

Faster and Faster **LTE-A 450Mbps**

23 Apr 2015



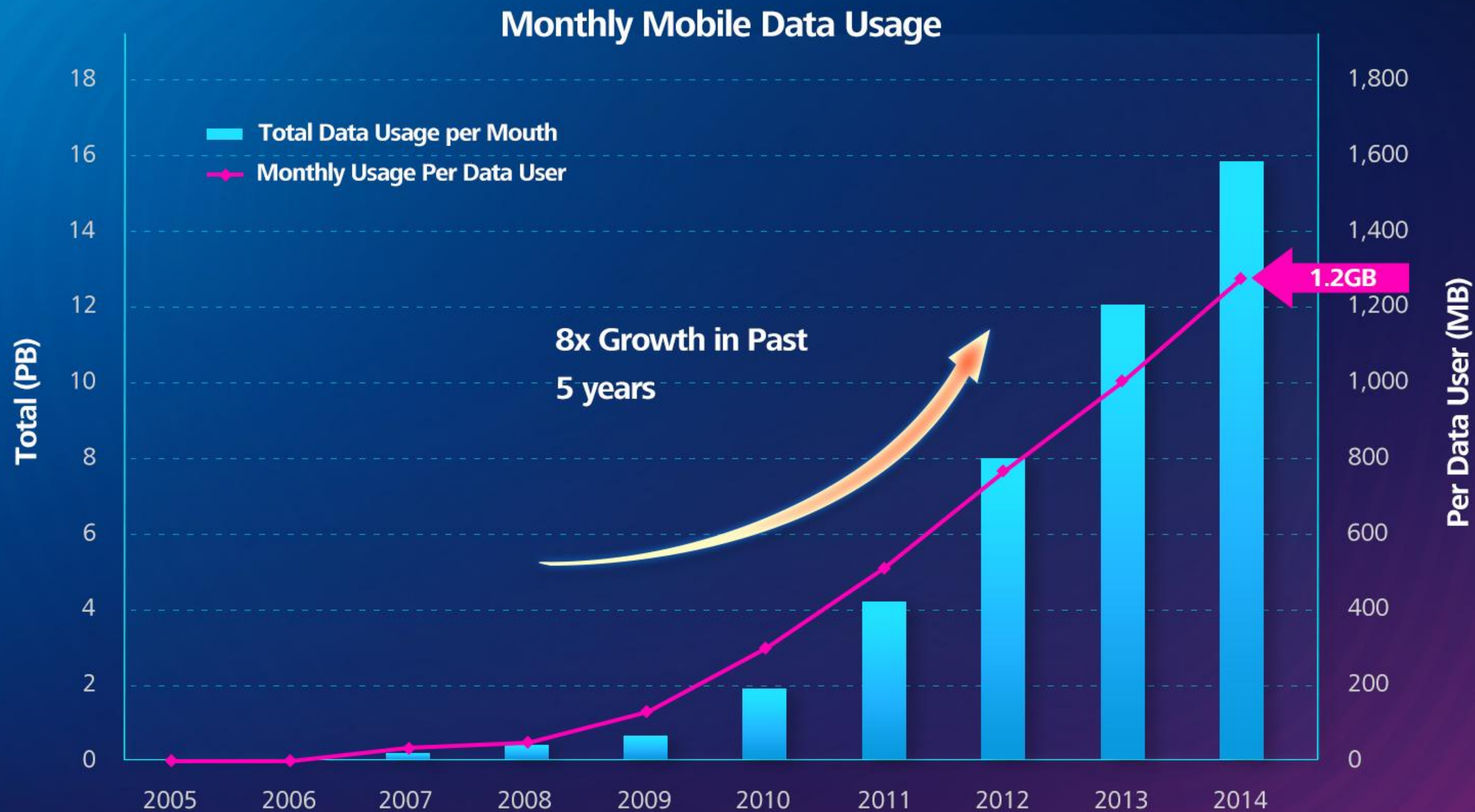
Managing Director, Engineering, HKT

Mr. LAM Wing Chap, Peter

Mobile Market in Hong Kong



Mobile Broadband Demand in HK Market



Strength of HKT – Most Extensive Fiber Network



