



NTT DOCOMO RAN Migration Strategy

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NTT DOCOMO, INC.

DOCOMO corporate overview & cellular phone market

NTT DOCOMO

As of March 2009

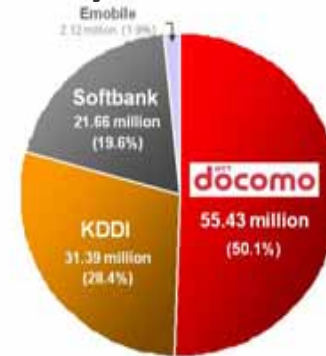
Established	1991
Employees	22,000
Stock listings	Tokyo, London, NYSE
Operating revenues (FY2008)	4,448 billion JPY (22.3 billion Euro)
Operating income (FY2008)	831 billion JPY (6.20 billion Euro)
Net income (FY2008)	472 billion JPY (3.52 billion Euro)
Market Share	50.8%
Subscriptions	54,601,000
Churn Rate (FY2008)	0.50%
ARPU (FY2008) (average revenue per user)	5,710 JPY (42.6Euro)

(exchange rate 1Eur=134JPY)

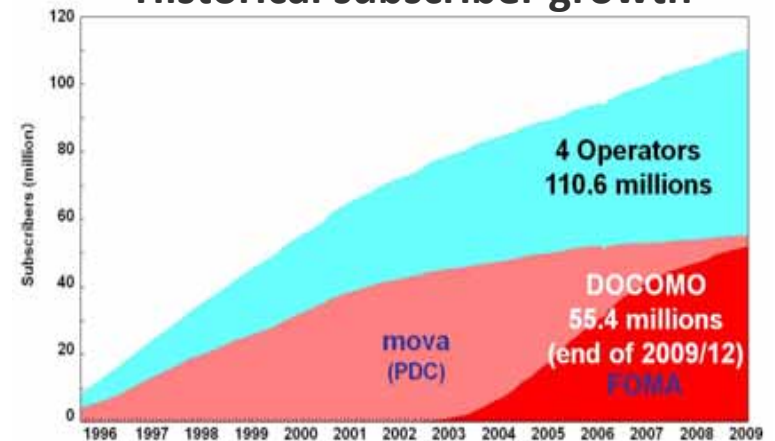
Japan's Cellular Phone Market

Market share by subscribers

As of Dec. 2009



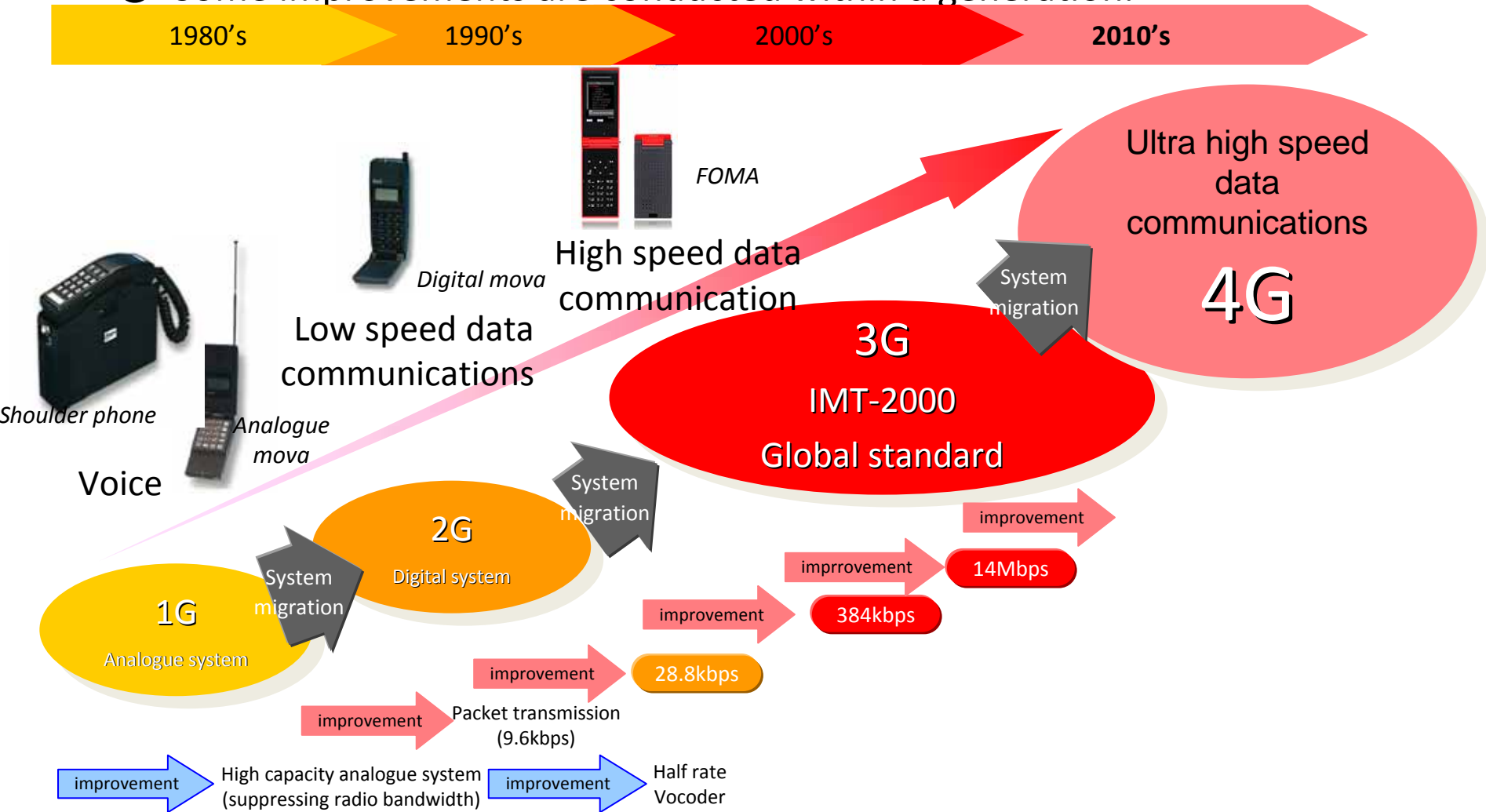
Historical subscriber growth



Extracted from TCA information (<http://www.tca.or.jp/>)

