# Mobile Broadband Self-Declaration Report

1st July – 31st December 2019

# EXECUTIVE SUMMARY

This is the 2nd publication by Malaysian Communications & Multimedia Commission (MCMC) on service providers' Self-declared Network Performance on mobile broadband. Information stated in this report covers the 2nd half of 2019, from 1st July 2019 to 31st December 2019.

The report is intended to provide insights to consumers and empower the consumer to make their own choices based on the data gathered from the crowd. The report is also aimed at service providers to improve their quality of broadband service to the consumers.

This report is a compilation of self-declared overall network performance of service providers. The data is derived from the tests performed by mobile broadband users, gathered through crowdsource system and not subjected to the Mandatory Standards.

Five (5) metrics shown in this report are:

i. Mobile broadband coverage map (nationwide)
ii. Download Speed (average)
iii. Upload Speed (average)
iv. Latency (average)
v. Video experience (quality on mobile device based on download speed)

# EXECUTIVE SUMMARY

Mobile broadband coverage metric (item i) for both 3G and 4G are simulations based on mathematical permutations. The coverage prediction is based on outdoor levels of signals received.

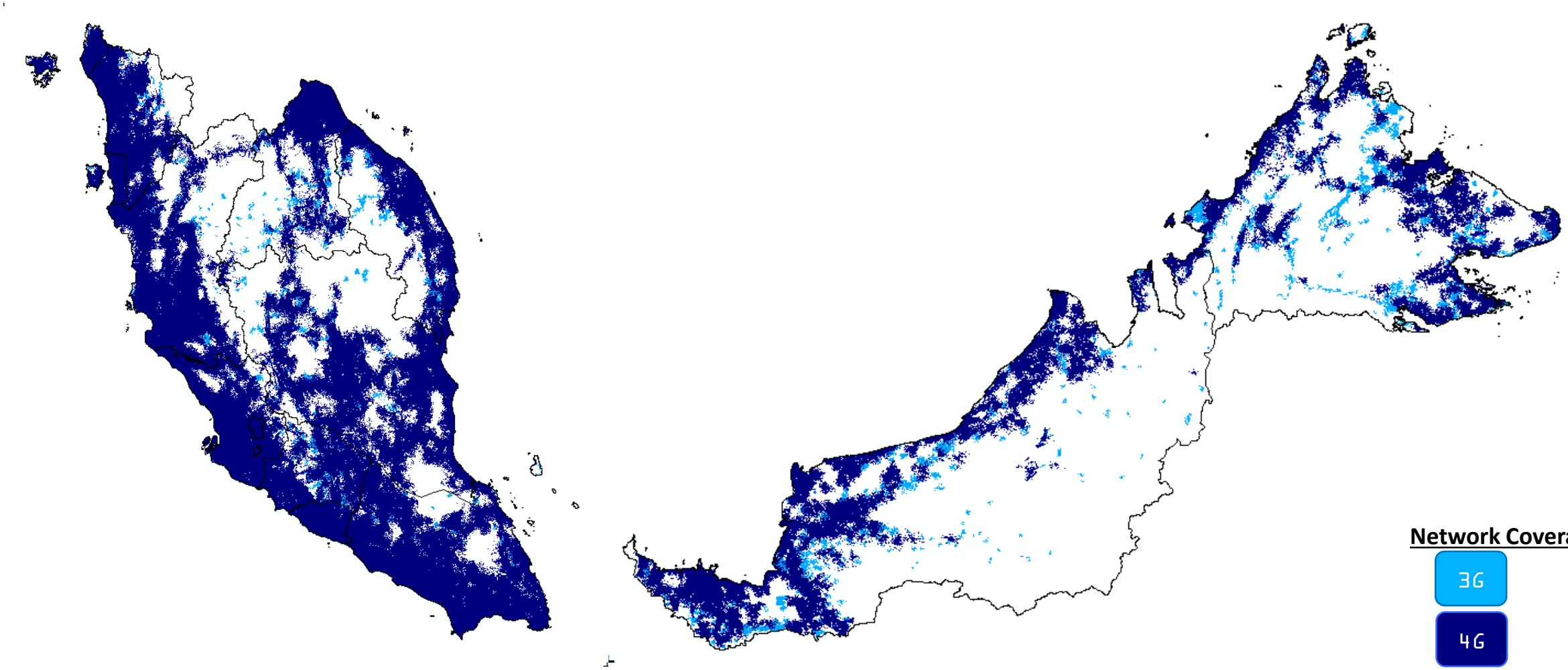
Other metrics (item ii, iii, iv) are generated from crowdsource applications with sufficient sample size to indicate the average user experience throughout the states of Malaysia from 1st July – 31st December 2019.

Video experience metric (item v) is based on Standard Definition (SD) or High Definition (HD) quality video streaming on mobile device. A minimum of 2.5Mbps download throughput is required for good HD quality video streaming on mobile device.

There are 6 mobile broadband operators in Malaysia subjected to Mandatory Standard for Quality of Service for Wireless Broadband Access Service. All operators have agreed to self-declare their consumer crowdsource data. However, YTLC failed to provide their self-declare consumer crowdsource data in this cycle and Maxis has declined to self-declare their 3G network performance.

