

# State of Mobile Networks: Malaysia (October 2018)

In OpenSignal's new analysis of Malaysia, Maxis maintained its dominant position in our speeds metrics, while Yes continued to lead the pack in 4G availability. But Celcom is asserting itself, pulling off gains in 4G availability and overall speed in our most recent tests. Analyzing nearly 1.3 billion measurements, OpenSignal compared Malaysia's six operators to see how they stacked up in 3G and 4G.

## Report Facts



1,293,457,828 Measurements



233,257 Test Devices



Jun 1 - Aug 29, 2018 Sample Period



Malaysia Report Location

## Highlights

### Maxis dominates OpenSignal's speed awards

Maxis didn't make a clean sweep of our speed metrics as it did in our last report, but it won our 4G download, 4G upload and overall download awards easily. In the final category, 3G download speed, Maxis tied with Celcom for first place.

### Yes again wins 4G availability, but Celcom is catching up

Yes held onto our 4G availability award and remains the only operator in Malaysia to provide an LTE connection to our users more than 90% of the time. That said, Celcom is quickly closing the gap. In the last six months, Celcom's availability climbed 5 percentage points to 86.2%.

### Celcom surpasses Yes in overall speed

Celcom is clearly upping its 4G game. Not only did its 4G availability increase, it also saw a bump in overall speeds, pushing it past Yes for second place in our overall download metric.

### 4G reach grows in Malaysia's big cities

In our analysis of Malaysia's five biggest cities, all of the top five operators saw their 4G availability increase over their national scores — in some cases by large margins.

## Awards Table

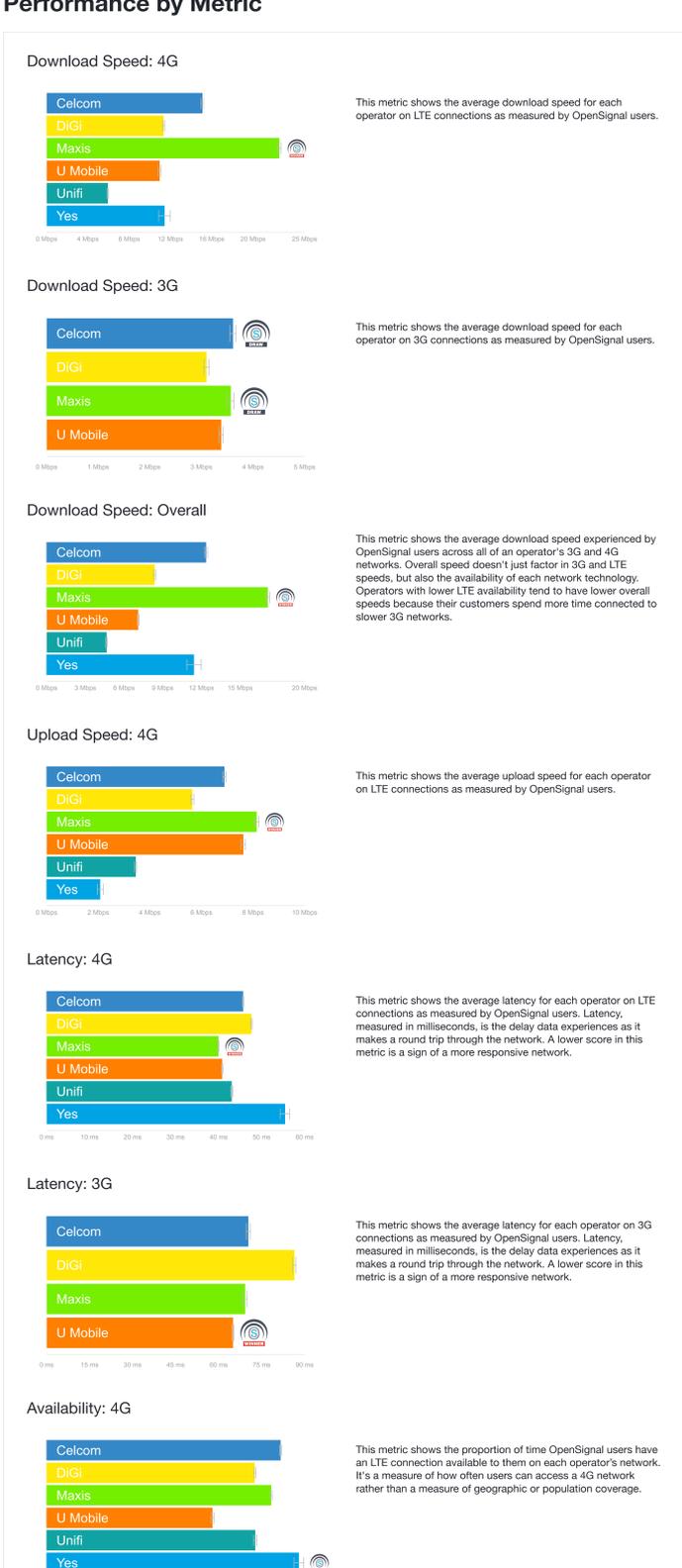
	Download Speed: 4G	Download Speed: 3G	Download Speed: Overall	Upload Speed: 4G	Latency: 4G	Latency: 3G	Availability: 4G
Celcom							
DiGi							
Maxis							
U Mobile							
Unifi							
Yes							