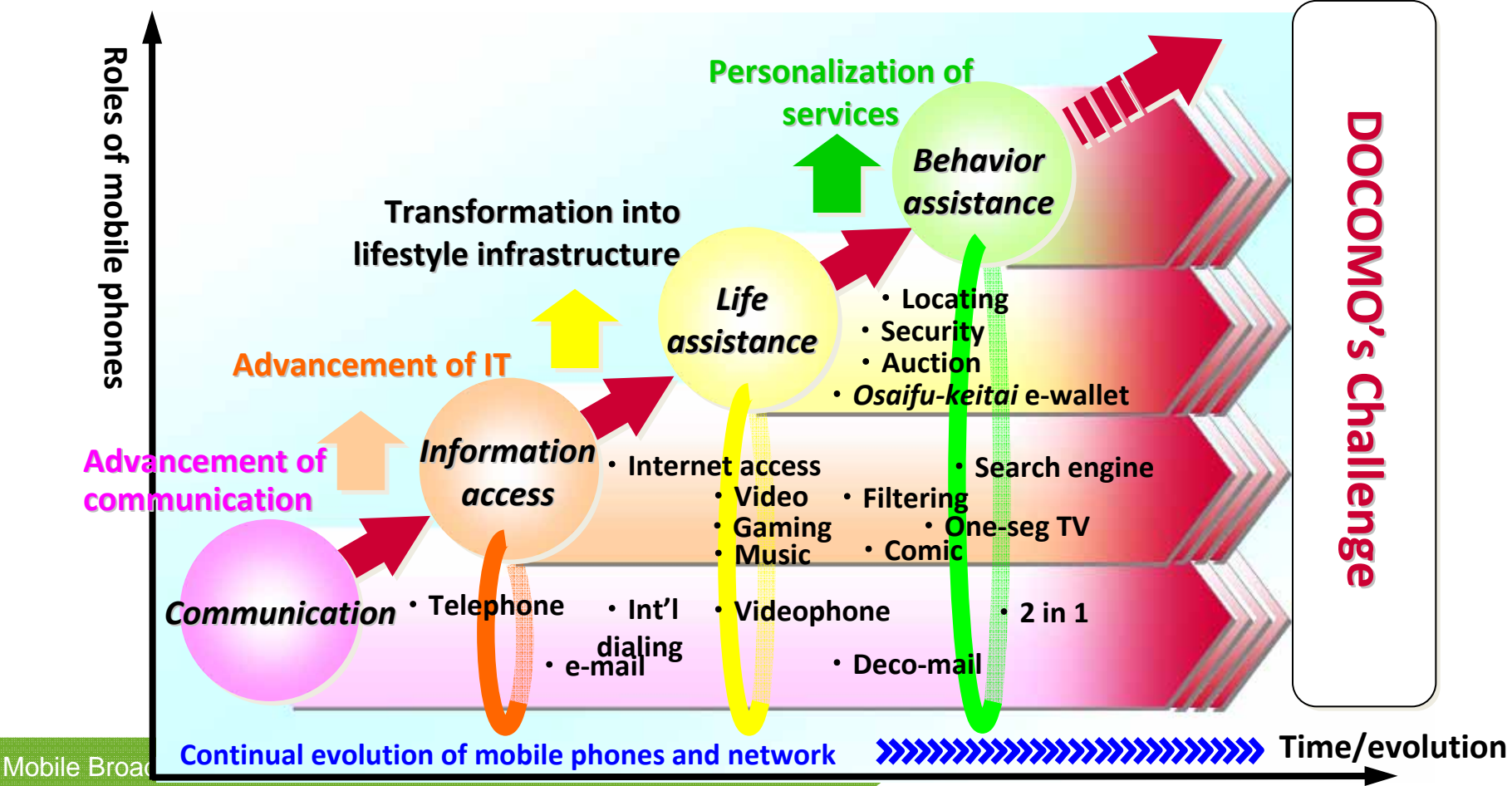
Improvement and migration of mobile cellular system

- Mobile cellular system migrates every 10-years.
- Some improvements are conducted within a generation.



Evolution of cellular services

- In addition to providing means for communication, information access and life assistance, mobile phones will also assume the role of assisting customers' individual behavior. DOCOMO will take on the challenge of advancing each of these roles.



Evolution of cellular phone

- With a magnitude of functions, the concept of cellular phones is being changed to more than just a communication tool