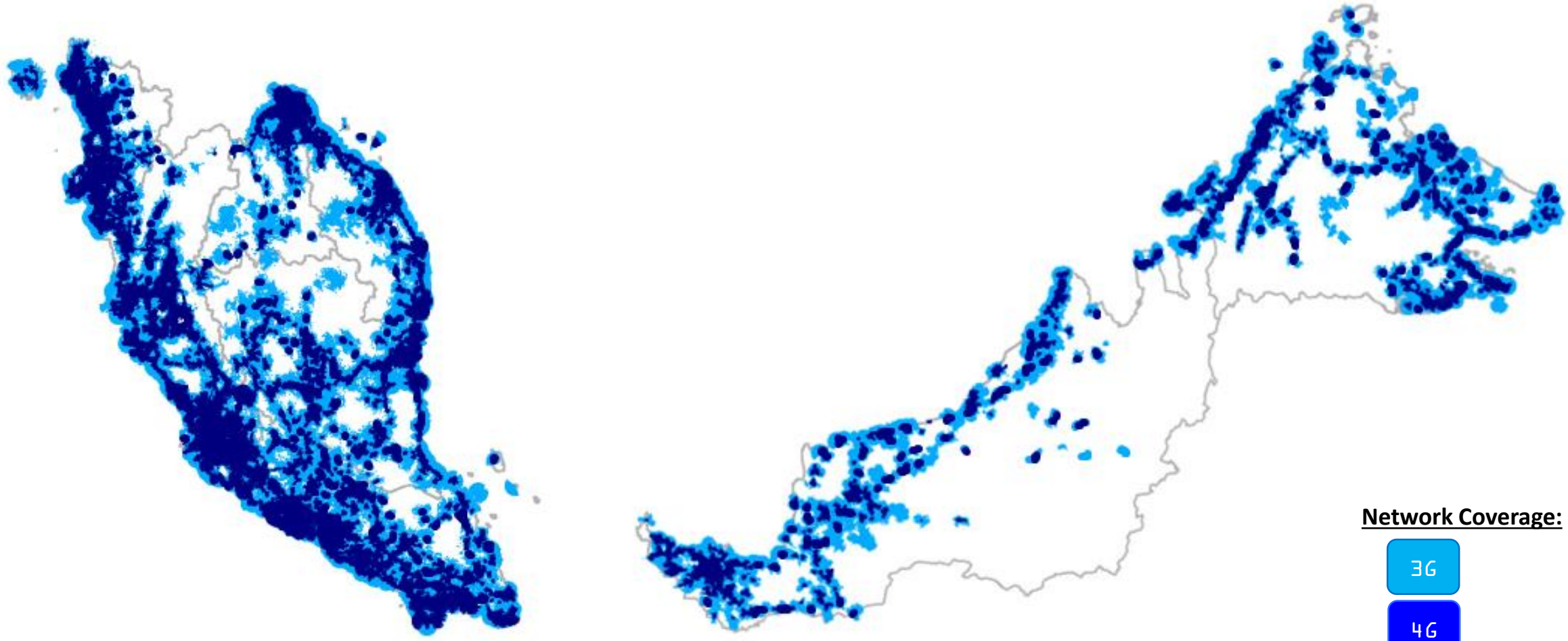
# MOBILE BROADBAND COVERAGE

# Celcom 3G & 4G LTE Coverage



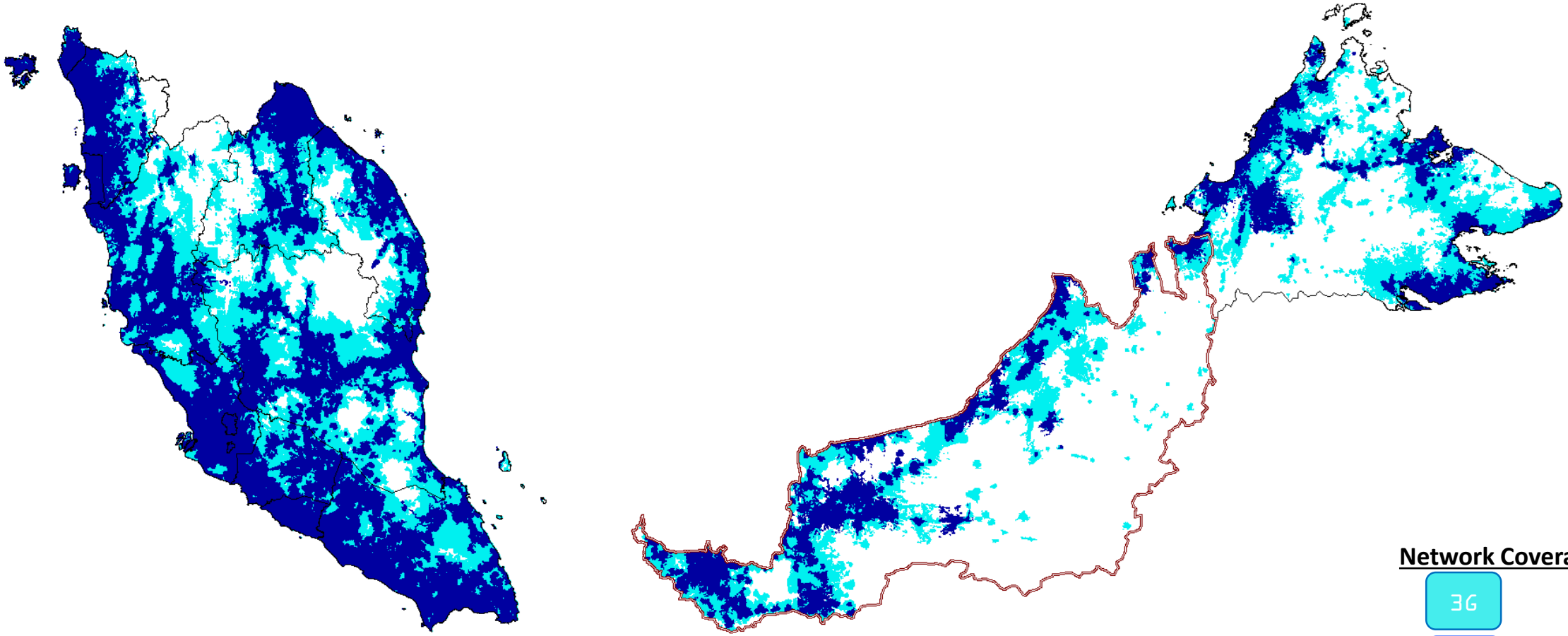

*Disclaimer: All coverage maps provided are for informational purposes only and are generated based on mathematical permutations. Actual service coverage, quality and availability may vary according to factors such as system limitations, topography, blockage, indoor coverage, phone and modem model. Services are provided on as available basis and please note that information provided here is not a guarantee of service availability. The coverage prediction is based on signal level of -98dBm and -110dBm for 3G and 4G respectively.*

# Digi 3G & 4G LTE Coverage




*Disclaimer: All coverage maps are provided for informational purposes only based on mathematical permutations. Actual service coverage, quality and availability may vary based on factors such as system limitations, topography, indoor coverage, device model. Information provided here is not a guarantee of service availability.*
*Coverage prediction is based on -110 dBm (4G) and -98 dBm(3G) signal threshold*

# Maxis 3G & 4G LTE Coverage



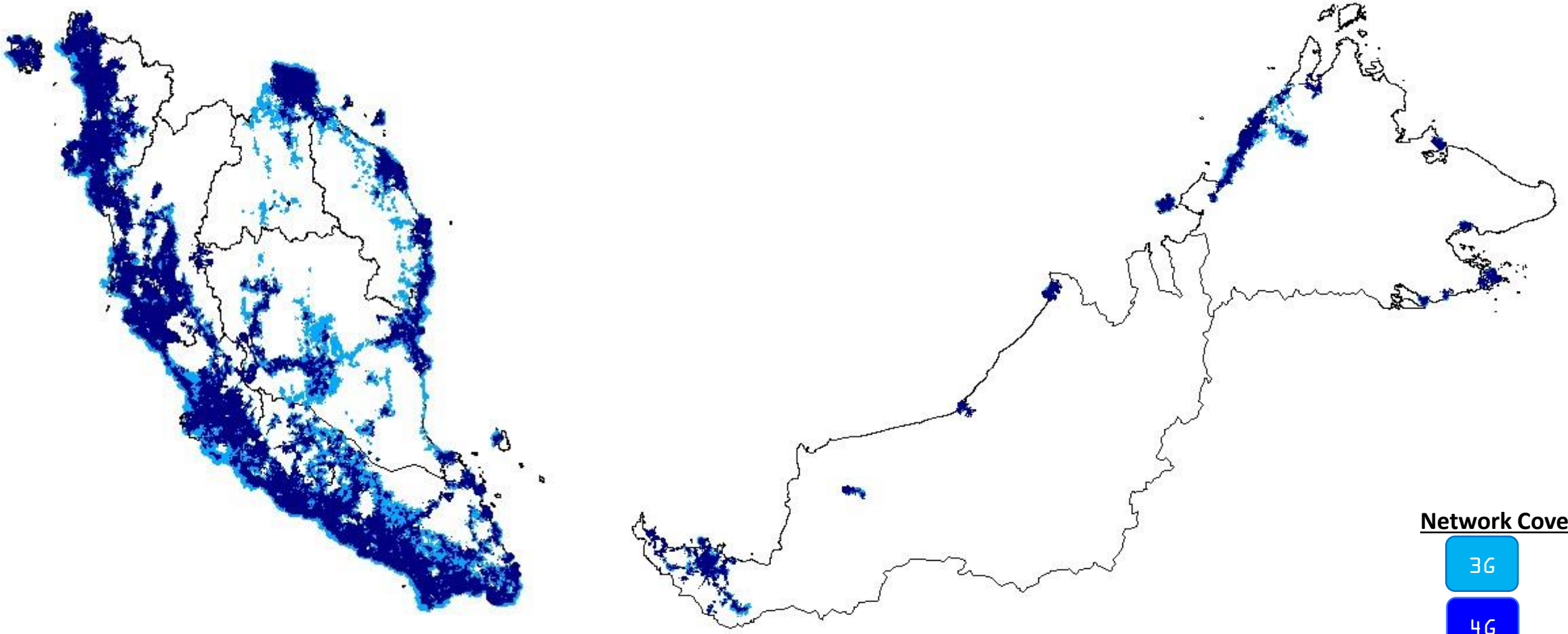
**Network Coverage:**

3G

4G

*Disclaimer: Coverage prediction above is based on -98dBm signal level for 3G & -110dBm for 4G)*
*Link to detail map : https://cw.maxis.com.my/en/consumer/maxis-network-map.html*