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## Performance by Metric



## Regional Performance

This chart shows the regional winners in each category OpenSignal measures. Click on the icons to see a more detailed graph showing each operator's metrics in a particular region.

**Legend:** M Maxis, C Celcom, D DiGi, U U Mobile, U Unifi

Region	Download Speed: 4G	Download Speed: 3G	Download Speed: Overall	Upload Speed: 4G	Latency: 4G	Latency: 3G	Availability: 4G
Ipoh	M	M, C, D, U	M	M, U	M	M, C	M, C
Johor Baharu	M	M, C	M	M	M	M	C
Kuala Lumpur	M	C	M	M, C	M	C	C
Malacca	M	U	M	U	M, U	U	C
Seberang Perai and Penang Island	M	C	M	M	M, U	M, C	C

## Analysis

Malaysia's 4G progress is marching steadily forward. We're seeing many trends in Malaysia that we see in countries where LTE is reaching maturity. 4G's reach is the best it's ever been in the country with five of Malaysia's six operators able to provide an LTE connection more than 75% of the time. We also saw a slight dip in 4G speeds, which is a good indication that more Malaysians are signing up for 4G services. Though few of our awards changed hands since our last Malaysia report, we did track some major moves from one operator in our metrics. We recorded a big jump in Celcom's 4G availability results, which in turn led to a bump in its overall download speed score. Celcom is still well behind the leaders in both metrics, Yes and Maxis respectively, but it is now ensconced in second place and closing the gaps in both categories.

For the fourth installment of OpenSignal's Malaysia report, we analyzed nearly 1.3 billion measurements collected from 233,257 devices in the 90 days between June 1 and Aug. 29. We compared the 3G and 4G services of Celcom, DiGi, Maxis and U Mobile, and the 4G services of Telekom Malaysia's Unifi (formerly Web3) and new entrant Yes, both of which are LTE-only providers. Our most extensive regional analysis to date is also included in this report, exploring our seven core metrics for Malaysia's five biggest operators in five major urban areas. Let's start first with a discussion on availability.

### 4G reach grows as speeds fall

Yes won our 4G availability prize as our users were able to access its LTE connections 92.9% of the time. The LTE-only operator remains the only Malaysian provider with a 4G availability score over 90% in our measurements, but it may soon face a challenger. While Celcom's 4G availability leaped upwards by 5 percentage points since our last report, while Yes's score stayed relatively static. If Celcom's 4G availability keeps growing at this pace — and Yes's availability remains idle — it could close the gap with Yes quickly.

Five of Malaysia's six operators now have 4G availability scores greater than 75%, a sign that operators' 4G rollouts are reaching maturity. The lone holdout was U Mobile, which had a 4G availability of 61.1% in our measurements.