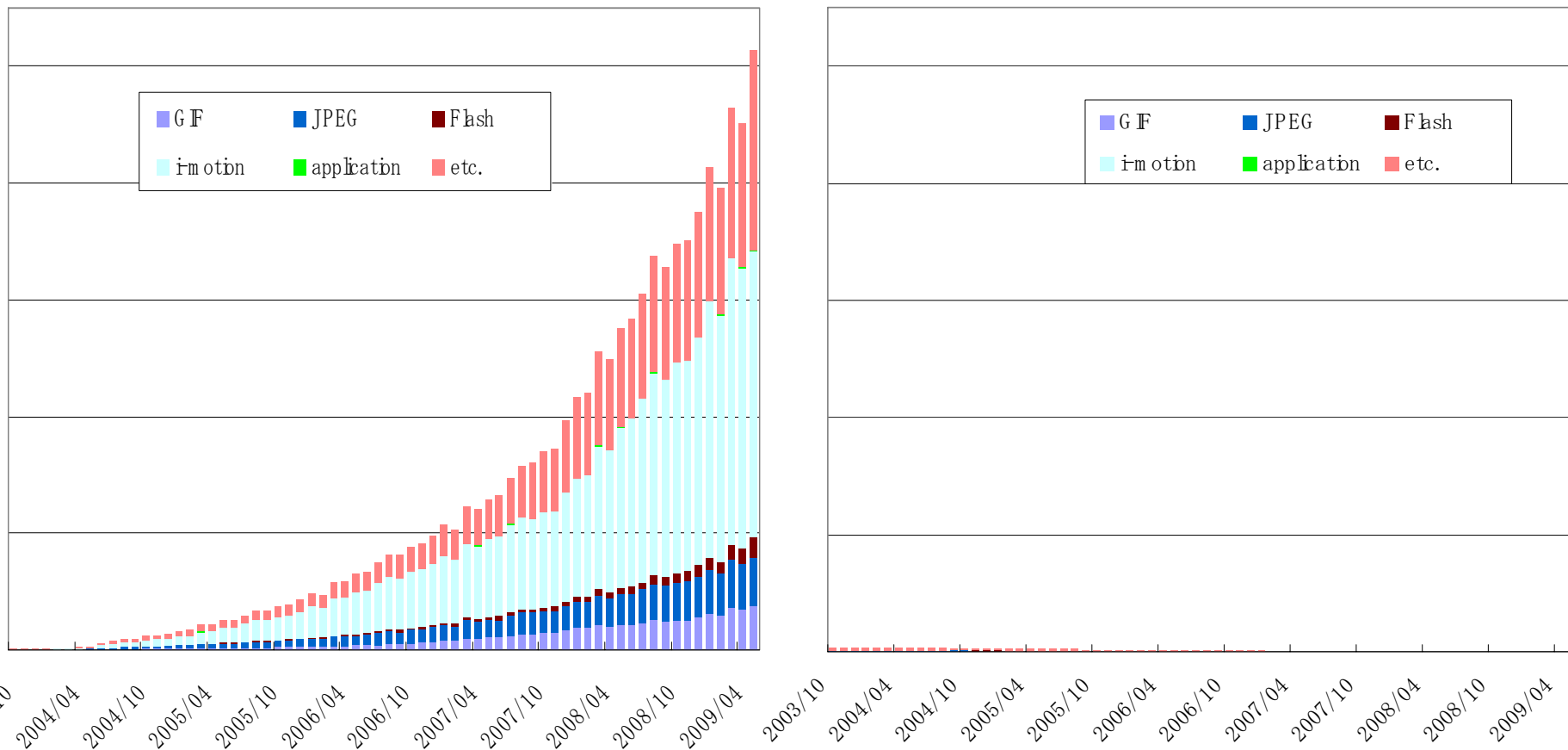


Growth of Packet Traffic in 3G

FOMA

the same scale

PDC



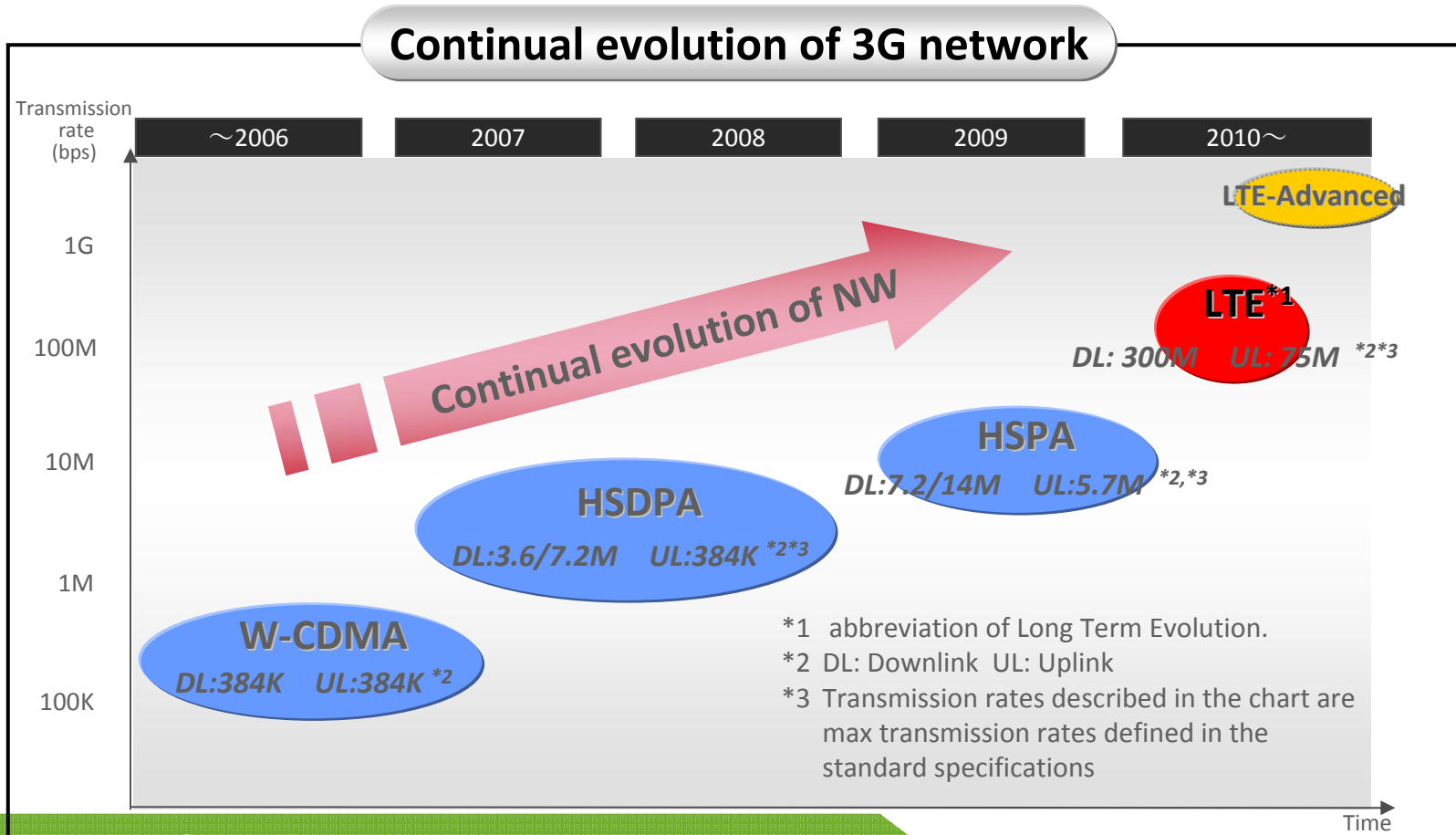
*: "application" does not consists of active packet

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Most of packets carries HTML in PDC and i-motion, GIF and JPEG in FOMA.

