

Public Consultation on 2014 Digital 21 Strategy

Hutchison Telephone Company Limited welcomes the opportunity to put forward our view on the proposed initiatives set out in the Public Consultation on 2014 Digital 21 Strategy (the “Consultation”).

1. Development of Mobile Broadband Communications

Mobile Broadband (“MBB”) communications is regarded as the backbone of an increasingly connected and information-based society. Consumers and businesses alike demand ever faster speed and ubiquitous connectivity. A MBB network with comprehensive coverage, enormous capacity and agile mobility is essential for most of the latest technologies as pointed out in Chapter 2 of the Consultation paper, namely “cloud computing, big data analytics, Internet of things, wireless and multi-platform”. To implement the Government's objective of facilitating access to the information "anytime, anywhere" we put forward some concrete suggestions as to how this can be achieved in practical terms.

The development of MBB depends on 3 issues, i.e. Spectrum, Network Topology and Spectral Efficiency. The third issue can be handled by mobile operators through progressive equipment upgrade according to standardized technology evolution, while the first two shall be boosted by the Government for a prosperous MBB backbone. Below are our comments on the development of Spectrum and Network Topology for the upcoming Digital 21 Strategy campaign.

1.1 Spectrum

- It is essential that new spectrum is made available as soon as possible to meet the huge and ever-increasing demand for mobile data services. The Government should propose Spectrum Assignment plan on the global harmonized spectrum bands for mobile communications; targeting spectrum bands candidates for the coming 5 years:

- 3GPP Band : > 600 MHz spectrum for mobile service
 - ✓ Band 28 : 2 x45 MHz FDD 700 MHz (Digital Dividend)
 - ✓ Band 38 : 1 x50 MHz TDD 2.5 GHz
 - ✓ Band 42 : 1 x200 MHz TDD 3.5 GHz
 - ✓ Band 43 : 1 x200 MHz TDD 3.5 GHz
 - ✓ Band 11, 21 : 2 x35 MHz FDD 1.5 GHz

- ITU Millimeter Wave Band for mobile backhaul / front haul
 - ✓ 71-76 GHz and 81-86 GHz (E band)

1.2 Network Topology

- Heterogeneous Networks (“HetNet”) is considered to be the future Network Topology for MBB networks. It will be deployed with dense Small Cells according to standardized 3GPP technology evolution.

- The Government should drive such pioneering deployment by coordinating all the relevant departments (e.g. OFCA, Highways Department, Town Planning Board and Buildings Department) and co-operate with commercial entities (e.g. mobile operators). A seamless policy and uniform process should be adopted to promote the deployment of small cells in public properties:
 - Ease of commercial Access for deployment and/or facilities maintenance (e.g. secure but simplified, streamlined physical access);
 - ✓ Access to electrical power
 - ✓ Access to Internet access connections for backhaul;
 - ✓ Access to Government premises and public/private buildings;

 - To simplify site approval procedures and shorten lead time owing to the large amount of small cells compared to conventional macro site;

it is recommended to be treated in the way similar to that for Wi-Fi hotspot deployment currently run.

- To set policy and timeline plan for E-band Millimeter Wave trial test and allocation, as a potential means for small cell backhaul / front haul;
- To set one-stop capability for commercial entities to pay for access to electrical power, Internet access, and rent for building access, if not exempted.
- It is mentioned in Section (B) of the Consultation paper that, “our city-wide Wi-Fi penetration is also among the highest in the world”, “free of charge or free for a certain period of time through some 10,000 hotspots at over 5,400 locations” with a view of further expansion at more locations in the future.
 - On top of the increasing Wi-Fi hotspot Quantity, we consider that the enhancement of Quality of Service (“QoS”) and Quality of Experience (“QoE”) for End Users are also important.
 - The development progress of the advanced Wi-Fi features below should be considered by the Government for feasibility evaluation:
 - ✓ Inter-working between Wi-Fi and Mobile networks, including seamless handover and loading balance;
 - ✓ IEEE 802.11ad: the multi-gigabit speed wireless communications technology operating over the unlicensed 60 GHz frequency band; subsumed by the Wi-Fi Alliance in March of 2013.
 - ✓ IEEE 802.22: using cognitive radio techniques to allow sharing of geographically unused white spaces spectrum allocated for TV broadcast service, on a non-interfering basis, to bring broadband access to hard-to-reach, low population density areas, typical of rural environment.

2. In summary, we believe that the Government should facilitate MBB development by adopting more mobile spectrum assignment, advanced technology and flexible regulatory regime so as to further reinforce Hong Kong's role as Asia's telecom hub and provide benefits to the Hong Kong community as a whole.

Hutchison Telephone Company Limited

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