

May 2017

FACTSHEET

IMCONNECTED IMPROVES INFORMATION TRANSPARENCY AND QUALITY OF EXPERIENCE FOR CONSUMERS

IMconnected is a mobile application that utilises voluntary crowdsourcing to improve the quality of experience for mobile broadband users. IMconnected gathers usage experience from users' mobile phones, such as broadband speed¹, latency and coverage on mobile cellular networks such as 3G and 4G, as well as on Wi-Fi networks. This allows IMDA to have a better understanding of mobile broadband performance and provides information on consumers' usage experience.

Results from the pilot

Since the start of the pilot in October 2014, around 4,000 users have shared their individual mobile experience with IDA (now IMDA), and the app has gathered more than 50 million data points.

The results showed that mobile users had good 3G service coverage experience island-wide, while coverage experience on 4G had been improving. Typical data download speed experienced by 80% of 4G participants was good, between 5.1 and 42.4 Mbps, with a peak speed of 87.7 Mbps. At these speeds, users can expect good experience for social networking, video streaming and online gaming. Typical data download speeds on 4G were about 5 times faster than 3G with much shorter latency² (about 4 times shorter) when establishing a connection. Data download speed on

¹ Otherwise known as throughput, this measures the rate at which a certain file size is successfully transferred. It is measured in megabits per second (Mbps).

² Latency measures the response time or time taken to establish a network connection from an end-user to a destination. Readings are taken for server hosted locally.

Wireless@SG services was also higher than the 2Mbps of bandwidth provided at public areas, achieving a peak speed of 8.5Mbps.

IMconnected has helped to identify areas with high utilisation as well as potential cellular blind spots. The results were shared with the mobile telecommunication operators to address areas where data coverage needs to improve. Overall, the data from IMconnected will help plan for efficient upgrades for a better user experience.

IMDA is publishing the IMconnected results to increase information transparency to help consumers make informed choices on their mobile broadband plans.

IDA (now IMDA) was satisfied with the outcome of the pilot and implemented IMconnected as a longer-term measure. IDA (now IMDA) launched the official release of the app on 1 July 2015.

As we expand the reach of IMconnected, we encourage consumers to join us in our crowdsourcing efforts and download IMconnected to share their mobile experience. IMDA will make these reports available every six months.

IMconnected is available on both the Apple App Store for iPhone users, and the Google Play Store for Android users.

Features of the App

(1) Crowdsourced Information on Mobile Broadband Experience

IMconnected will periodically collect the following information in the background:

Data Performance	Voice Performance	Device Identifiers
(1) Session throughput (2) Latency (3) Packet loss per session (4) Data volume utilised	(1) Experienced Network Coverage	(1) Manufacturer and model (2) Operating System (3) Location Information*

** Users are advised to turn on the “location” feature on their mobile phones for more accurate data and feedback to IMDA.*

Information collection for IMconnected is anonymised, and no personal data which can be used to identify an individual will be collected (e.g. Mobile number, IMEI, photographs or video images, personal email address or online profiles).

(2) Speed Test

Users can use a single data stream to test their broadband speed. Please refer to Figure 1 below for a screenshot.

(3) Connection to Popular Website and Apps

IMconnected will also allow participants to view their connection performance to the following popular websites and apps³ - Facebook, Youtube, Google, Twitter, Mediacorp and Gmail. Please refer to Figure 2 below for a screenshot.

³ Based on Nielsen Digital Index 2013 and Alexa September 2014 for the ranking of most accessed sites/apps in Singapore. This list will change as it is subject to the availability of websites and apps.

(4) User-submitted Experience Survey

Users can also submit their mobile broadband experience through a survey on their location (e.g. in a train, bus, indoor or outdoor environment), how they feel about their broadband experience and their experience with certain call and data performance.

Please refer to Figure 3 below for a screenshot.



IMconnected is jointly developed with Ciqua Ltd. Ciqua Ltd was founded in 2007 and is based in Edinburgh, United Kingdom with an additional office in Australia. They have provided such mobile applications to overseas operators in Shanghai, Qatar and Finland.

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