octoBox® software 2.0

octoBox software 2.0 brings new dashboard mode, improved graphics and multiPerf® traffic tool

To serve the rapid growth in work-from-home requirements and ever-accelerating demand for streaming entertainment services, the need for increasingly sophisticated Wi-Fi features such as OFDMA, MU-MIMO, mesh Wi-Fi and BSS has grown. The ability to test these features before they can be launched to the market is vital.

The new octoBox software 2.0 brings important productivity updates that will reduce the time needed for testing. A new dashboard mode allows engineers to create new test scenarios more easily, while better data visualization and plots make the results easier to interpret and communicate. Upgrades in octoScope’s multiPerf traffic generator make it possible to test with any device, while also adding improvements in the ability to measure delay and jitter. Tight synchronization of instruments in the testbed allow measurements of one-way delay along with in-depth statistics showing how that delay and other parameters vary over time.

The new software leverages the power of parallel databuses and processing built into all the octoBox testbeds, allowing them to be used for emulation of multipoint-to-multipoint test scenarios involving dozens of real devices, while providing real-time feedback of the test progress and results.

Features
- New dashboard mode that allows engineers to create new tests easily
- Improved plots
- Android and Windows support for multiPerf
- One way delay measurements

Benefits
- Create tests faster
- Analyze test results faster
- Test on more devices
Dashboard mode

When opened, the octoBox User Interface defaults to dashboard mode. The dashboard mode is an interactive section of the web user interface that allows the user to quickly perform tests using the octoBox software. It can be used for simple tests or for optimizing a more complicated testing scenario.

The left side of the dashboard mode includes controls for traffic pairs, attenuators, wireshark sniffing and the turntable.

The middle section shows plots for any layer 2 statistics that the user wants to follow. The middle part also shows status and provides control for all the attenuators in the testbed.

The right side of the user interface provides status for all the test instruments in the testbed.

The dashboard mode supports saving a test as an autotest to run it in autotest mode.
Autotest mode

The purpose of the autotest mode is to run tests that have been previously saved. Test can be selected using a simple GUI from a set of tests saved on the system.

Once the test is selected and run, the interface shows visualization of the test progress. Just like in dashboard mode, the user can choose which layer 2 plots to view. The status of the test instruments as well as the attenuators are visualized on the screen.

The difference from dashboard mode is that the user can’t configure the test scenario. In this way mistakes in the testing process can be omitted because the test creation (dashboard) and the test execution (autotest) modes are separated.
multiPerf improvements

octoBox software 2.0 expands multiPerf support in a few different ways:

- Support for Android and Windows operating systems
- One way delay measurements

The new operating system support allows various off the shelf devices such as phones to be added to test scenarios. multiPerf will control the device through a USB connection and perform the measurements wirelessly. In this way the measurements will not be impacted.

New types of timing measurements in the octoBox software 2.0. One way delay measurements are now supported. Tight synchronization of instruments in the testbed allow in-depth statistics in how that delay and other parameters vary over time.