# U Mobile 3G & 4G LTE Coverage



**Network Coverage:**

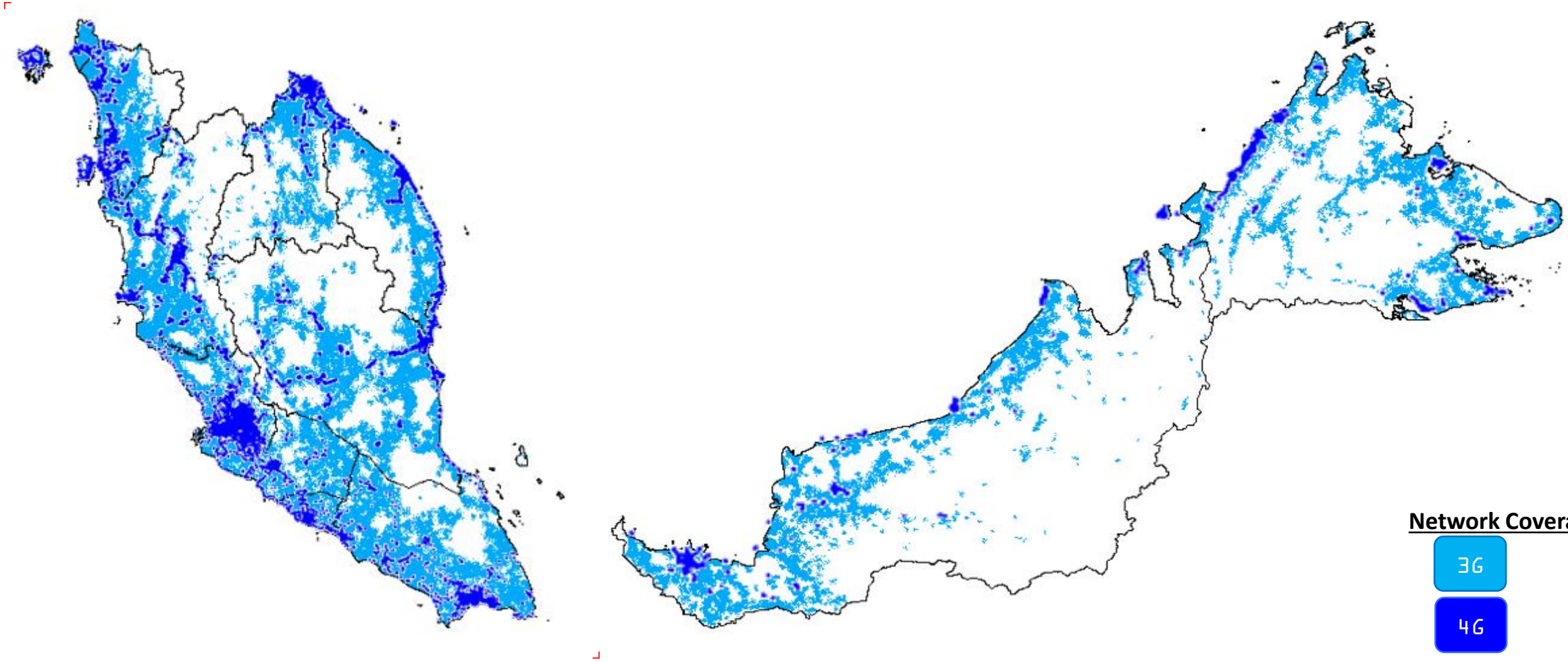
3G

4G

*Disclaimer: Services are provided on the best effort basis. All coverage maps are provided for informational purposes only based on mathematical permutations. Actual service coverage, quality and availability may vary based on factors such as system limitations, topography, indoor coverage, device model. Information provided here is not a guarantee of service availability. Coverage prediction is based on 4G -110 dBm and 3G -98dBm.*

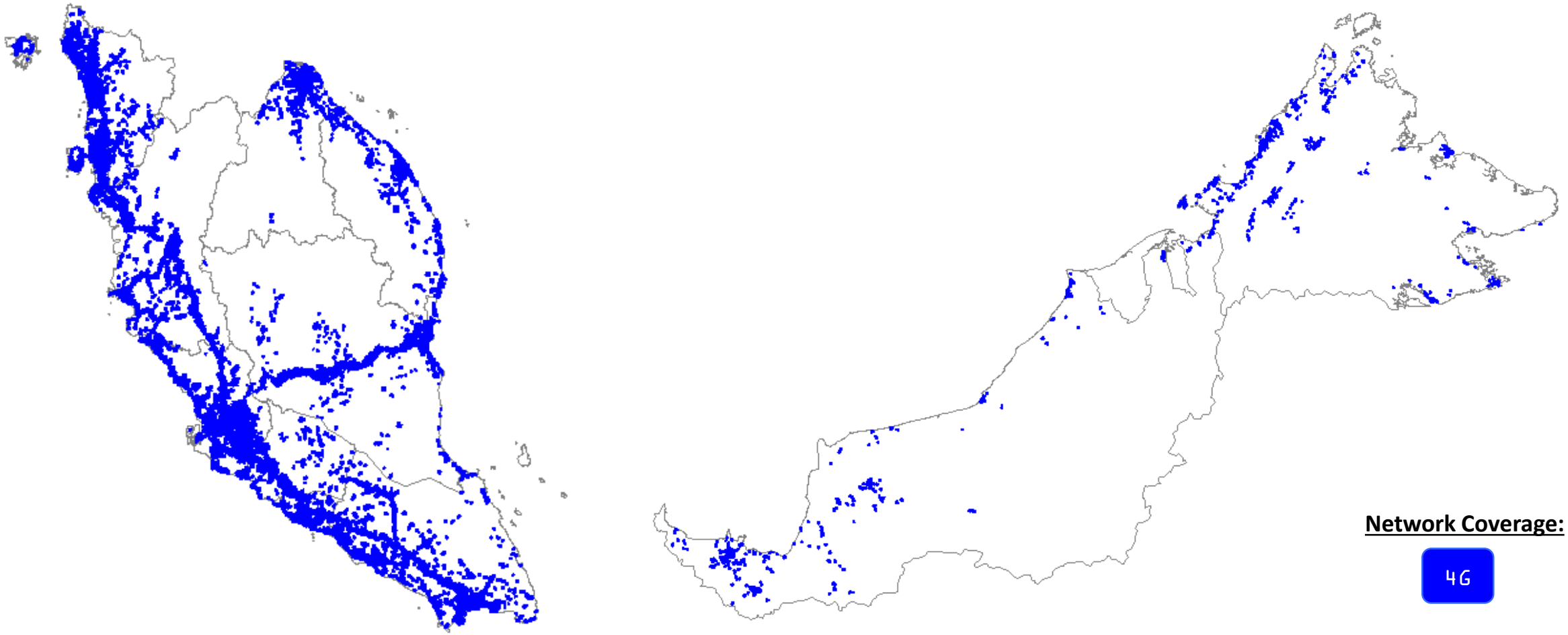
*Link to detail map : https://www.u.com.my/support/selfhelp/coverage-map*

# Unifi Mobile 3G & 4G LTE Coverage




*Disclaimer: All coverage maps provided are for informational purposes only and are generated based on mathematical permutations. Actual service coverage, quality and availability may vary according to factors such as domestic roaming, system limitations, topography, blockage, indoor coverage, phone and modem model. Services are provided on as available basis and please note that information provided here is not a guarantee of service availability. The 4G coverage prediction plot is based on signal level of -91dBm. The 3G coverage prediction plot is based on the domestic roaming with Celcom**