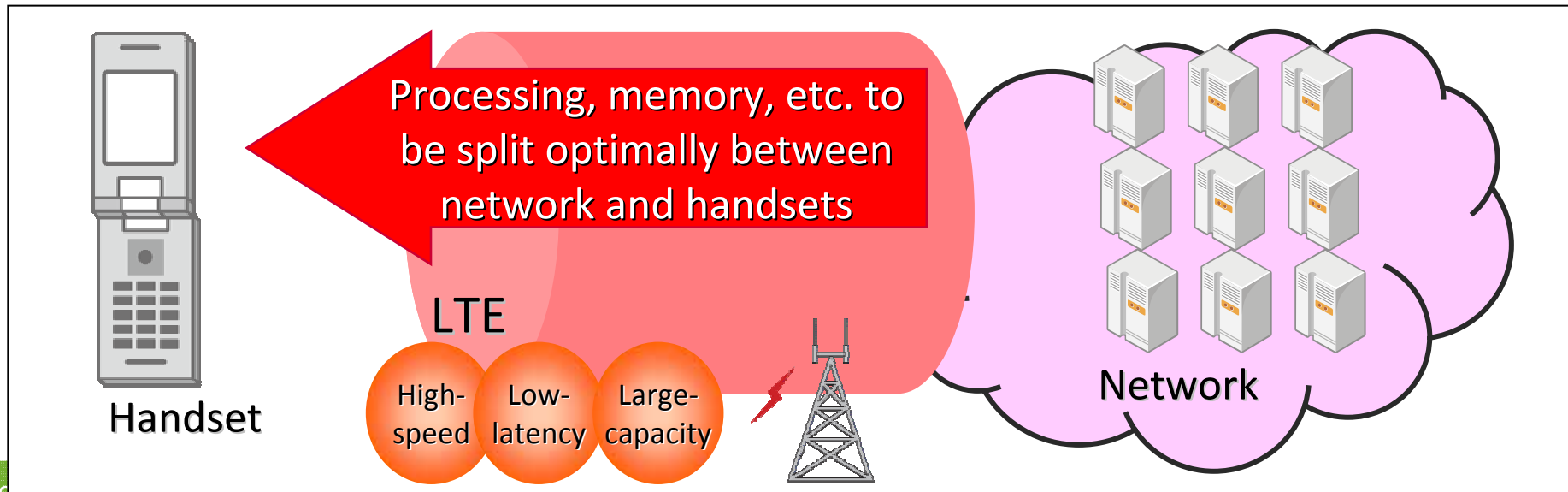
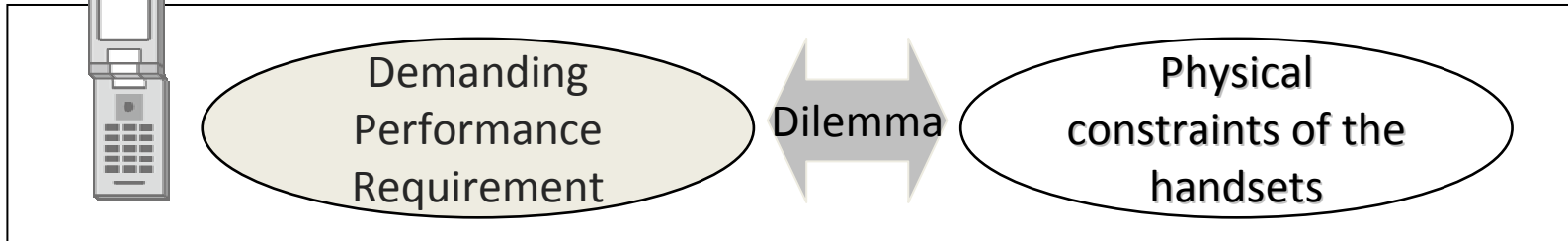
Ratio of i-motion is further increasing in the latest years

- HSUPA(HSPA): Introduced in June 2009
- LTE: Planned for introduction in **CY** 2010 as one of the first adopters in the world