Strength of HKT – Comprehensive Spectrum Resources



Dec 2014 : 2CC LTE-A CA 300Mbps

2600 MHz
Band



1800 MHz
Band



Spectrum Allocation
Source : OFCA

HKT is the first operator in Hong Kong to launch 300Mbps LTE with LTE-A 2CC CA

HKT

(*) GBL is a 50:50 JV of HKT and another HK operator



Next Milestone : 3CC LTE-A CA 450Mbps

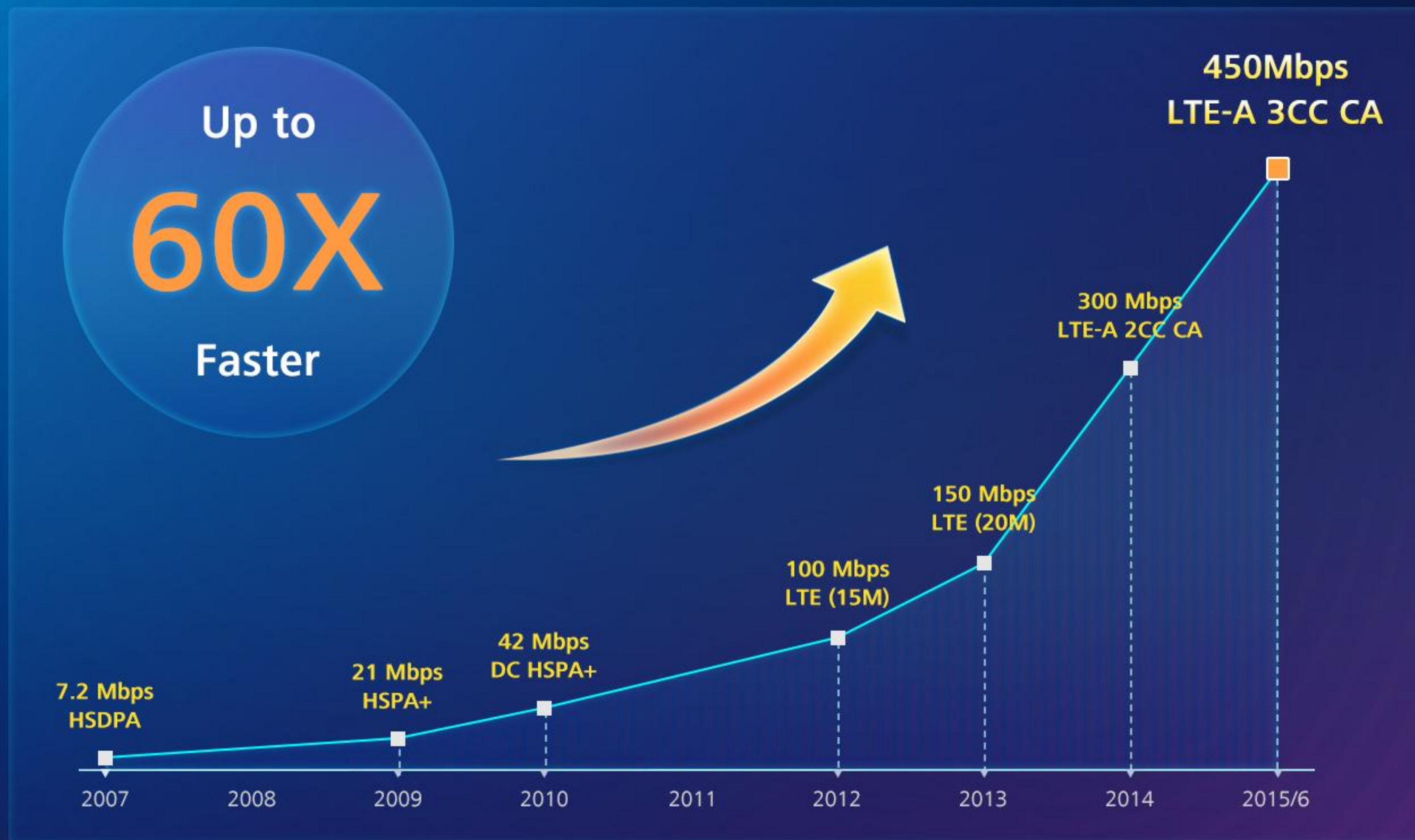


Spectrum Allocation
Source : OFCA

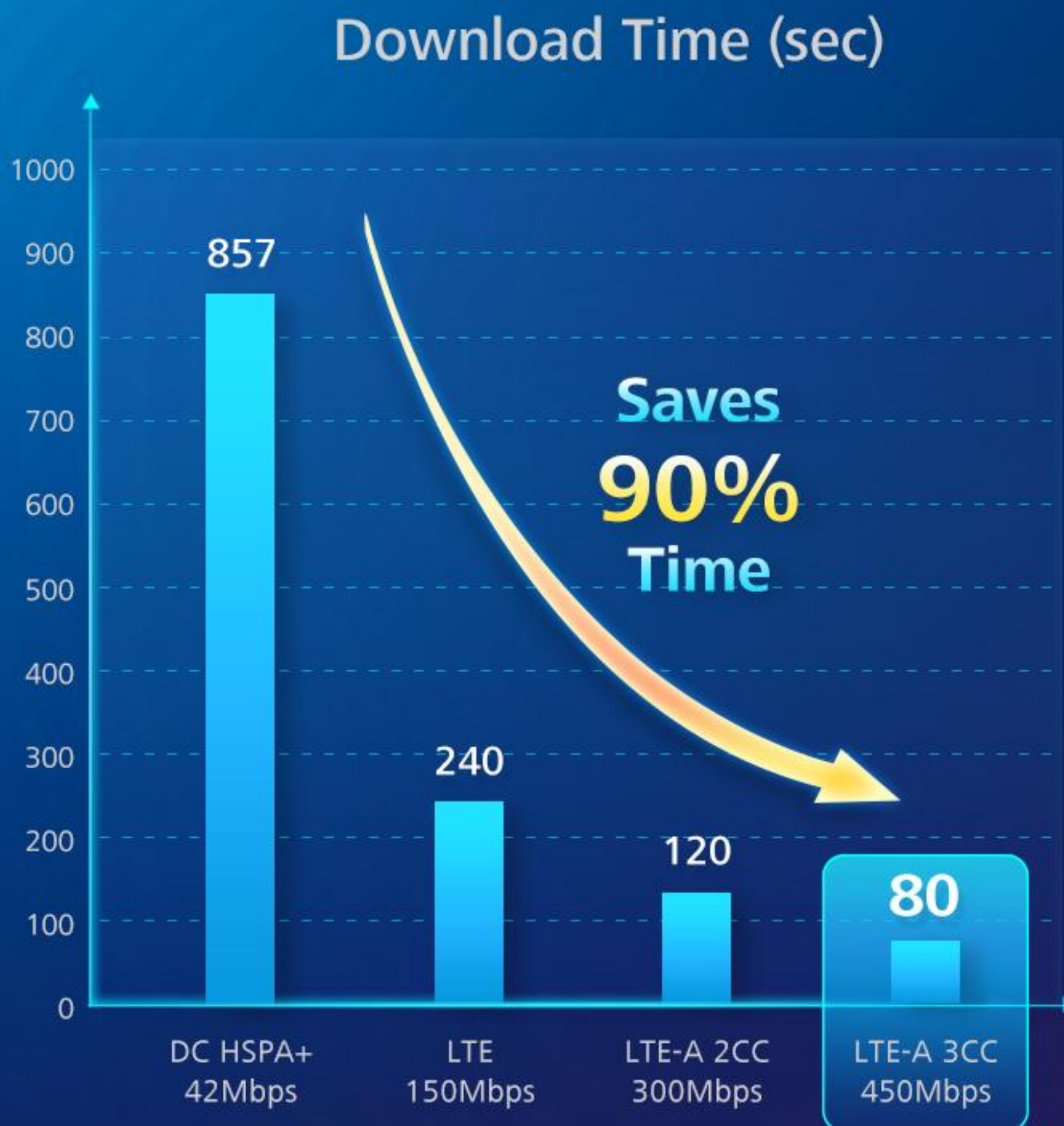
HKT is the only Hong Kong operator that is capable to realize 3CC LTE-A CA for max 450Mbps