# YTLC 4G LTE Coverage



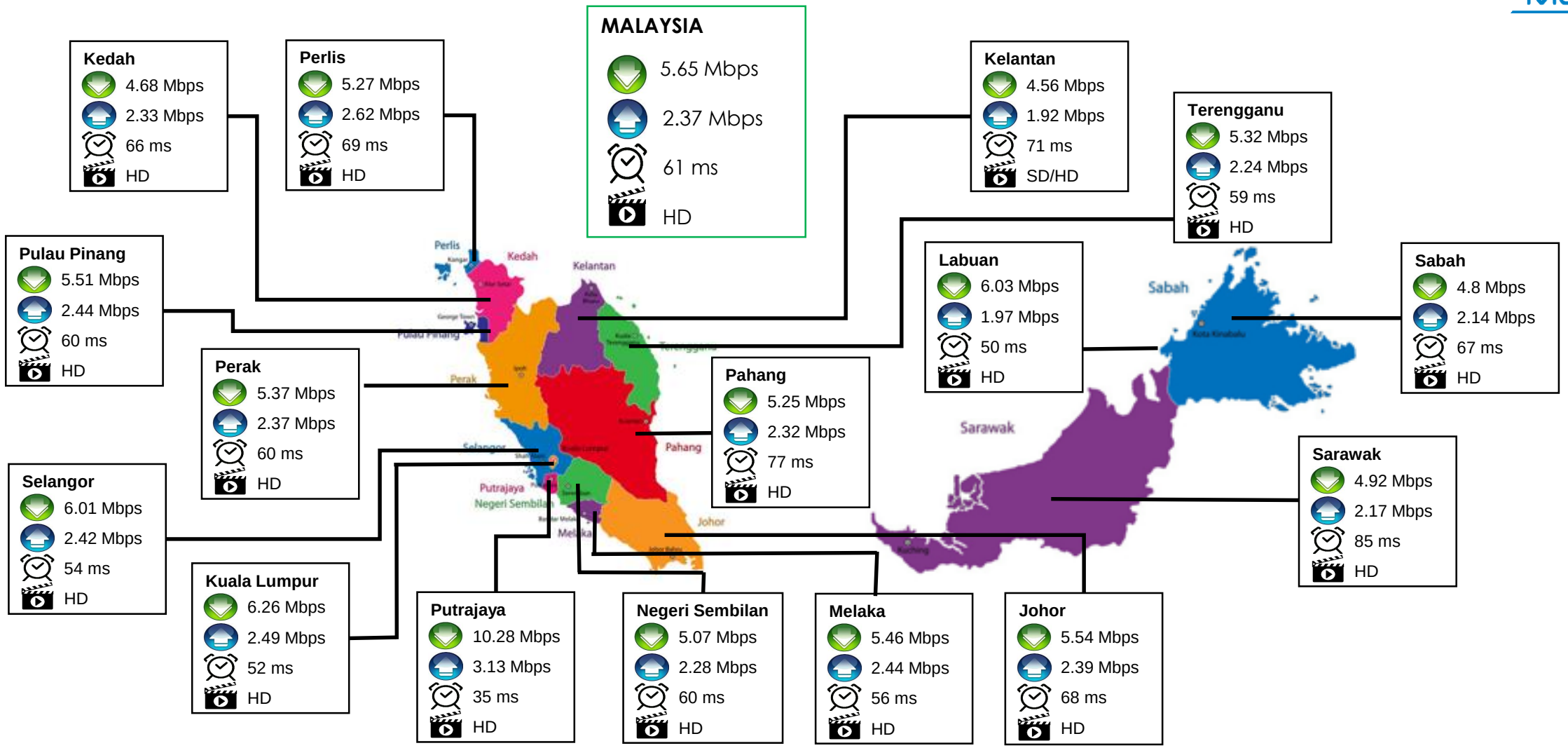
**Network Coverage:**

4G

*Disclaimer : Mobile broadband coverage map(s) shown is(are) based on computer simulations outdoor at the street level and a minimum of 2.5Mbps download throughput based on 80% of the time, subjected to number of connected users, resource utilization at the base station and network availability. The actual coverage may vary depending on the surroundings, environmental obstructions, distance to the base stations, the actual location of customer's mobile device within the building and the height in comparison to the serving base station height, and the structural type & age of the buildings. Such conditions will affect the actual coverage and customer experience. The coverage prediction is based on signal level of -107.4dBm.*

# MOBILE BROADBAND NETWORK PERFORMANCE

# Celcom Network Performance on 3G




Average download speed

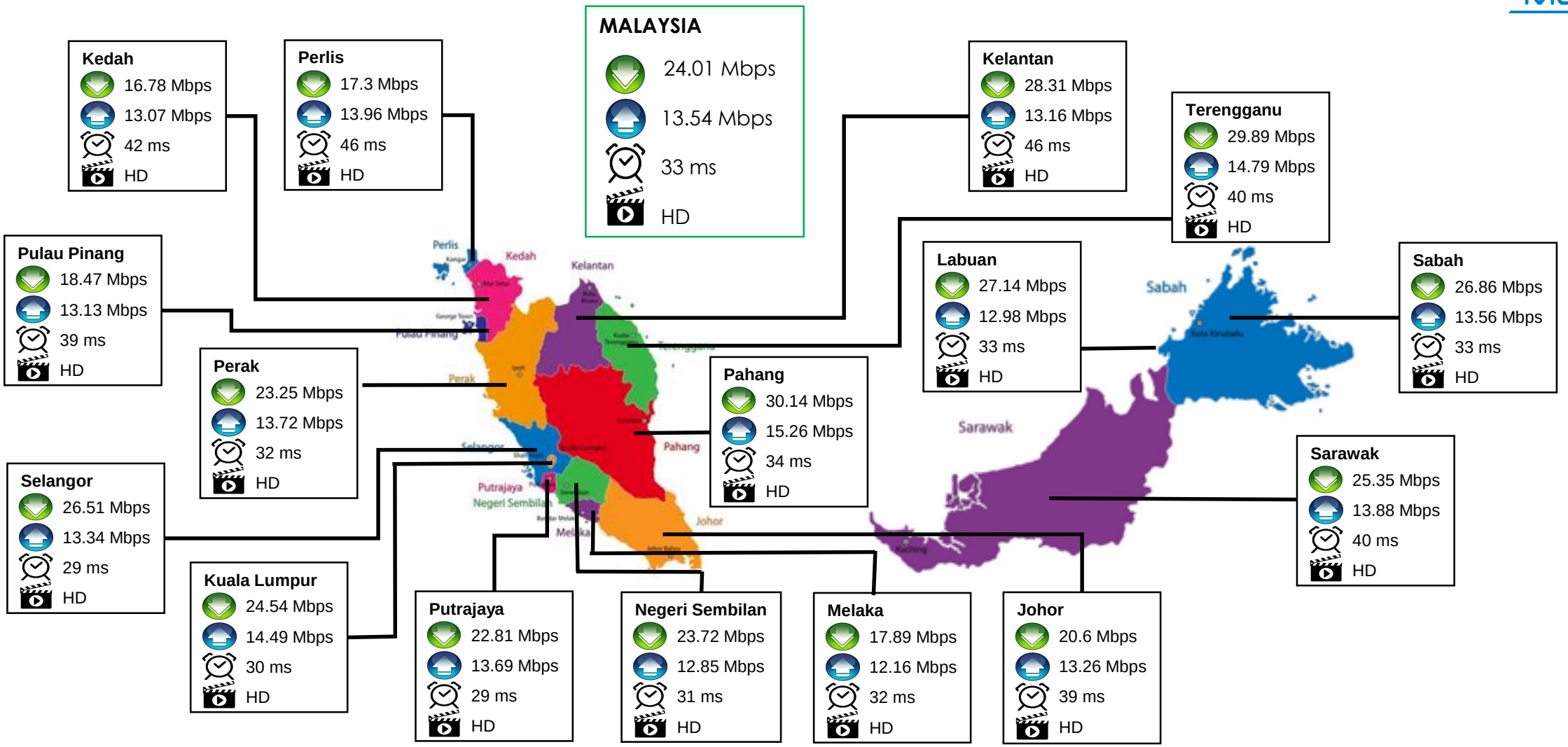
Average upload speed

Average latency

Average video quality

*Disclaimer: Download, Upload and Latency figures based on analysis by Ookla® of Speedtest Intelligence® data for Q3–Q4 2019. Ookla trademarks used under license and reprinted with permission.*

