FACT SHEET: Light-Fidelity (Li-Fi) Invitation-to-Trial

Facilitating Li-Fi Trials in Singapore

Singapore aims to promote greater technological innovation by encouraging trials in the nascent Light-Fidelity (Li-Fi) technology and exploring its potential benefits and applications. Li-Fi is an innovative light-based communication technology that has the potential to provide a new layer of wireless connectivity as a future-ready solution in addition to the heterogeneous radio frequency wireless networks.

We have seen growing interest from both local and overseas companies to explore its potential benefits and applications. To enable this, and continue IMDA's goals of empowering possibilities through ICM in support of our Smart Nation vision, IMDA is waiving frequency fees associated with Li-Fi trials in Singapore to encourage and facilitate technical trials of this technology within the nation with immediate effect.

Companies that are interested in conducting Li-Fi trials may utilise the existing IMDA's Technical Trial framework[1]. Application for a Technical Trial licence can be found on the IMDA website.

Potential Use Cases for Li-Fi

In view of the increasing demand for radio spectrum for communications, IMDA has been monitoring the developments of Li-Fi technology. Unlike traditional telecommunication devices that use radio frequency signals for data transmission, Li-Fi uses the visible light portion of the electro-magnetic spectrum between 400 and 800THz. Operating at the higher range of the electro-magnetic spectrum allows Li-Fi to deliver potentially higher capacity throughput of up to 1Gbps while alleviating demand for radio spectrum.

In Singapore, there has been growing awareness and interest in Li-Fi technology. For example, in July 2016, Temasek invested in pureLiFi, an Edinburgh-based telecommunications company, to support the development of the firm's technology. In addition, companies such as StarHub are also working with pureLiFi to explore the possibility of conducting Li-Fi trials here. Such collaborations will open up more opportunities for Li-Fi adoption in Singapore and IMDA hopes to see more of such joint-industry trials here.

Li-Fi applications are varied as a result of its key features, such as directional lighting, intrinsic security, high data rate and integrated networking capabilities. Some of the key applications using Li-Fi technology are highlighted below:

[1] IMDA's Technical Trial Framework defines license conditions such as the frequency range, maximum power levels, and compliance with industry standard protocols for use in Singapore.

i) Home and Enterprise Networking: Li-Fi networks could be deployed to complement the existing networks such as mobile and Wi-Fi networks, providing an additional boost in the capacity.

ii) Location-based Services: Li-Fi opens up vast advertising and navigational opportunities for businesses, where users of Li-Fi enabled mobile devices can receive relevant information based on their locations.

ISSUED BY THE INFOCOMM MEDIA DEVELOPMENT AUTHORITY

About Infocomm Media Development Authority

The Info-communications Media Development Authority (IMDA) will develop a vibrant, world-class infocomm media sector that drives the economy, connects people, bonds communities and powers Singapore's Smart Nation vision. IMDA does this by developing talent, strengthening business capabilities, and enhancing Singapore's ICT and media infrastructure. IMDA regulates the telecommunications and media sectors to safeguard consumer interests while fostering a pro-business environment. IMDA also enhances Singapore's data protection regime through the Personal Data Protection Commission. For more news and information, visit www.imda.gov.sg or follow IMDA on Facebook IMDAsg and Twitter @IMDAsg.

For media clarifications, please contact:

Adrian Chan (Mr)
Corporate and Marketing Communication
Tel: +65 6211 1510
E-mail: adrian_km_chan@imda.gov.sg

Eugene Neubronner (Mr)
Corporate and Marketing Communication
Tel: +65 6211 1182
E-mail: eugene_neubronner@imda.gov.sg