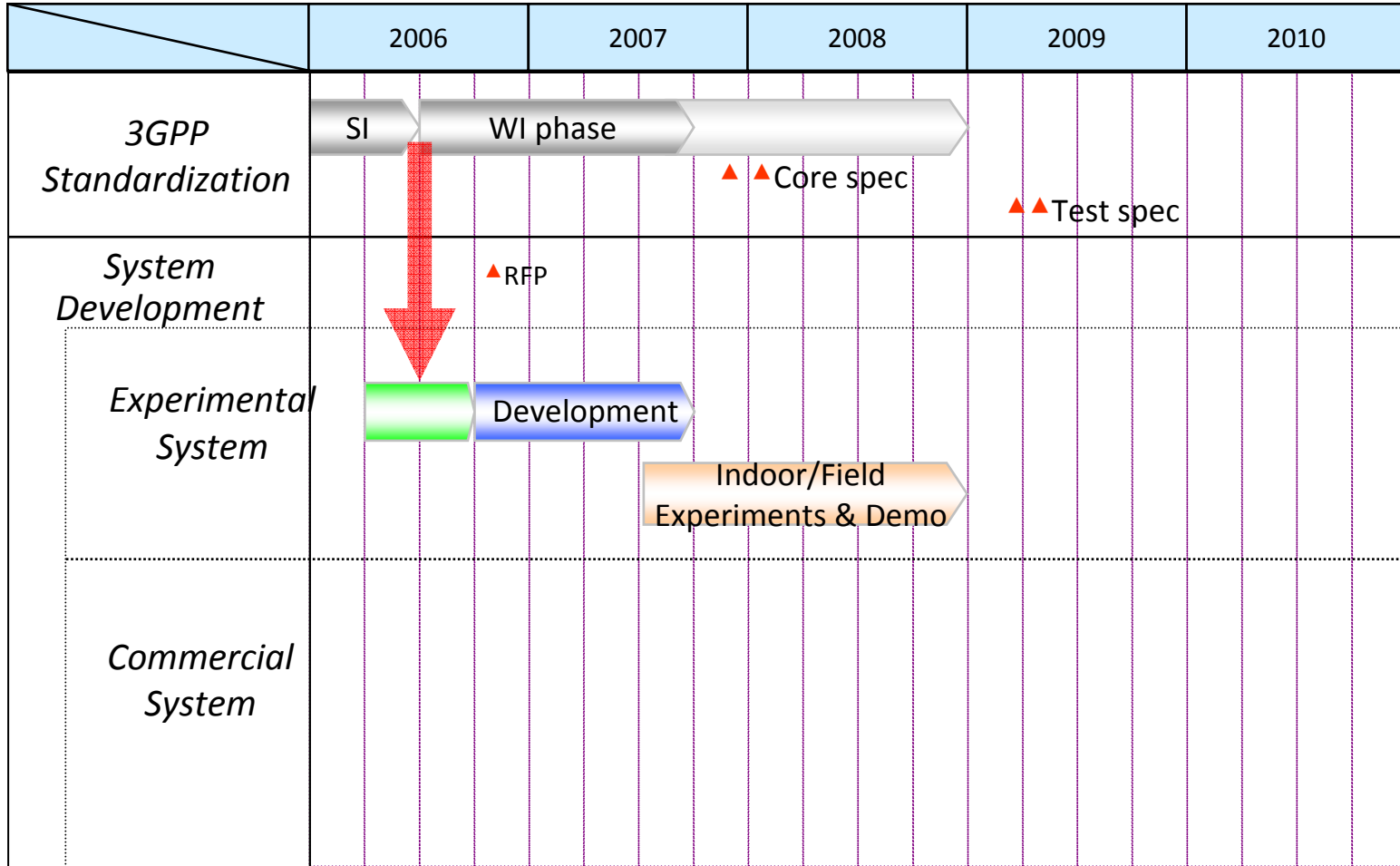


Handset/network collaboration by introduction of LTE

- Provide advanced services by optimizing the allocation of functions between handsets and networks, in particular to leverage the high-speed, low-latency, large-capacity properties of the LTE network.



Overall LTE time plan of DOCOMO



Field experiments have been executed in 3 cities in Japan to confirm LTE practical performance in variety of environments

Sapporo, Hokkaido

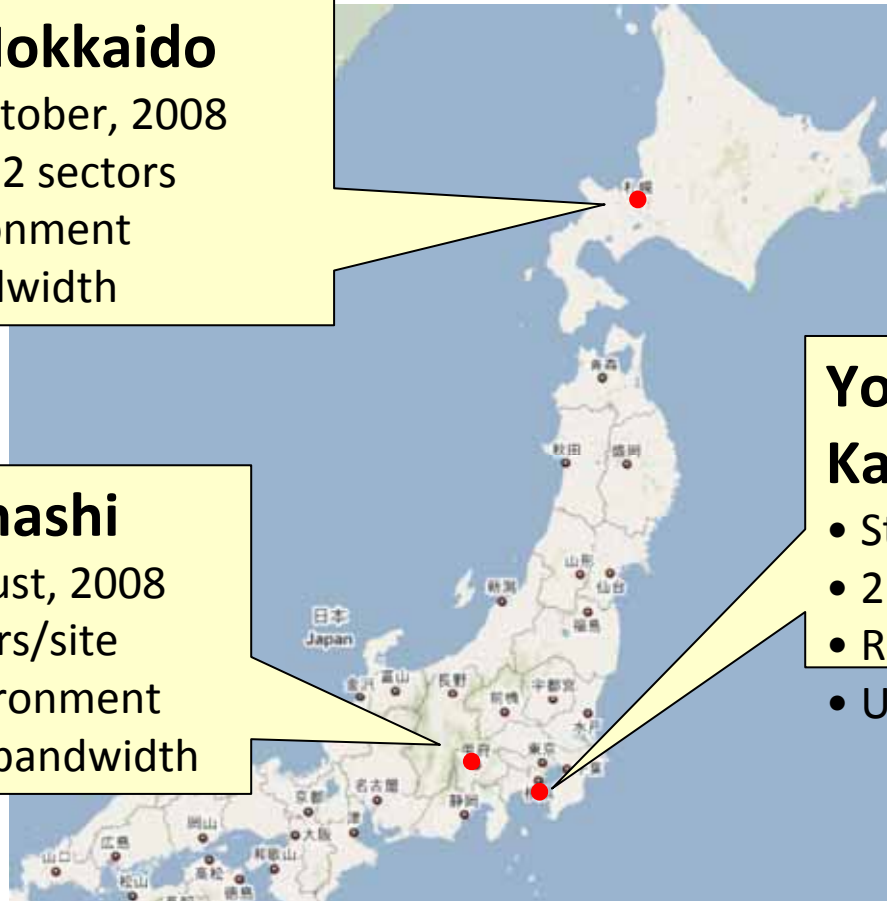
- Started in October, 2008
- A single site, 2 sectors
- Urban environment
- 10 MHz bandwidth

