

5G is Now

Huawei Field Trial Progress



Huawei Provides E2E 5G Solution for R15 Commercialization

Massive MIMO Macro



AAU5613 AAU5310 HAAU5213

Massive MIMO Pole Site



HAAU5112 EasyBlink

Small Cell



5G LampSite

Device



5G CPE

Baseband



BBU5900 CBU5900

Transport



Microwave IP-RAN/PTN FO-OTN WDM

Core



Cloud Based

5G is Now, from Enhanced MBB to Digital Society

R15: A Milestone for Enhanced MBB Experience



Phase I: eMBB

NR Framework

- Waveform
- Channel Coding
- Frame Structure
- Numerology

- Native Massive MIMO

Architecture

- UL&DL Decoupling
- CU-DU Split

uRLLC Baseline

2018

R16: A Platform Serving All Industries



Phase II: eMBB+uRLLC+mMTC



NR Improvement



Vertical Digitalization



Spectrum

2020

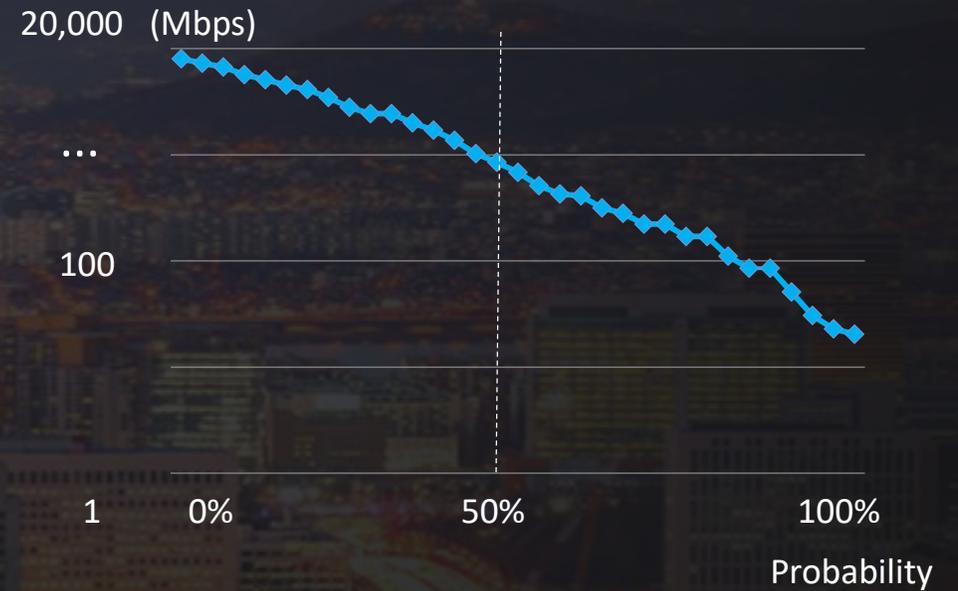
Live Demo of Massive MIMO Shows Huge Increase in Cell Capacity

Band	3.5GHz
BS Antennas	64T64R
Bandwidth	100MHz
UE Antennas	2T4R
UE	16 UEs



11.26 Gbps

Average DL Cell Capacity



*Trial in Shanghai, China

Huawei 3D-MIMO Makes xGbps Outdoor Experience Possible

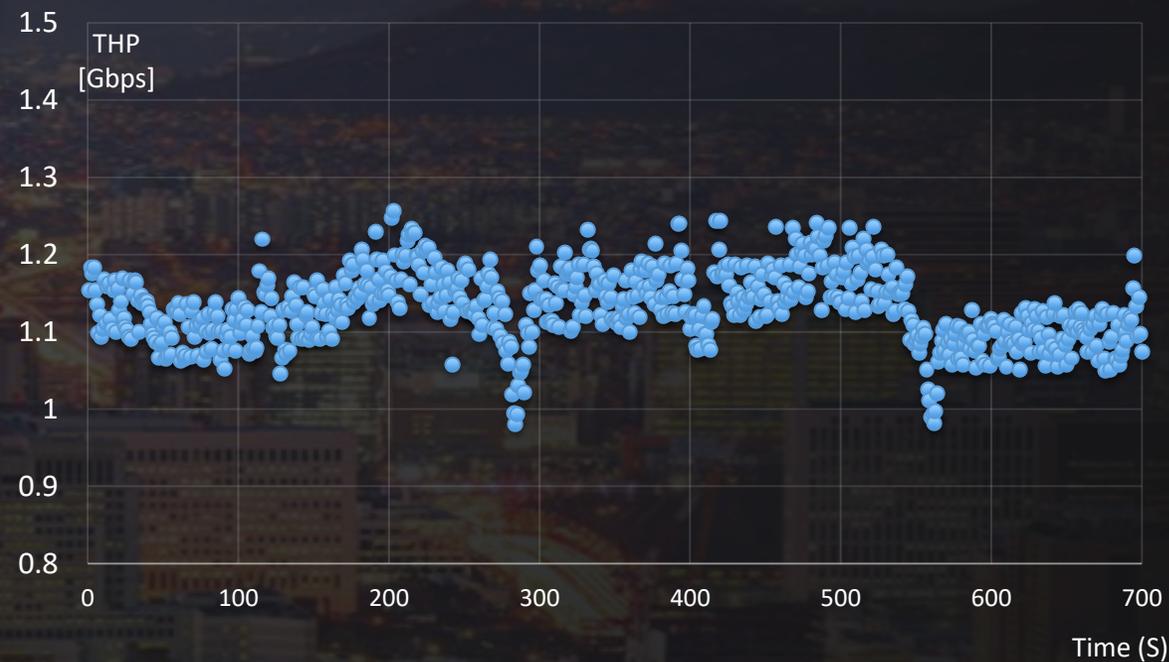
Band	3.5GHz
BS Antennas	64T64R
Bandwidth	100MHz
UE Antennas	2T4R