(*) GBL is a 50:50 JV of HKT and another HK operator

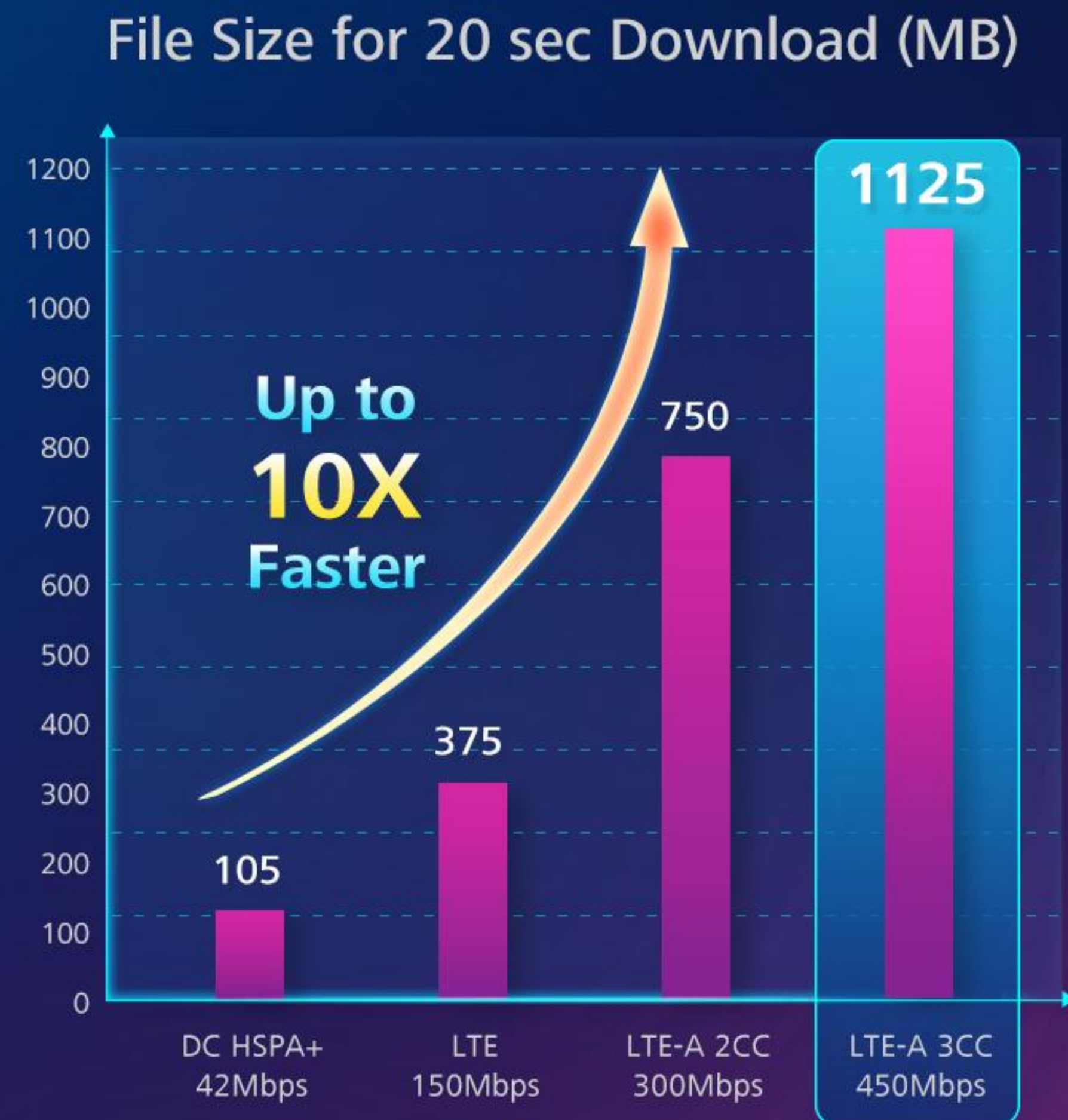
HKT Mobile Broadband Evolution



Customer Experience with LTE-A 450Mbps



* Estimated download time when transmitting a file of a DVD of 4.5GB size based on theoretical calculation



