

## ANNEX B

June 2014

### FACTSHEET *HetNet Trials*

#### Background

Singapore is pushing towards becoming the world's first Smart Nation, one that will improve the quality of life for individuals and business productivity for enterprises. In a Smart Nation, we also seek to create an anticipatory Government that can better serve our citizens, and a nationwide Heterogeneous Network (HetNet) is a key component to achieve this.

In March this year, IDA announced plans to embark on a blueprint for HetNet which is expected to allow for more optimal use of wireless spectrum by allowing devices to switch seamlessly between various types of wireless networks.

To realise the full potential of what HetNet can offer to citizens, IDA will be conducting a series of HetNet trials in conjunction with the infocomm industry.

Through the trials, IDA will be able to validate technologies and capabilities of HetNet, which may either be commercially available today or still in research, and identify the most suitable ones for future deployment. The trials are expected to commence in 2015.

A key outcome of the trials is to achieve seamless roaming across different wireless access networks within each mobile network operator (MNO), as well as more efficient use of physical resources (e.g. spectrum, networks, energy). Data throughput will also be increased to support a wider range of multimedia applications. Consequently, consumers will enjoy an improved quality of experience.

IDA will be organising an industry briefing event on 1 July 2014. IDA will share its vision of achieving a Smart Nation with the industry and how the HetNet programme is aligned with this vision. More information on how the industry can participate in the HetNet trials will also be released at the event.

#### About HetNet

An initial assessment by IDA forecasts the mobile data traffic in Singapore to grow exponentially from approximately 3.1 petabytes per month in 2010 to approximately 37 petabytes per month in 2015, representing a compound annual growth rate of 64%. IDA is exploring HetNet as a strategy to mitigate the potential crunch in wireless spectrum usage. The key benefits of HetNet are as follows:

#### Seamless Access and Consistent User Experience

With the pervasiveness of Internet applications and services, it is important to provide users with a consistent experience as they move across different networks.

With HetNet, consumer devices will be able to authenticate and access different networks, powered by various mobile technologies, seamlessly when they roam. This would provide consumers with a consistent user experience, whether they are watching a video clip or making an Internet phone call.

For example, when a mobile device that is connected to a cellular network enters a Wi-Fi hotspot where faster speeds are available, it will switch to the Wi-Fi network automatically without interruption to data downloads or video freezes that typically arise from switching between different wireless networks.

### Dynamic Network Management

HetNet would allow for sharing of information among various networks, as different networks would be able to “talk” to one another. In the process, it would optimise resources and re-distribute demands across different networks. This results in an overall better management of network capacity and spectrum usage, ensuring an acceptable level of experience for all users.

Such dynamic network management would benefit cellular operators as it would alleviate the growing mobile data load on cellular networks. Consumers, especially heavy data users, would also benefit as they may realise cost savings and faster average speeds as their data gets offloaded from cellular to alternative wireless services.

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