*Trial in Shenzhen, China, April, 2018

>1Gbps

User Experience @ C-Band



Huawei 3D-MIMO Enables Hundreds of Mbps Indoor Experience

Outdoor to Indoor Trial in Dense Urban Areas

BS 3.5GHz, 3D-MIMO



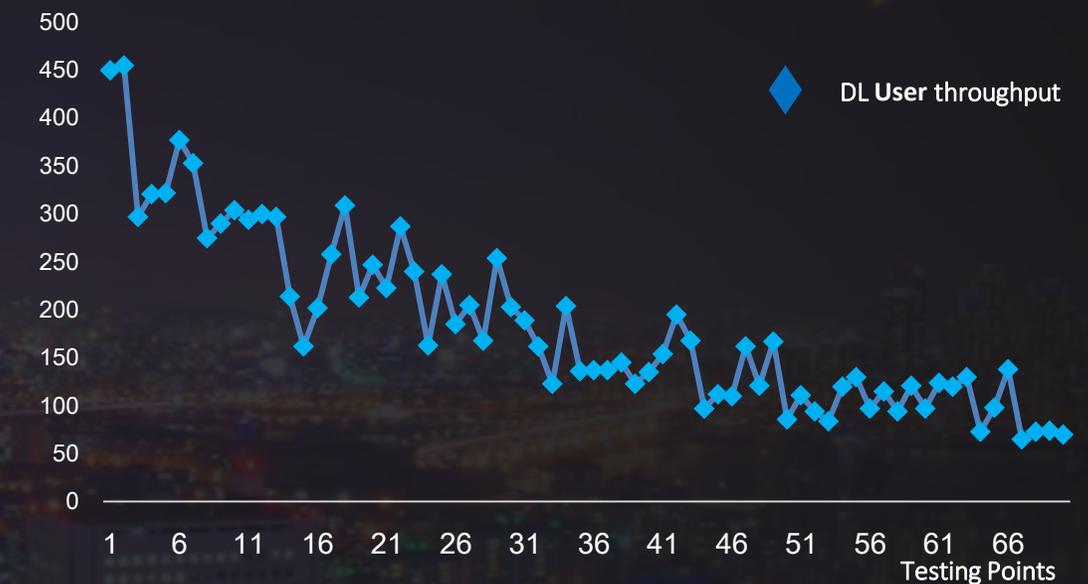
 CPE Spots in the Buildings

**Trial in Shenzhen, China, April, 2018*

Hundreds of Mbps Indoor Anytime Anywhere

DL Speed
[Mbps]