* The amount of material downloaded after 20 sec of transmission based on theoretical calculation

President of Wireless Network Product Line, Huawei

Mr. David Wang

HKT & Huawei Collaboration History

- 1st LTE2600@15MHz in HK
- 1st MOCN Network in Asia

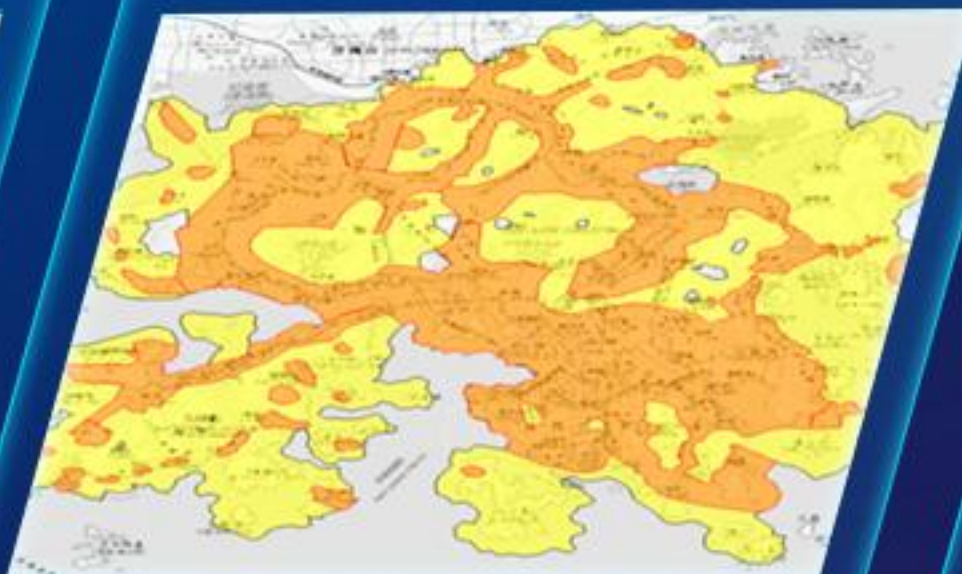
2012



LTE2600 Coverage
"Capacity Layer"

- LTE1800M Refarming
- Expand LTE2600M to 20MHz

2013



LTE1800 Coverage
"Coverage Layer"

- World 1st VoLTE+eSRVCC Network
- 300Mbps (World 1st 2CC Inter-Site CA@IPRAN)

