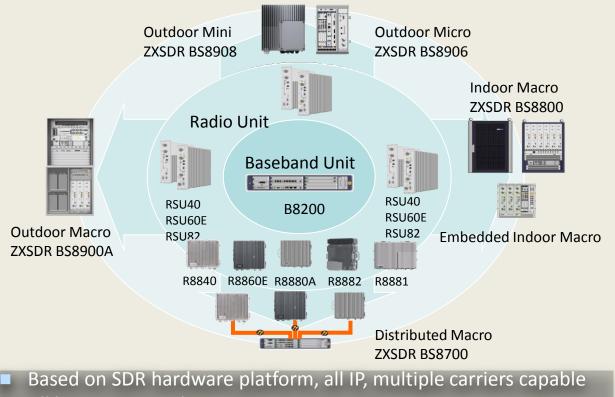
Refarming

Convergence, revolution for traditional base station

- Multi-mode
- Multi-band
- Flat network
- Smooth evolution



LTE System Product Family



- All base stations share same components, higher integration and less spares

| | TDD | FDD |
|---|---------------------|--|
| | 1.4G (1447~1467) | 1.8G UL:1710~1785 DL:1805~1880 |
| | 1.8G (1785~1805) | 2.1G UL:1920~1980 DL:2110~2170 |
| | 1.9G (1880~1920) | 2.6G UL:2500~2570 DL:2620~2690 |
| - | 2.3G (2300~2400) | 700M UL:698~716 DL:728~746 |
| | 2.6G (2570~2620) | 800M UL:806.00~820.98 DL:851.00~865.98 |
| 1 | 3.4G (3400~3600) | |
| | 3.5G (3500-3800) | |
| | 450M (400-430) | 450M |
| | 600M (606-678) | |





Hi3G, 1st TDD/FDD Dual-Mode LTE Network



"We have chosen ZTE to modernize our 3G and LTE mobile broadband network, because its high quality technology, advanced LTE dual-mode solutions and quick consignment responses really meet our requirement, and even exceed our expectation."

-- Peder Ramel, CEO of Hi3G



Solution highlights

- LTE TDD/LTE FDD/UMTS Multi-mode
 eNodeB
- Multi-mode user device
- Spectrum: 2.6GHz/800Mhz
- Bandwidth: 50M/2*10M
- Site number: 3500
- Main equipment: BBU,+RRU, EPC



Benefits

- World's 1st TDD/FDD dual-mode commercial LTE network
- The throughput increased 100% by deploying TDD/FDD dual-mode LTE network
- Hi3G continuously won "The Best Mobile Network" of Sweden in the third party estimation



Local Presence in Hungary

- **XECOMPLE SECTION 2018 ZTE has built (!!!) the first LTE network in Hungary**
- **Experienced team of Hungarian and Chinese engineers**
- **ZTE has a Regional Network Operation Center in Budapest**