95% indoor > 100Mbps



UL & DL Decoupling Live Demo Shows ~11dB Gain in C-Band Coverage

Penetration Loss across the Building

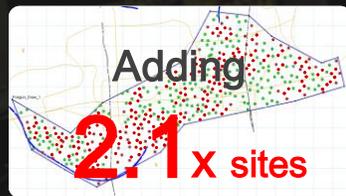


245m

Uplink <5Mbps
as Switch point

3.5GHz 64T64R (100MHz)
1.8GHz 2T2R (20MHz)
O2I Scenario

UL&DL Decoupling Reduces Site Deployment Cost

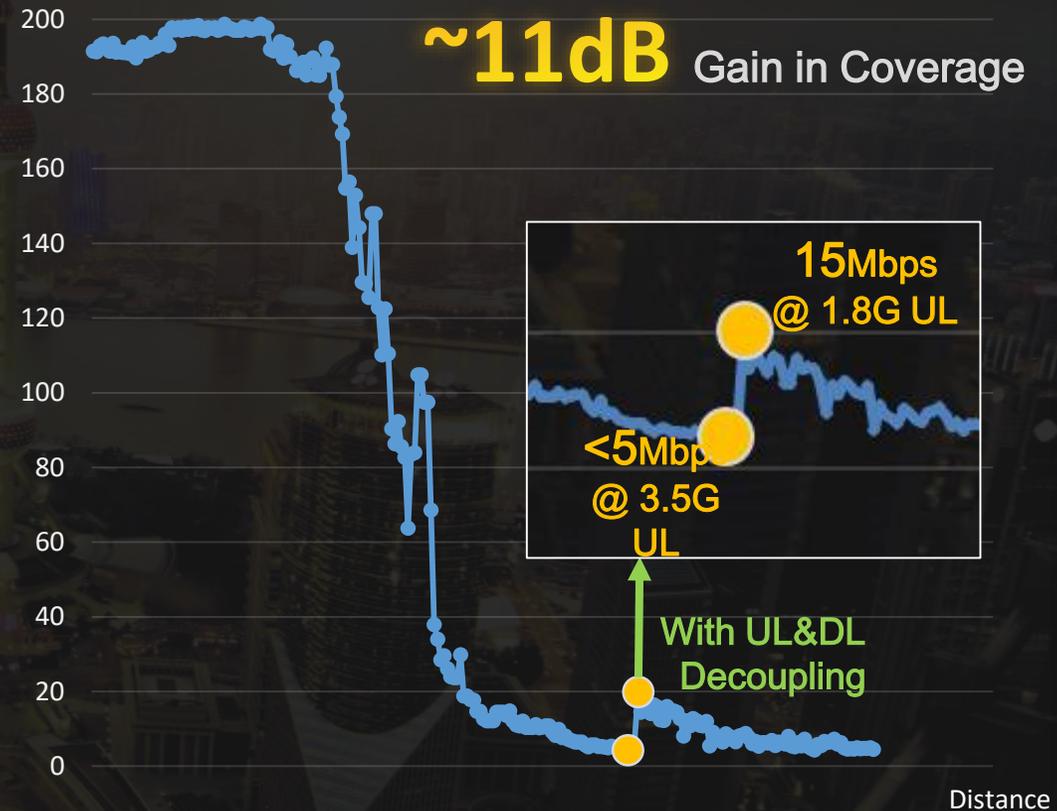


No Decoupling



Decoupling

UL&DL Decoupling Extends 5G C-Band Coverage

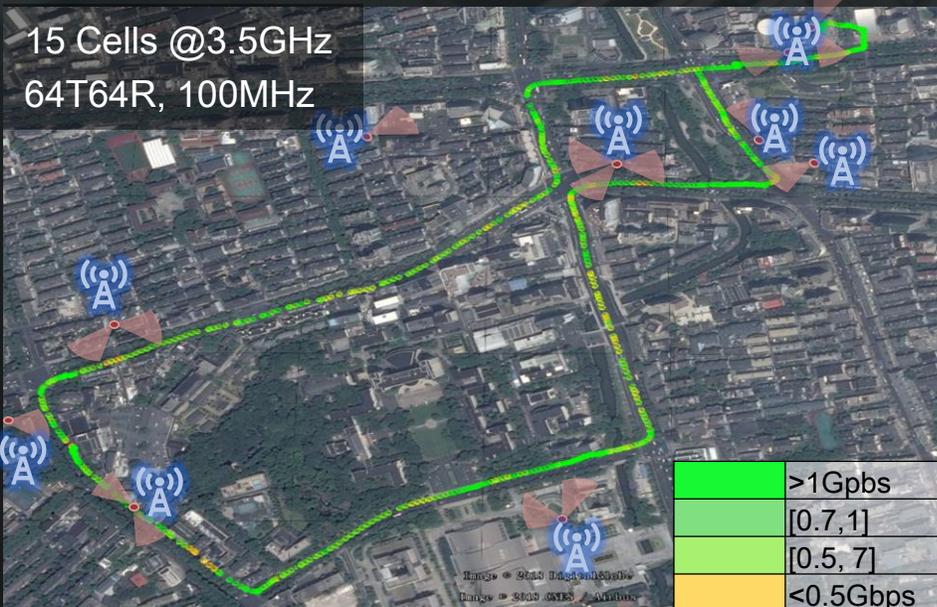


*Trial in Shenzhen, China, April, 2018

5G C-band Large Scale Field Trial in Hangzhou "5G City"



5G Field Trial in Hangzhou, China



C-band Performance Trial Scenarios



> 1Gbps

C-band
Outdoor Experience

2~6x UL Experience

UL & DL Decoupling
O2I Scenario

Multiple Use Cases



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Huawei Leads IMT-2020 5G Trial



Highest Cell Throughput



Lowest Latency



Massive Connections



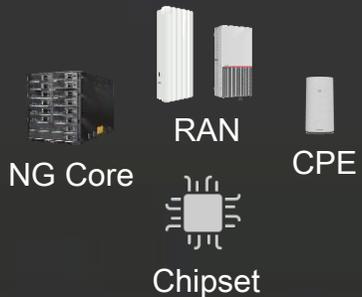
Most Comprehensive Interoperability Test



Live Use Cases to verify NR capability



Most Complete E2E System



Most Comprehensive Spectrum



3GPP-Based 5G Pre-Commercial Network in Leading Cities

30+

3GPP-Based 5G Pre-Commercial Network



Vancouver & Toronto



London



Berlin



Tokyo



Dubai



Seoul



Milan



Shanghai



Beijing

...

50+

Leading Operators



Thank you!