In speed, Maxis again turned in another dominant performance, winning three of our speed awards outright and drawing for the win in the fourth. In 4G download speed, Maxis averaged connections of 22.5 Mbps in our measurements, making it the only operator to surpass the 20 Mbps mark. We did, however, record drops in 4G download speed for every operator except U Mobile. In the case of Yes, that decline was quite severe, from 15.7 Mbps to 11.4 Mbps in six months. This is a common trend we see in countries where LTE services are maturing. As more customers sign up for 4G plans, they consume more capacity on the network, causing average speeds to fall.

Maxis won our 4G upload speed award with an average connection of 8.1 Mbps, and it was tied for first place in 3G download speed with Celcom. Maxis also easily won our overall speed download award, which tracks the average connection speed our users see across operators' 3G and 4G networks. A year ago, Yes had our overall speed award locked down due to the strength of its 4G availability and its high 4G download speed results. But since then, Yes's 4G speeds have fallen dramatically, allowing both Maxis and Celcom to surpass the upstart operator in our overall download metric.

Our final metric category, latency, measures the round-trip response time of data requests sent through the network. A lower latency connection can mean that web content and video begins loading faster or less lag in real-time communication apps. U Mobile asserted itself in our results, winning our 3G latency award with a response time of 69.2 milliseconds, and it came within a hair's breadth of taking our 4G latency award as well. Maxis, however, took the prize with a 4G response time just below 40ms.

### 4G availability pops in the big cities

In OpenSignal's regional analysis of Malaysia's biggest cities, we examined our seven core metrics for Malaysia's five largest operators. Many of our city results reflected our national results with Maxis winning our 4G download speed and overall download speed awards in all five areas. 3G download speed was a much more competitive category with Celcom assuming a lead over Maxis in our Kuala Lumpur and Penang results and U Mobile taking the 3G award in Malacca. Meanwhile in 4G availability we saw some stellar results in the big cities. Nearly every operator far exceeded its national availability score in each of the five cities. Celcom in particular stood out among the five operators we examined. We measured 4G availability greater than 90% for the operator in four of the five markets.

Malaysia exemplifies its region. Like its Southeast Asian neighbors, Malaysia is focused first and foremost on expanding access to LTE — reflected in its high availability scores — as almost any LTE connection is superior to a 2G or 3G link. But, as is the trend in the region, 4G speeds in Malaysia are relatively slow. Only one operator, Maxis, averaged 4G download speeds higher than the global average of 16.9 Mbps.

As all of Malaysia's operators pass the 80% availability mark, we may well see Malaysia's operators shift their focus to increasing capacity and speed. We're already seeing some signs. In September, Celcom announced plans to upgrade its LTE network, and once low-frequency 700 MHz airwaves make their way into Malaysian networks, operators could move into a new phase of network growth. More spectrum means more capacity and support for LTE-Advanced, and that translates into faster speeds and a better mobile experience overall.

### Our Methodology

OpenSignal measures the real-world experience of consumers on mobile networks as they go about their daily lives. We collect 3 billion individual measurements every day from tens of millions of smartphones worldwide.

Our measurements are collected at all hours of the day, every day of the year, under conditions of normal usage, including inside buildings and outdoors, in cities and the countryside, and everywhere in between. By analyzing on-device measurements recorded in the places where subscribers actually live, work and travel, we report on mobile network service the way users truly experience it.

We continually adapt our methodology to best represent the changing experience of consumers on mobile networks and, therefore, comparisons of the results to past reports should be considered indicative only. For more information on how we collect and analyze our data, see our [methodology page](#).

For this particular report, 1,293,457,828 datapoints were collected from 233,257 users during the period: Jun 1 - Aug 29, 2018.

For every metric we've calculated statistical confidence intervals and plotted them on all of the graphs. When confidence intervals overlap for a certain metric, our measured results are too close to declare a winner in a particular category. In those cases, we show a statistical draw. For this reason, some metrics have multiple operator winners.

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