Kofu, Yamanashi

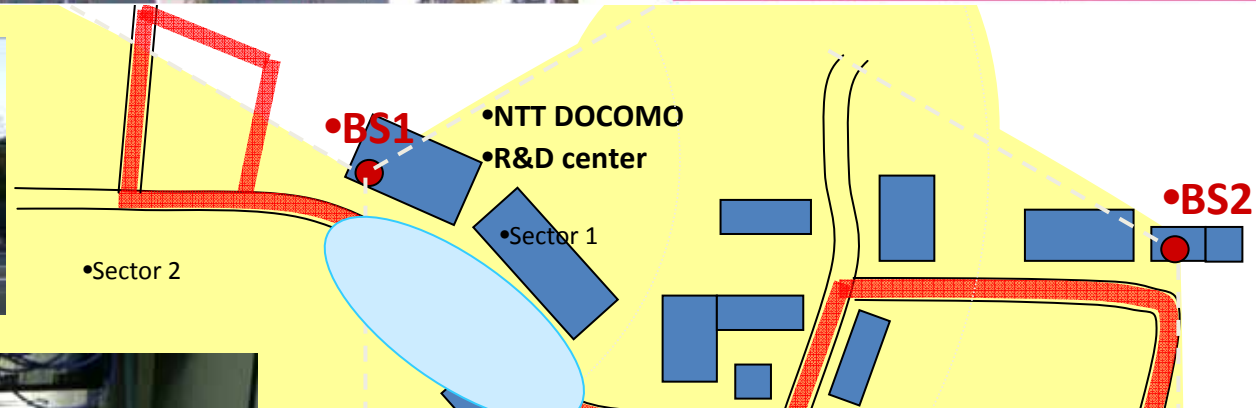
- Started in August, 2008
- 2 sites, 6 sectors/site
- Suburban environment
- Up to 20MHz bandwidth

Yokosuka, Kanagawa

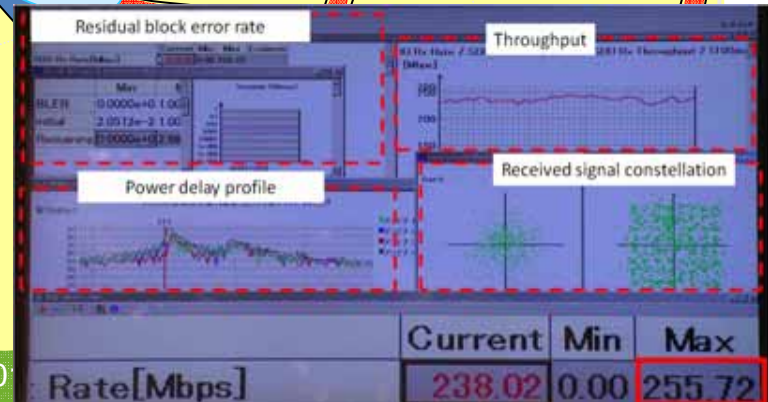
- Started in February, 2008
- 2 sites, 2sectors/site
- Rural environment
- Up to 20MHz bandwidth