2014



VoLTE Launch

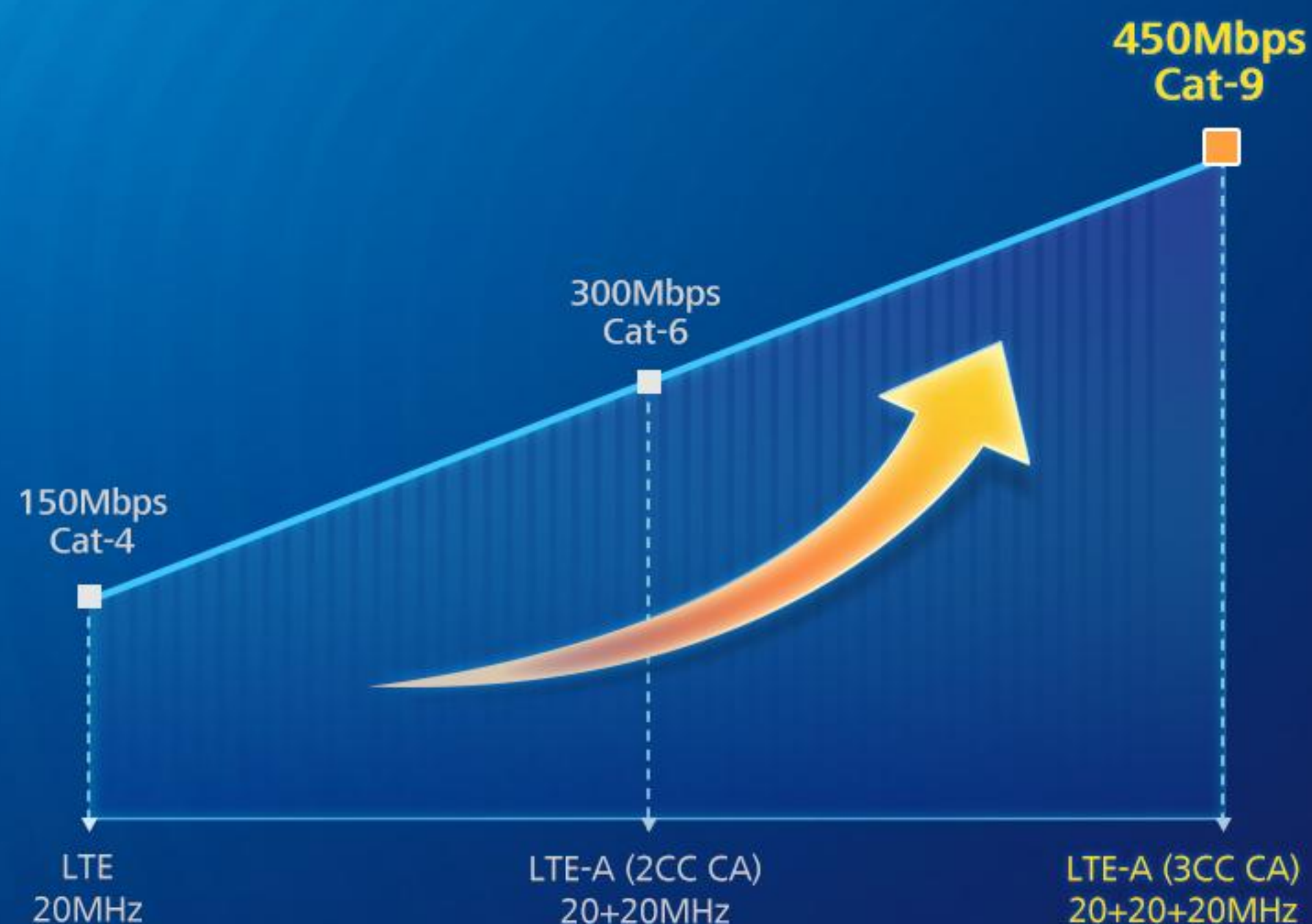
- 450Mbps (World 1st 3CC Inter-Site CA@IPRAN)

2015



Joint Demo @ MWC2015

450Mbps, **Fastest** LTE-A Network in the World



New Benchmark in the World
Cat-9 Network



Downloading Time

~6 min

Cat-4
150Mbps

~3 min

Cat-6
300Mbps

<2 min

Cat-9
450Mbps

Excellent User Experience
3X Faster

3CC CA Ecosystem Taking Off

HISILICON



Balong 750

Downlink:

- 4CC CA, DL2x2
- 3CC CA, DL4x4

Downlink:

- 2CC CA

QUALCOMM®



Snapdragon 810

Downlink:

- 3CC CA, DL2x2
- 2CC CA, DL2x2



MDM 9x45

Downlink:

- 3CC CA, DL2x2
- 2CC CA, DL4x4

Downlink:

- 2CC CA



SAMSUNG
GALAXY Note4



HTC
One M9



LG
G Flex 2



LeTV
Le max 1



MI
Note



OPPO
Find9



Smartisan
T2



Huawei
Device

.....

3CC CA Chipsets are Ready

3CC CA Devices are Coming

HKT & Huawei **Joint Innovation Lab** to Lead the Market



High Density LTE Network:

- Average outdoor site radius in Causeway Bay is about 63m

High Smartphone Penetration:

- Average 236 Mobile subscription per 100 population

Complicated Network:

- 4 Modes, 7 Bands Allocation
(850M, 900M, H-1800M, L-1800M, 2100M, H-2600M, L-2600M)

Joint Innovation Lab

Vision:
Best Network, Best Services



Projects

- Speed Project (300Mbps/450Mbps)
- No-Edge Project (xMbps Everywhere)
- Indoor Digitalization (LampSite)
- Service Innovation (eMBMS/PTT)
-

Pave the way to **Future Together**



THANK YOU

World 1st Inter-Site 3CC CA Using IP-RAN Based Solution