# Celcom Network Performance on 4G

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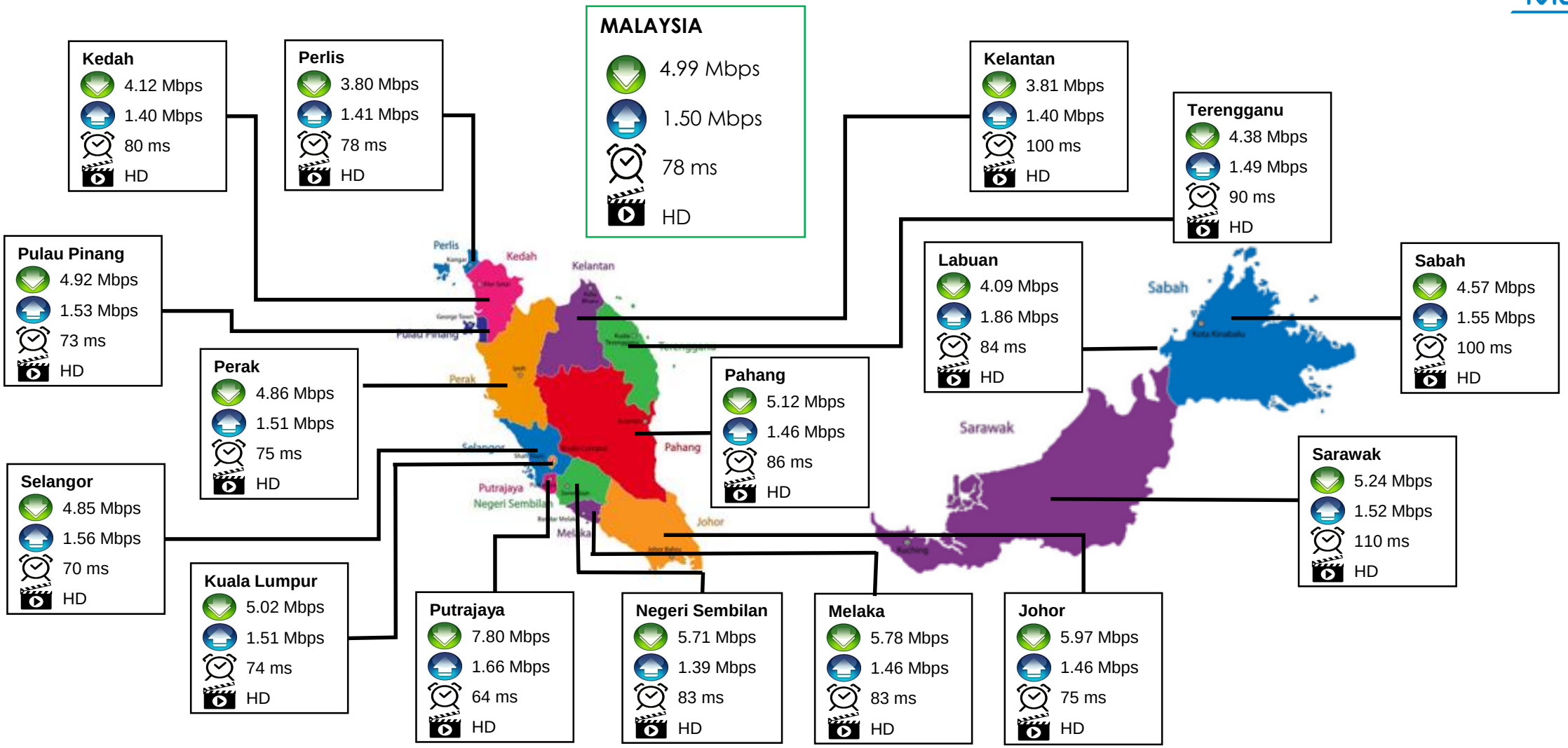
# Digi Network Performance on 3G

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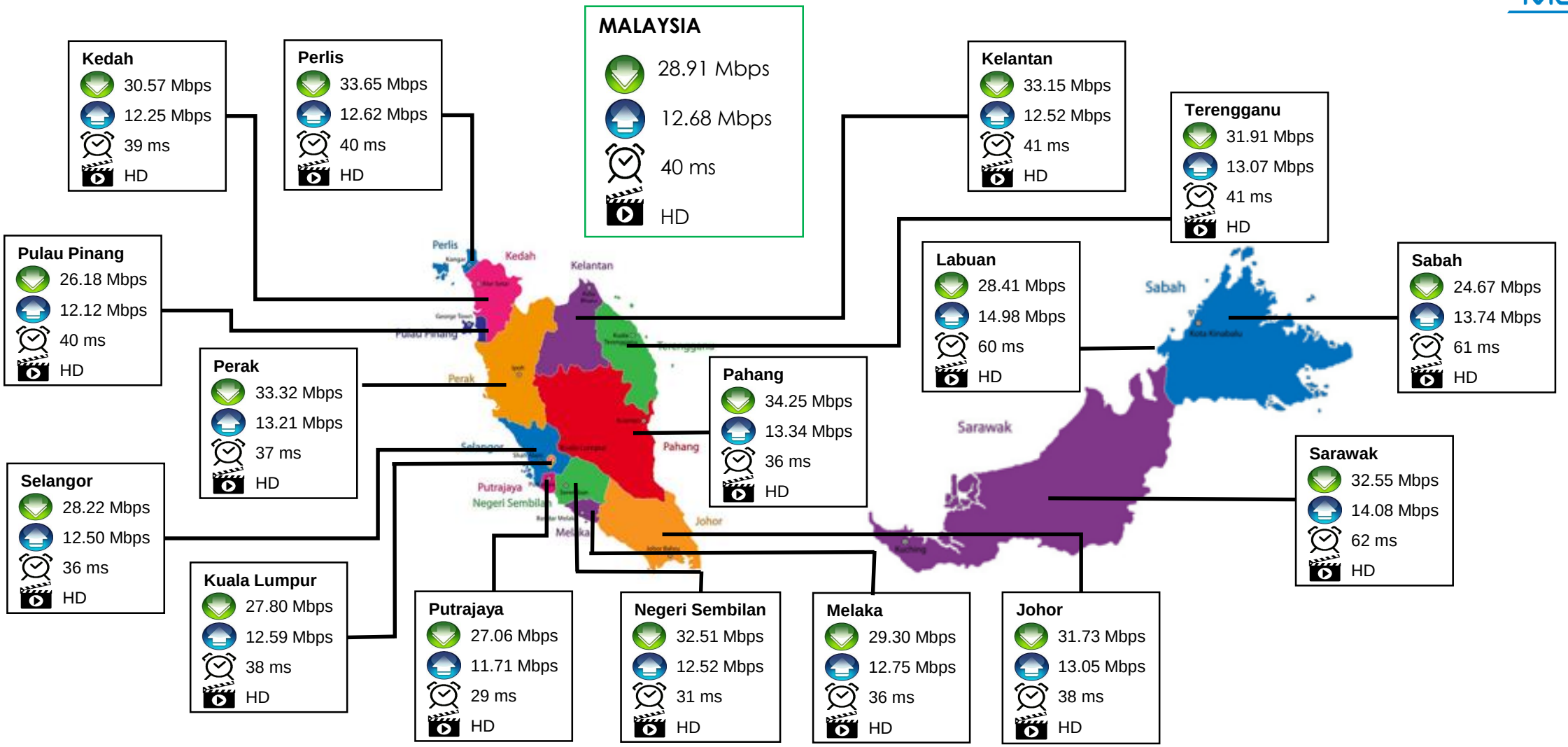
# Digi Network Performance on 4G