NTT DOCOMO field experiments



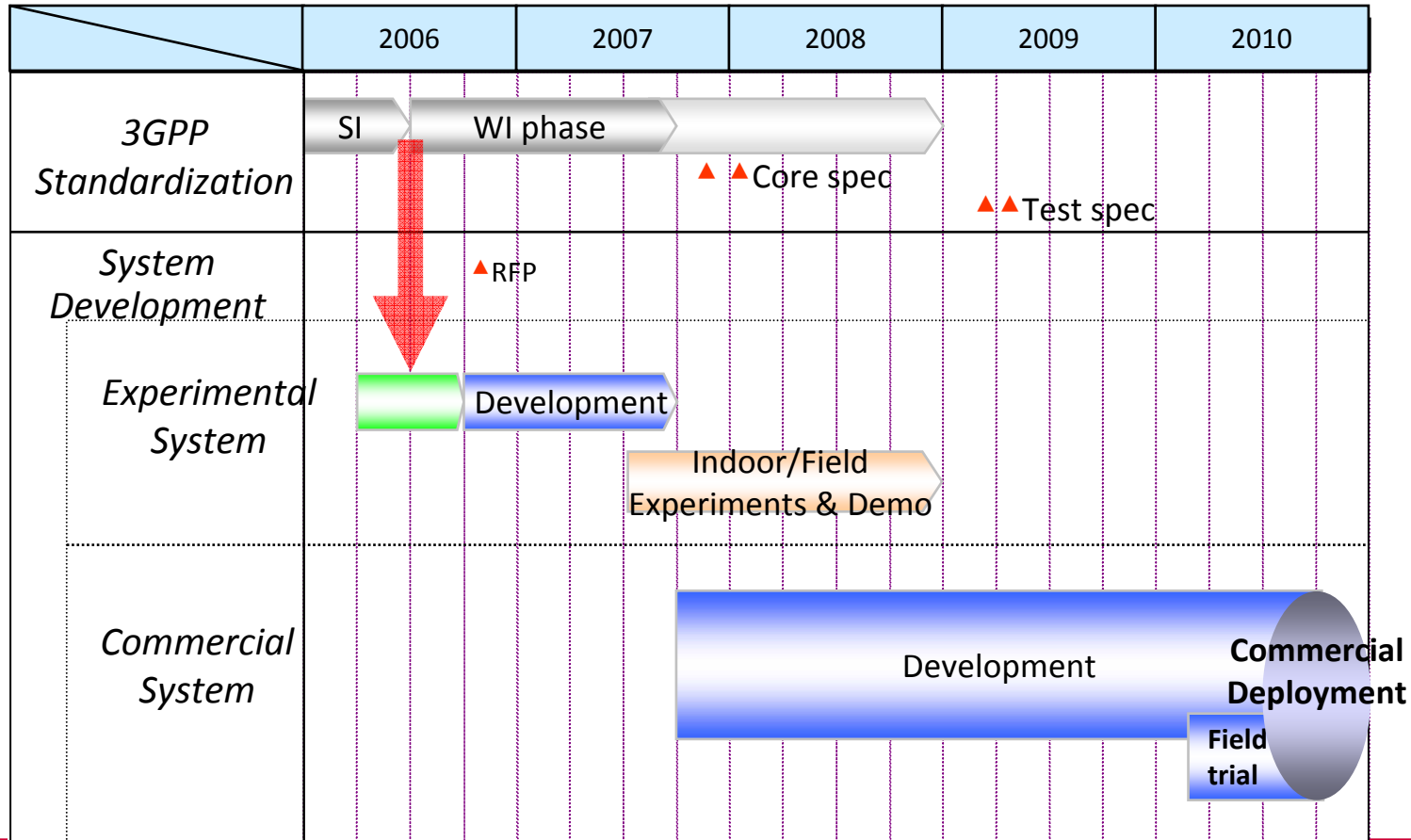
•250m



course

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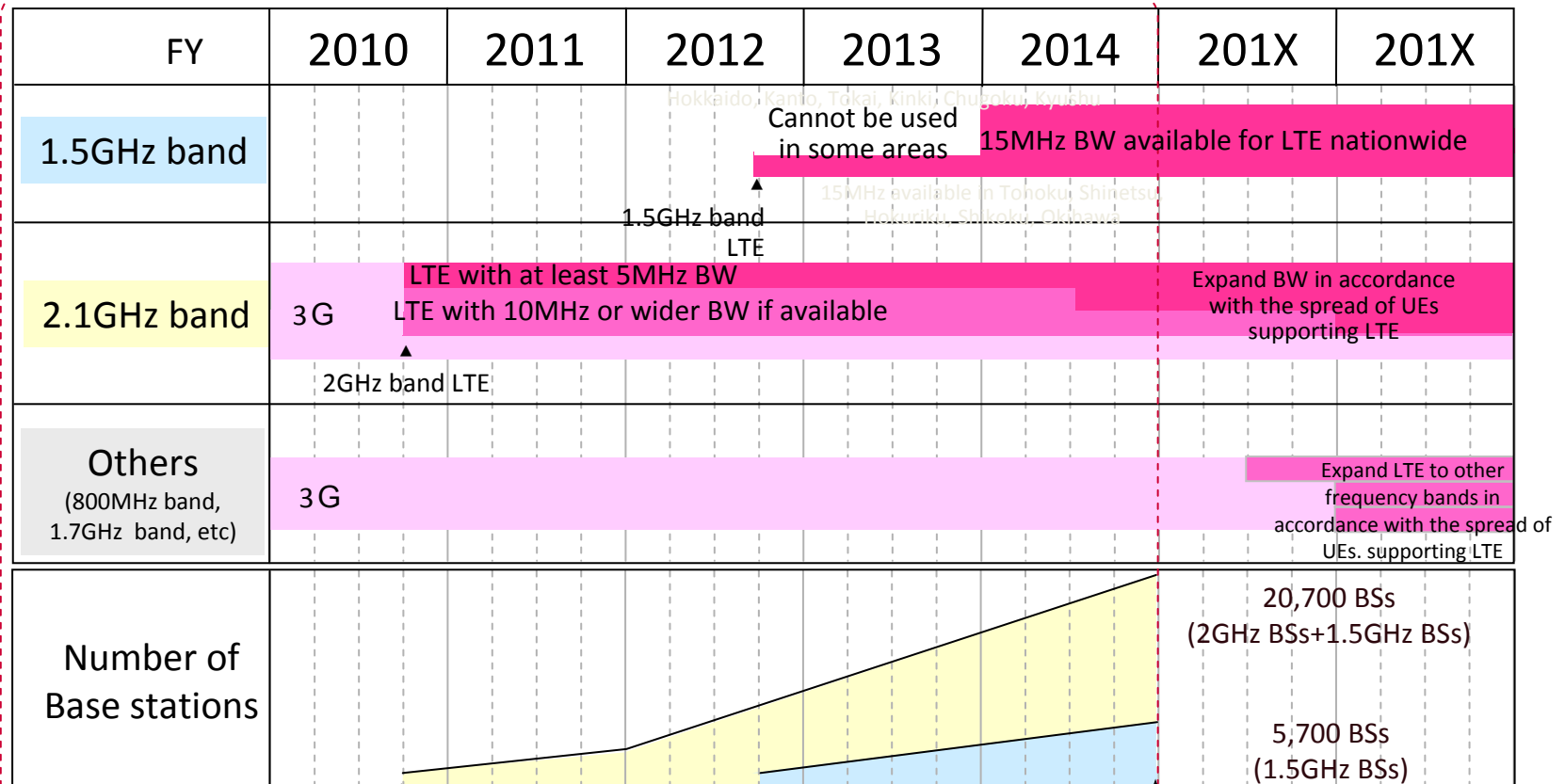
Overall LTE time plan of DOCOMO



- DOCOMO will launch LTE as one of the leading operators in the world
 - To ensure the interoperability, we will keep watching the global status
 - DOCOMO's plan is in line with that of other leading operators

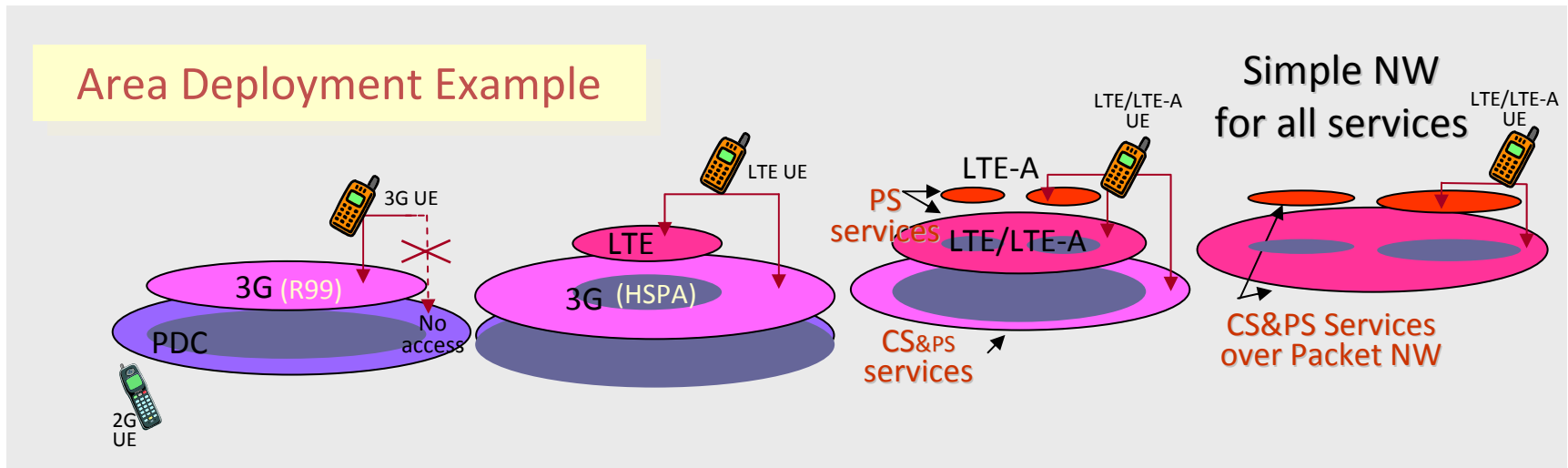
LTE system deployment scenarios – Spectrum

