Regulatory compliance

ACCC Typical Busy Period Speeds

The Australian Competition & Consumer Commission have published industry guidance on the advertising speeds of broadband. This introduces a standardised metric that characterises the typical busy period speeds for each broadband plan that an RSP offers ('RSP' is the common term for a retail internet service provider in Australia).

SamKnows has been extended to support the ACCC typical speed metrics natively. These allow you to visualise the typical busy period speeds, which are presented separately for download and upload speed. The metrics are fully integrated into SamKnows One, meaning that they can be used in data analysis, alerting, dashboards, presets, data API exports and reports.

Metrics

We offer four metrics that perform the above calculations:

1. Typical Busy Period - Download Speed
2. Typical Busy Period - Upload Speed
3. Typical Busy Period - Percentage of Advertised Download Speed
4. Typical Busy Period - Percentage of Advertised Upload Speed

Calculations

We calculate the metric in the same way we do for both the ACCC reports and in SamKnows One. The approach is described as follows.

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2. Average across all Agents, by day and hour. This should result in 56 records in total across a two week period.
3. Pick the weeks + 1th lowest result. Across a two week period, this would mean picking the 3rd lowest result. This is the typical evening speed for the plan.

The result can be presented in megabits per second, or alternatively as a percentage of the plan's advertised speeds.

FCC Mobility Fund II

The FCC Mobility Fund II provides money for qualifying operators to invest in providing mobile broadband to unserved areas of the United States of America. In order to qualify it must be proven that the current available service is less than 5 megabits per second. SamKnows has built a kit, specifically for this purpose, which is now being used by the FCC.

This can be used by:

1. Challengers to prove coverage is below the 5 megabits per second minimum benchmark and an area is eligible for funding
2. By incumbent carriers to prove the accuracy of existing coverage maps
3. By federal and state regulators to qualify statements made by industry relating to coverage in particular areas
4. By federal and state regulators to monitor the impact on investment in areas where coverage is received.

The Wireless Network Quality kit allows for the following active measurements to run.

Active measurements

Download speed
These tests measure the download HTTP throughput in bits per second. The test will run for a fixed duration (in addition to a TCP warmup period). This time is configurable at runtime.

The duration default is 5 seconds, maximum is 30 seconds and minimum is 5 seconds.
Upload speed
These tests measure the upload HTTP throughput in bits per second. The test will run for a fixed duration (in addition to a TCP warmup period). This time is configurable at runtime.

The duration default is 5 seconds, maximum is 30 seconds and minimum is 5 seconds.

Latency / packet loss / jitter
This is a single test that provides three separate metrics upon completion: latency, jitter and packet loss. Only latency is shown in-app but all three metrics are submitted and visible in SamKnows One. You can configure the packet count, packet interval and test duration at runtime.

The duration default is 5 seconds, maximum is 30 seconds and minimum is 5 seconds. The packet count default is 200, maximum is 500, and minimum is 100.

Additional environmental data
It also captures supporting evidence in the form of environmental data, which includes key metrics like:

Handset type
- Capturing the handset model ensures results are demonstrably compliant with the FCC's list of accepted handsets for testing.
- Failed test capture
- Demonstrating areas of low- or no-coverage by capturing tests that were not able to complete due to poor network proves eligibility across tested areas.
- Cell tower ID

- Understanding which cell tower was providing network for each test can indicate cell loading factor and demonstrate eligibility
- Additional environmental data
- Additional information like cell signal strength, cross traffic information and operating system is also collected. The full list may be found here (https://samknows.com/products/agents/cell-survey-app)
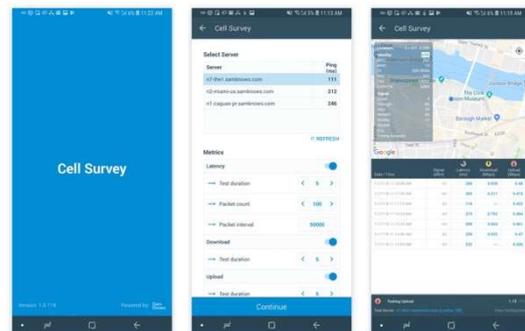
SamKnows One: Reporting and live data analysis
Data collected during drive or consumer testing is available in SamKnows One. As with all data in SamKnows One, it can be analysed in charts and mapping, or exported into raw .csv or .json files.

Automated reports display data against thresholds required for regulatory and QA thresholds. This presents an at-a-glance view of metrics against predetermined standards, so it is easy to demonstrate where standards are met and exceeded or give guidance to areas that may need improvements. This can provide insight into where infrastructure is best deployed, and where service above specific thresholds is already being provided.

Wireless Network Quality Index

Example map - signal strength indicators

Example chart - Maximum download speed by time of day

Mobile Download Speed

Mobile Download Speed