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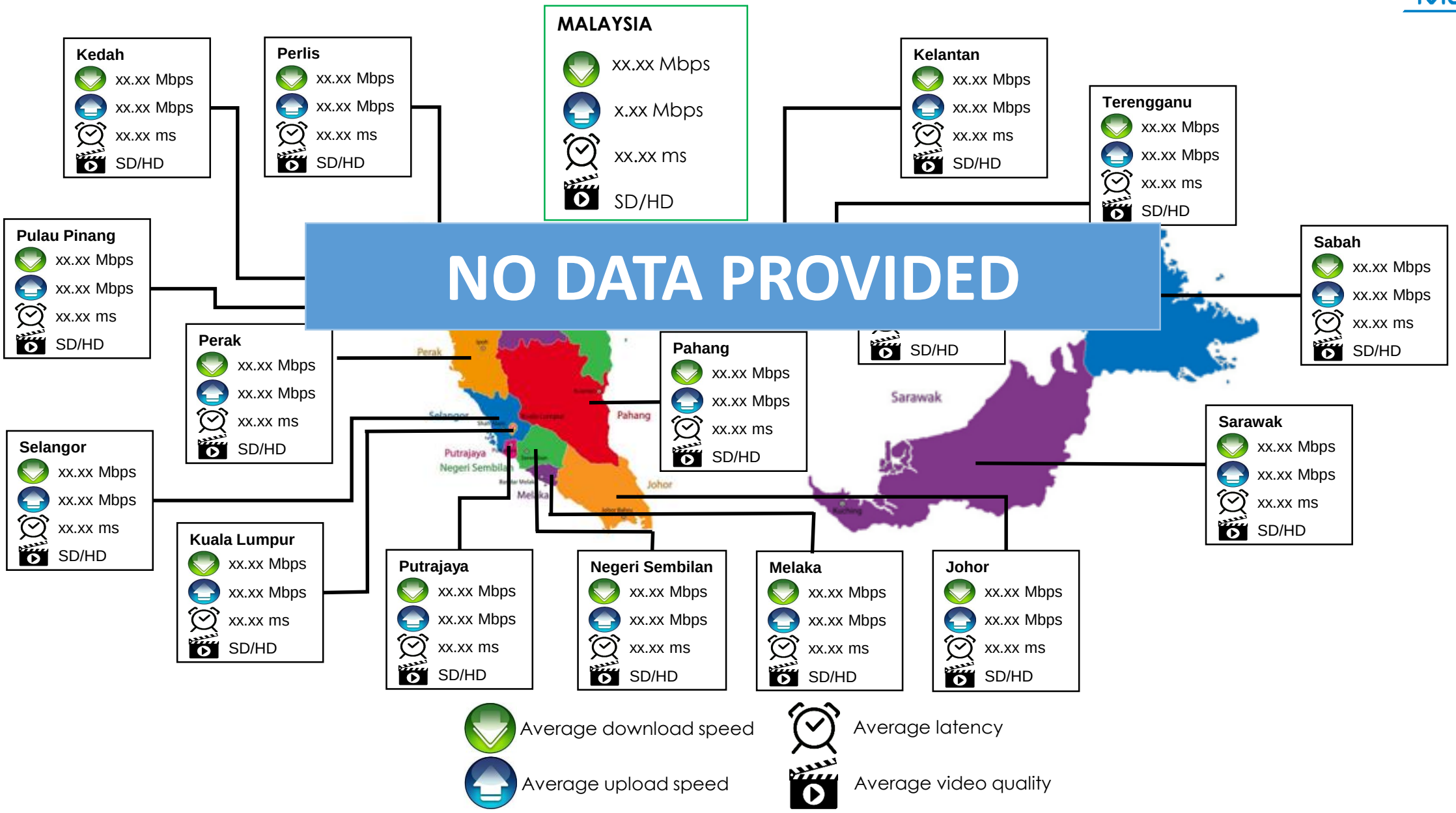
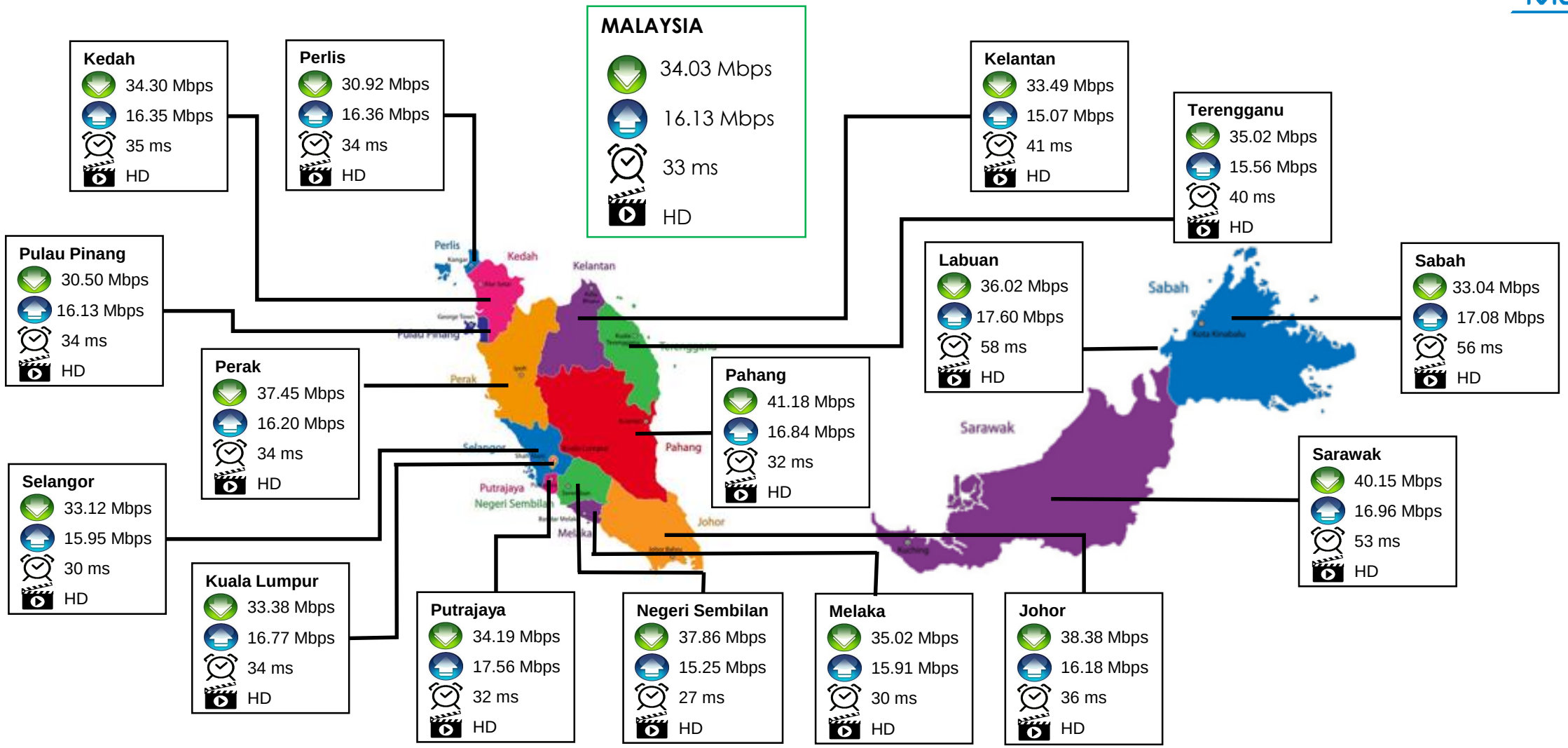
# Maxis Network Performance on 3G



# Maxis Network Performance on 4G




Average download speed

Average upload speed

Average latency

Average video quality

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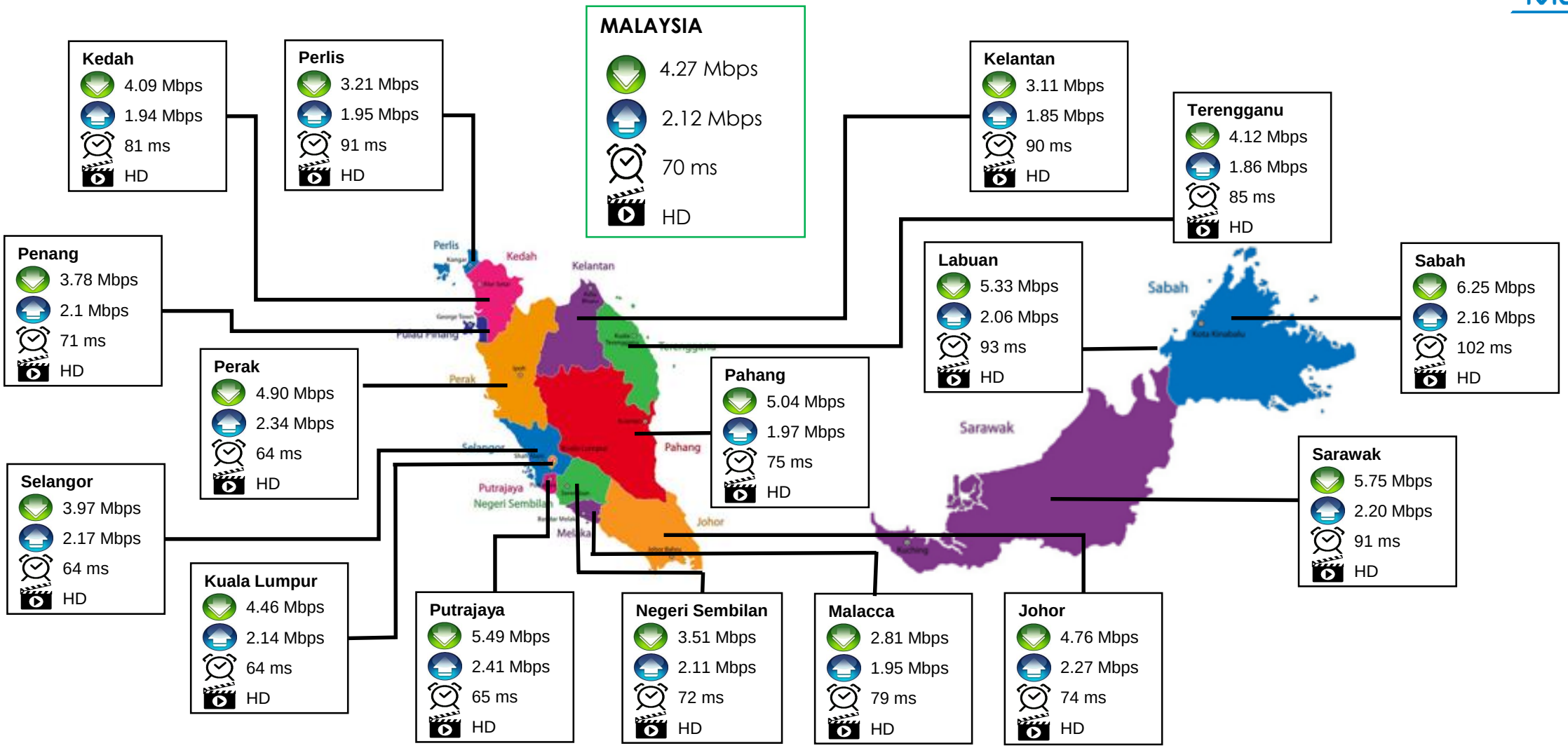
# U Mobile Network Performance on 3G

