Case Study: WiFi@MRT – From Connectivity to Analytics

Executive Summary

Beneficiaries:
Commuters

Industry:
Government

Location:
Mass Rapid Transit (MRT) stations
Expanding coverage to Light Rail Transit (LRT) stations, bus interchanges and terminals

Usage:
2 million daily

Objectives:
Enhance commuting experience

Challenges:
Rail infrastructural enhancements to meet increased demand take time.

Commuters' expectations are omnipresent and require quick resolution.

Results:
2 million logins daily (2.9 million daily journeys on MRT)

Value Adds:
WiFi data used to generate deep insights through advanced data analytics

Overview

In land-scarce Singapore, public transport has increasingly become a travel mode of choice, on the back of a growing population (5.54 million as of 2015) and a well-connected public transport network.

Indeed, public transport ridership in Singapore has seen a rising trend over the years, hitting a daily average of 6.9 million journeys on public transport, of which 40% of those journeys are on Singapore's Mass Rapid Transit (MRT) rail system.

As the Singapore Government continues to expand capacity of the rail network with physical enhancements to meet increasing demand, commuters continue to expect shorter waiting times before boarding a train, especially during peak hours in the mornings and evenings. Since infrastructure enhancements take time, the Singapore Land Transport Authority (LTA) had to innovate and develop a quick resolution to meet commuters' omnipresent expectations.

Against this backdrop, LTA started a programme in 2013 to provide free WiFi coverage, Wireless@SG on Singapore's public transport network, as part of the Land Transport Master Plan to provide better service to commuters. The Wireless@SG is a wireless connectivity programme by the Infocomm Development Authority of Singapore (IDA) that provides free and easy connectivity to Wi-Fi services in the public space, in collaboration with venue owners and service providers.

Better Commuting Experience For All

Starting with Mass Rapid Transit (MRT) stations, WiFi connectivity was provided at MRT station platforms for commuters as they wait for trains. With this service, commuting journeys were enhanced in the following ways:

Productive journeys - An 'always connected' journey, particularly for commuters who need to check their emails, access social media or read the news during their commutes.

Comfortable commutes - Innovative crowd management using WiFi hotspot placement to encourage crowd displacement to areas with better connectivity.

Data-driven insights - Data collected from WiFi hotspots are used to generate rich and useful insights on crowd behaviour and improve the delivery of our public transport services.

Rosina Howe-Teo, Chief Innovation Officer, Land Transport Authority:

"This enhances the commuting experience by providing an 'always connected' journey for commuters who need to check their emails or read the news during their commutes.

We are very encouraged by the growing usage of the WiFi service at MRT nodes. LTA can also use the data to generate useful insights on crowd behaviour and improve the delivery of our public transport services"

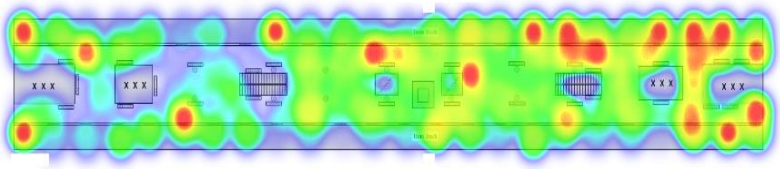

Illustration of crowd visualisation using WiFi data

For example, data collected from the WiFi hotspots help LTA's transport planners, architects and engineers visualise crowd and passenger flows along MRT station platforms in real-time, and hence are able to deliver better commuter-centric solutions.

The WiFi service, whilst provided at 20% of all MRT stations, has more than **2 million logins per day** – testament to its immense popularity among Singapore commuters taking journeys on the MRT.

Encouraged by the good response as well as the rich insights WiFi data has enabled, LTA is expanding WiFi coverage such that by 2020, commuters can connect to WiFi at all MRT and Light Rail Transit (LRT) stations, as well as bus interchanges and terminals.

In Summary

Initially developed to provide commuters with WiFi connectivity at MRT stations, the WiFi service has now become an integral part of daily commutes in Singapore.

Beyond this, the programme has also reaped benefits for Singapore.

WiFi data are used to generate deep insights that not only improve LTA's delivery of public transport services, but also are a key enabler for advanced analytics driving Smart Urban Mobility for Singapore.

About LTA

The Land Transport Authority (LTA) is a statutory board under the Ministry of Transport that is responsible for planning, operating, and maintaining Singapore's land transport infrastructure and systems. LTA's aim is to make public transport and other mobility forms come alive so travellers of all ages will look forward to their daily journeys. LTA wants to make daily travel in Singapore, a way of life that is healthier, greener and more sustainable.

More Information

To know more about LTA, visit: http://www.lta.gov.sg/

About IDA

The mission of the Infocomm Development Authority of Singapore (IDA) is to develop information technology and telecommunications within Singapore with a view to serve citizens of all ages and companies of all sizes. IDA does this by actively supporting the growth of innovative technology companies and start-ups in Singapore, working with leading global IT companies as well as developing excellent information technology and telecommunications infrastructure, policies and capabilities for Singapore.

More Information

For more news and information, visit www.ida.gov.sg. Follow IDA on Facebook IDA.Singapore and Twitter @IDAsg.