- 1.5GHz band was assigned to DOCOMO for LTE
- Introduce LTE first using 2.1GHz band, and then expand to 1.5GHz band



LTE system deployment scenarios

- At the LTE launch,
 - LTE area will be overlaid over the legacy 3G area
 - LTE UEs will have legacy 3G functionality
 - Focus on PS services
 - CS services will be provided by the legacy 3G systems with CS fallback
 - Reuse of existing BS site for low cost deployment
- After LTE UEs and enhanced services become widely available
 - CS services will be provided by LTE on the PS domain
 - DOCOMO is also planning to smooth path to LTE-Advanced with simple NW for all services

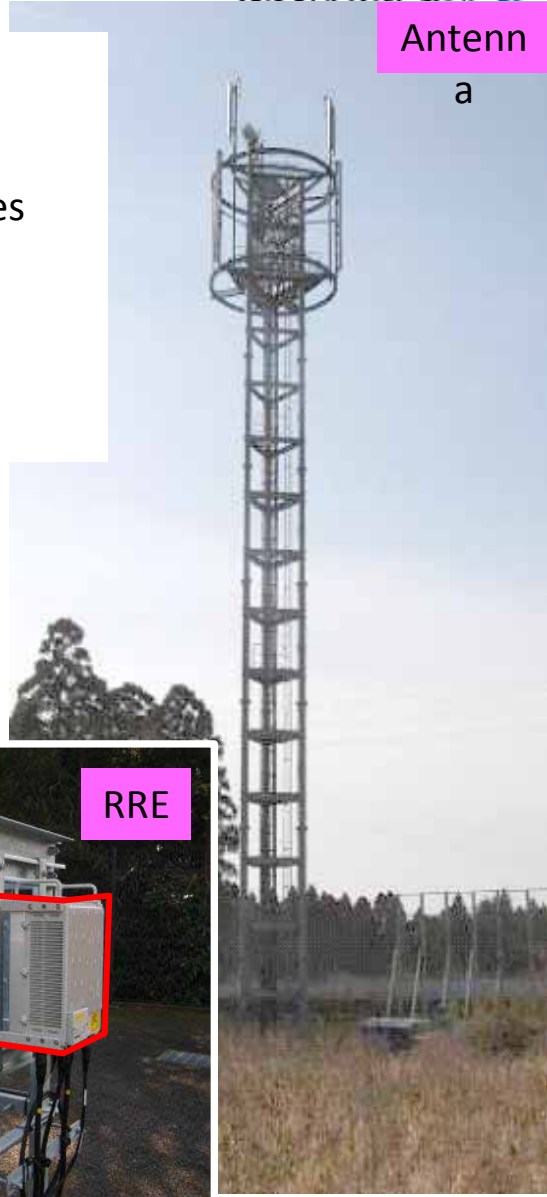
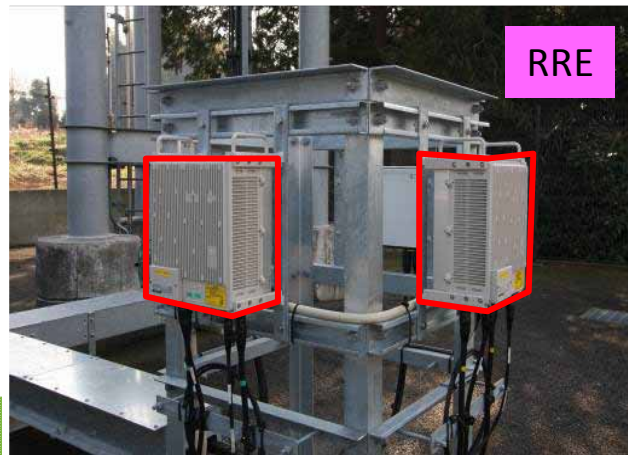




Field Trial



- DOCOMO is conducting Field Trial near by Tokyo.
- Following items are verified and confirmed in the trail.
 - Systematic confirmation using total LTE network nodes (multiples vendors)
 - Confirmation of connectivity and mobility functions
 - Confirmation of handover between 3G and LTE
 - Parameter optimization to maximize LTE performance



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LTE trials and deployment

- LTE Trials
 - NTT DOCOMO conducted LTE indoor and field trials from July 2007 and February 2008, respectively.
 - Field trials are conducted in 3 cities in Japan to confirm practical LTE performance under variety of environment
 - The trial results shows satisfying high performance of LTE in terms of delay, throughput and stability
- NTT DOCOMO's views on LTE deployment
 - NTT DOCOMO will launch LTE in 2010 as one of the leading companies of LTE in the world
 - LTE area will be overlaid with 3G area and LTE/3G dual mode terminal will be introduced in order to deploy seamless service area from the beginning of LTE launch
 - 2 GHz spectrum band will be used for LTE launch considering utilization of existing NW facilities and global roaming
 - LTE spectrum can be increased in the future according to wide spread of LTE terminals and new spectrum band allocation



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