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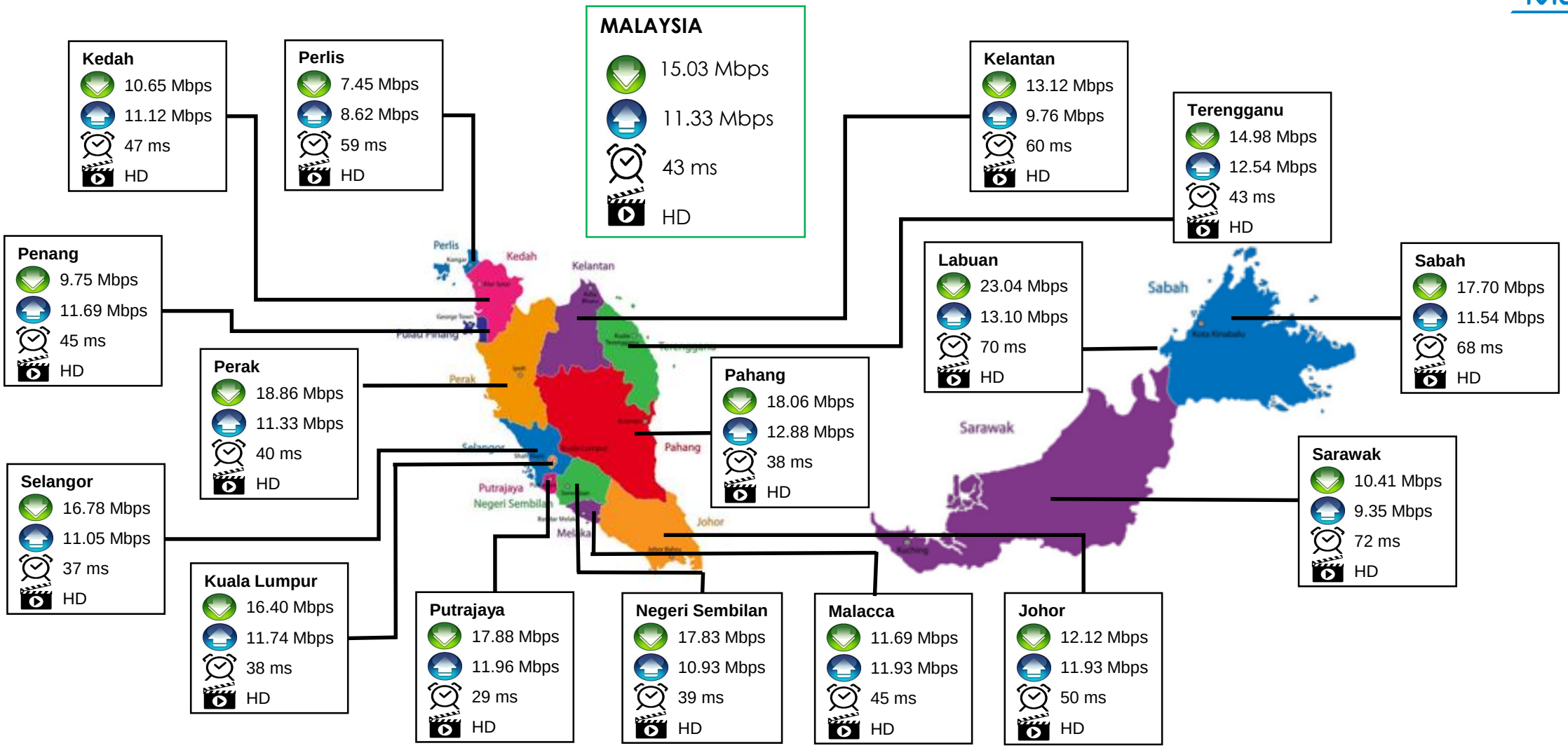


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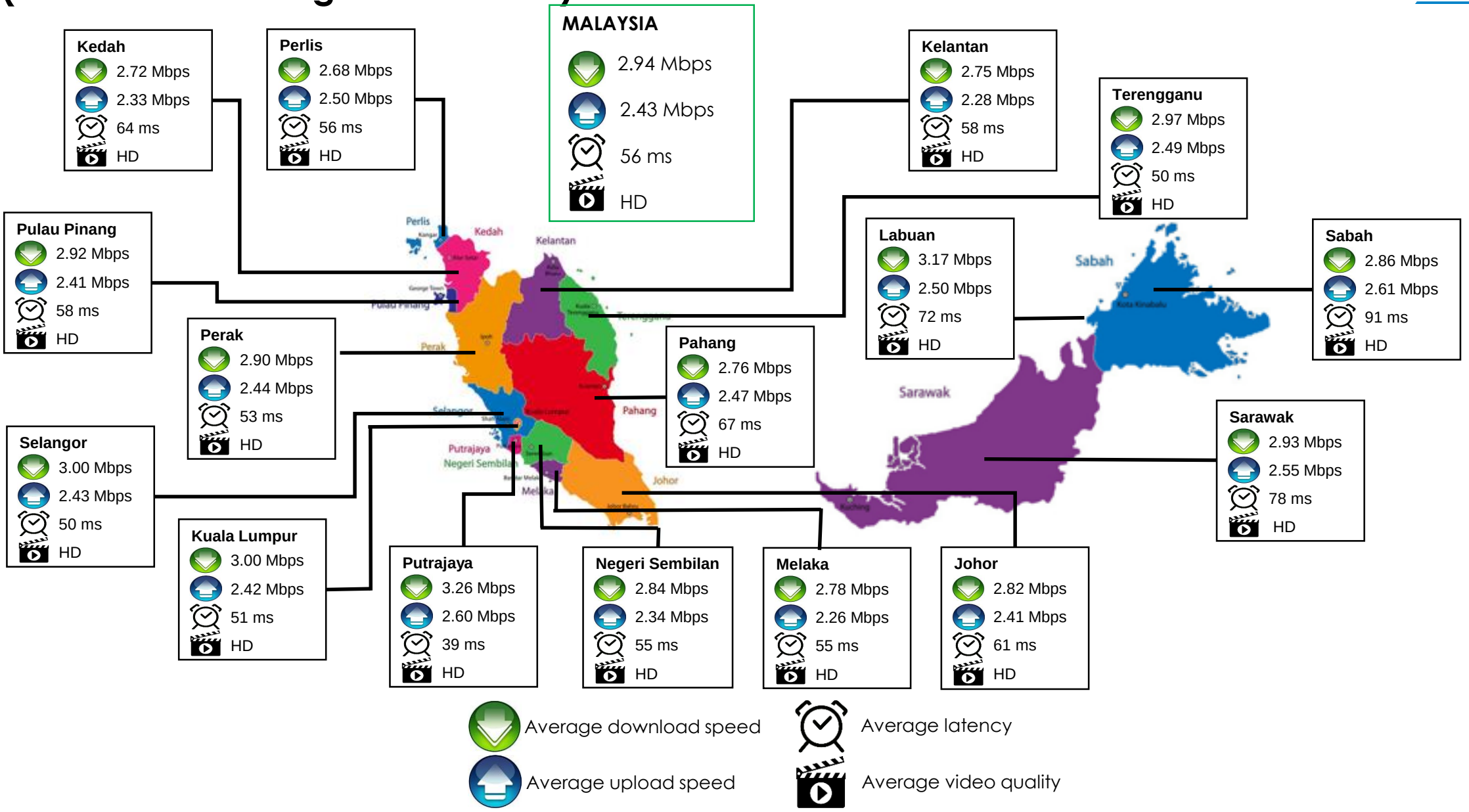
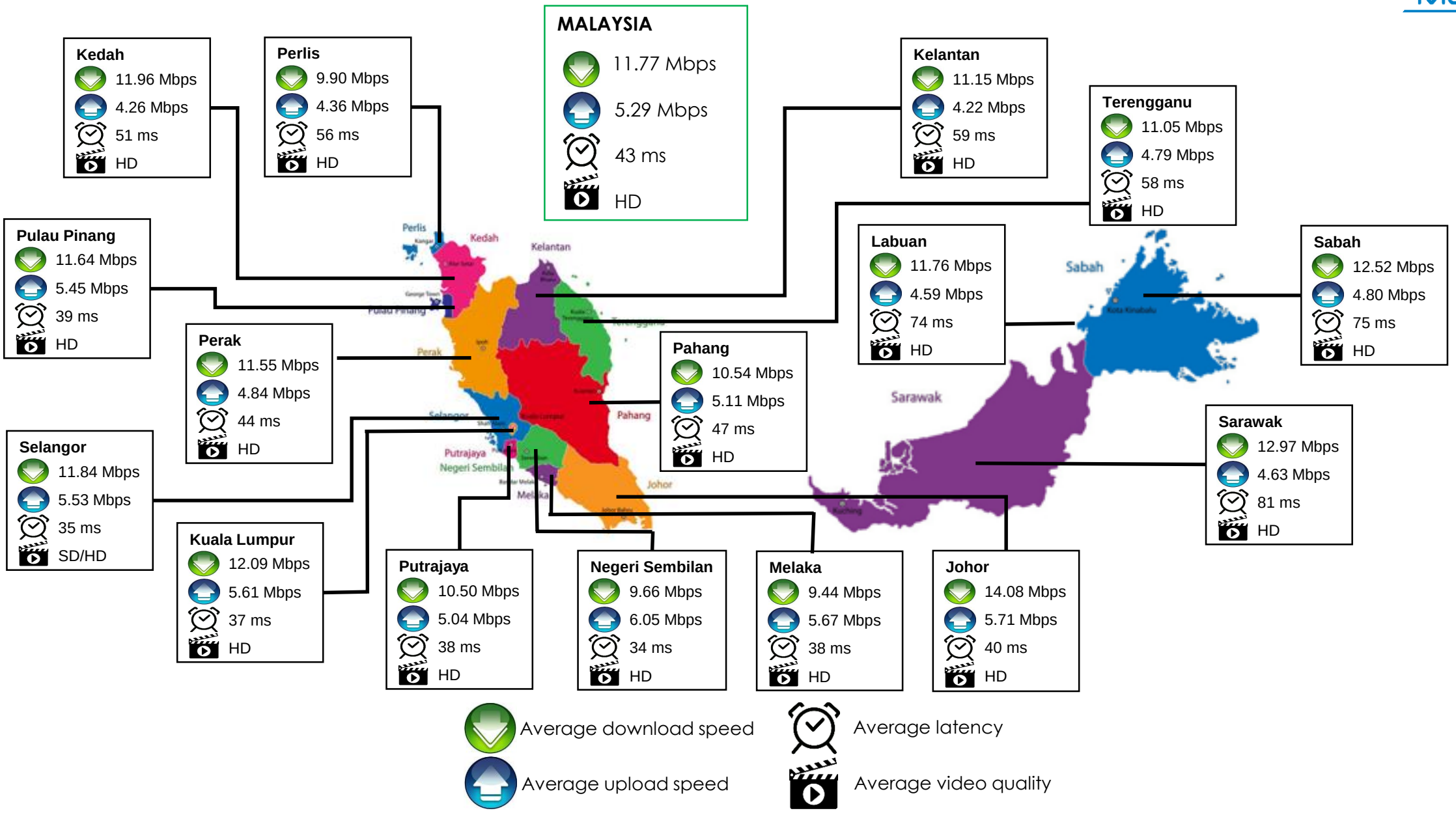
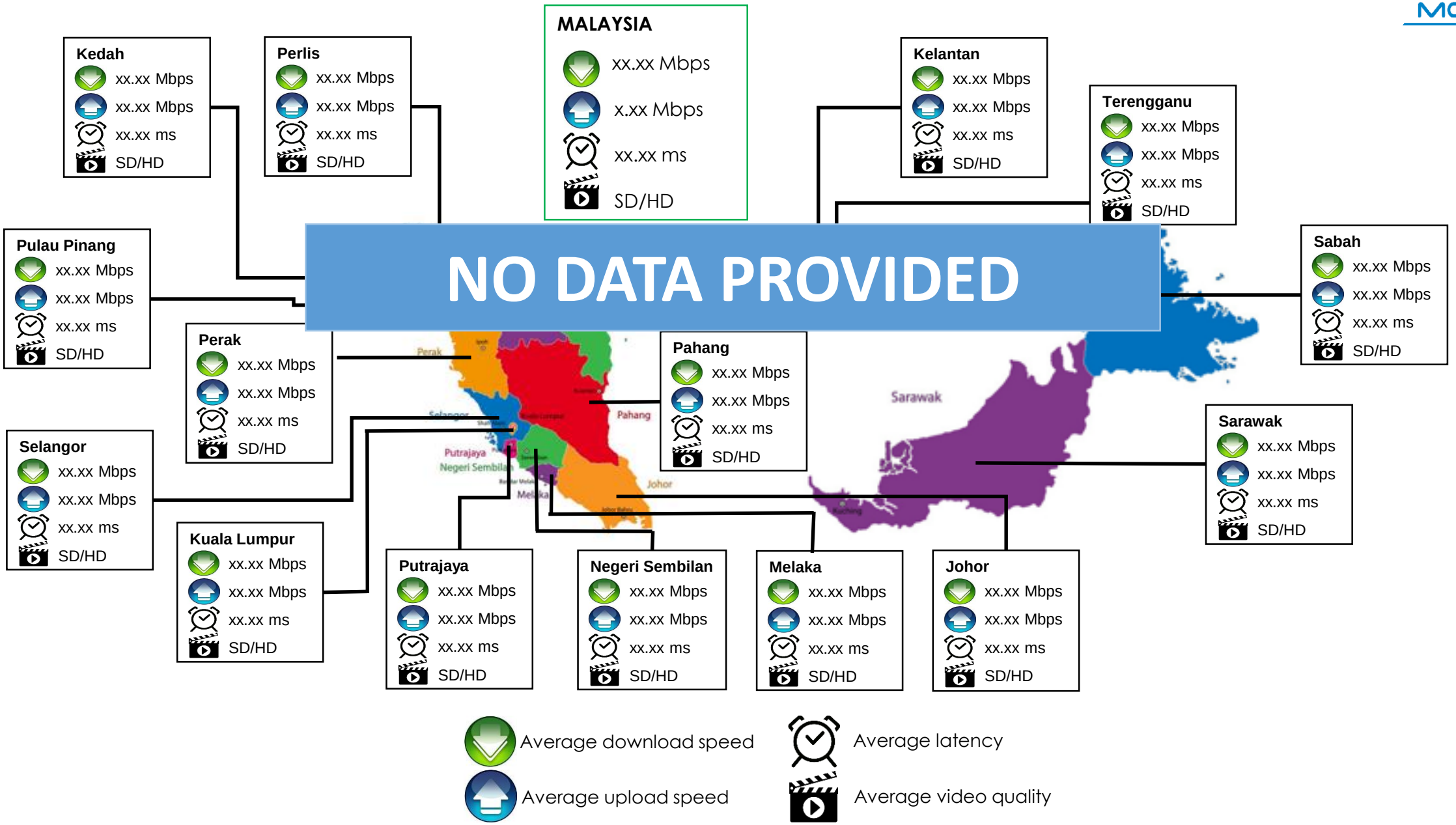
# Unifi Mobile Network Performance on 3G
## (Domestic Roaming with Celcom)



# Unifi Mobile Network Performance on 4G



# YTLC Network Performance on 4G



# END OF REPORT