AirScout | GIGACHECK

TEMPO COMMUNICATIONS

GigaCheck Project

GigaCheck is used by broadband service installers to qualify Wi-Fi and wired data rates for customers obtaining premium (1Gbps) data delivery services. GigaCheck measures data rates up to 1.0Gbps over ethernet and 1.3Gbps over Wi-Fi and presents the data in a user-friendly method. The GigaCheck solution consists of a high-performance ethernet and Wi-Fi sensor, a customer facing mobile application and a cloud backend.

Tempo is proposing a mobile application project that adds new features, modifies the user experience and upgrades the user interface.

If time and resources permit, Tempo proposes the application changes be rolled into the cloud solution.

AirScout | GIGACHECK

TEMPO COMMUNICATIONS

GigaCheck UIX & Feature Changes

- Feature – improve multi-Wi-Fi access point and Wi-Fi mesh network handling and heat mapping.
- Feature – add floor plan importation, storage and retrieval
- UIX - Streamline workflows with Step based Wizards
- UIX - Leverage mobile device gestures for more intuitive access to greater levels of information
- UIX - Provide easier touch access to UI controls like buttons, text boxes and dropdowns
- UIX - Reduce UI clutter by only displaying contextually appropriate controls
- Code Base – evaluate migration of the technology stack from JavaScript to C# and Xamarin.Forms to improve code Scalability, Reuse and Automated Testability

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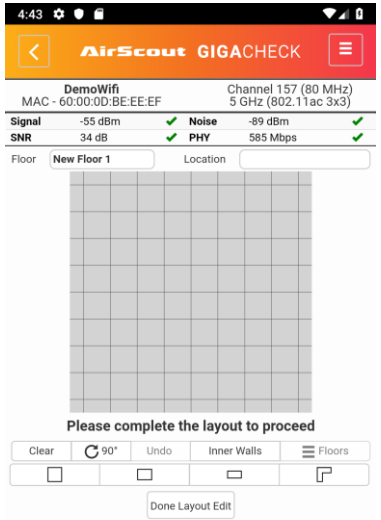
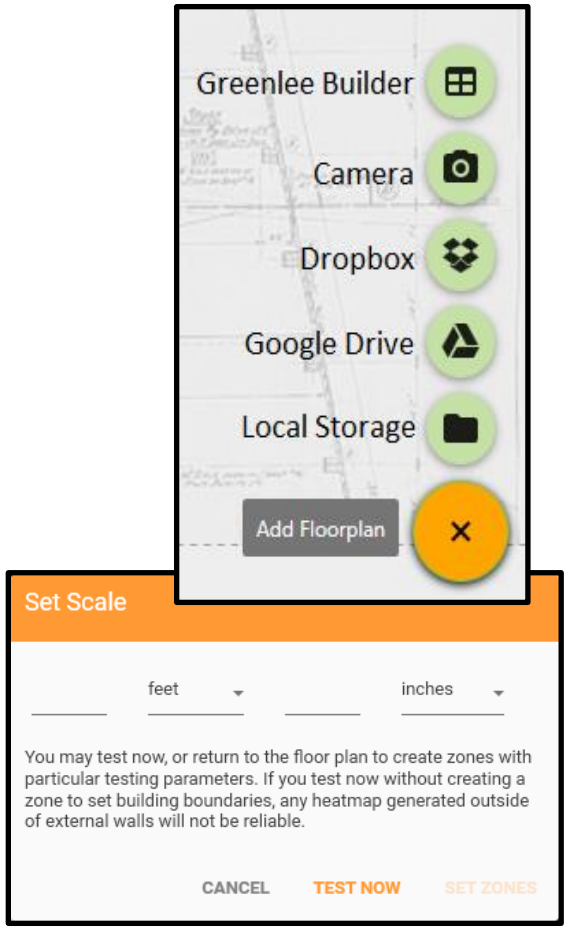
The GigaCheck sensor connects to the customers residential gateway over a wired or Wi-Fi connection. The cell phone running the GigaCheck application also connect to the customers residential gateway over Wi-Fi and finds an IP route solution to the sensor permitting communications. The mobile application controls the session while the sensor using an embedded Ookla speed test measures data rates. During the session the technician is validating services and verifying Wi-Fi performance in the building. At the end of the session a report is generated to show the customer and document the results.

Introduction

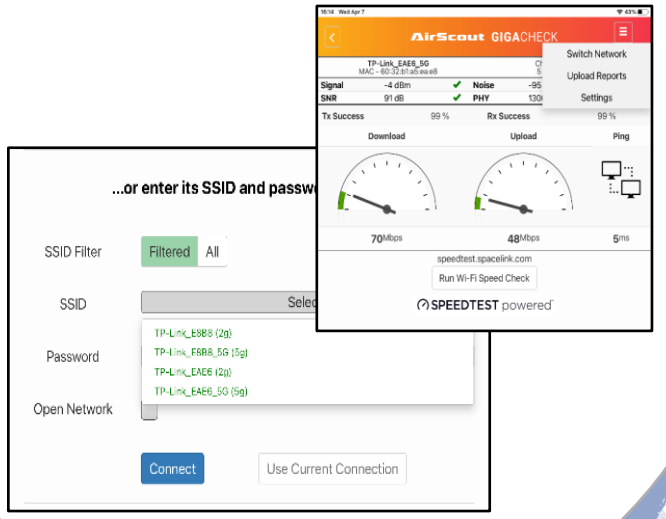


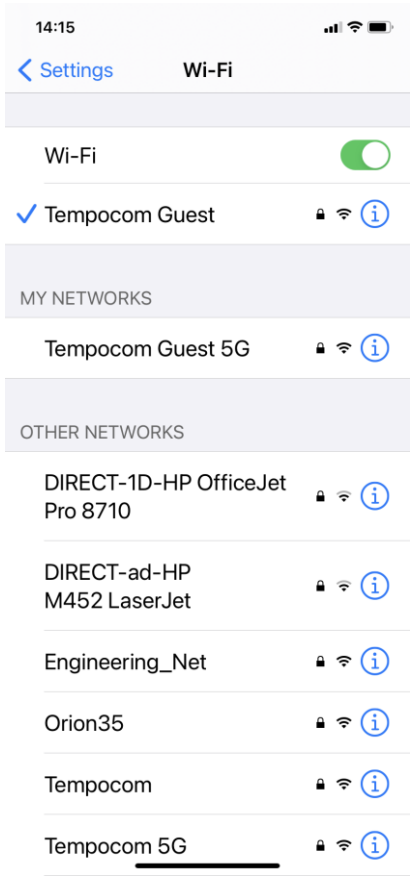


Feature - GigaCheck does not import, store and retrieve a floor plan. Tempo would like to add this capability using a previously developed floor plan importation and scaling solution developed for AirScout Enterprise.

1. Import user supplied floor plans as a document or photo. Draw perimeter and exclusion zones like AS Enterprise.
2. Store and recall floor plan for use at another site

Floor Plan Importation



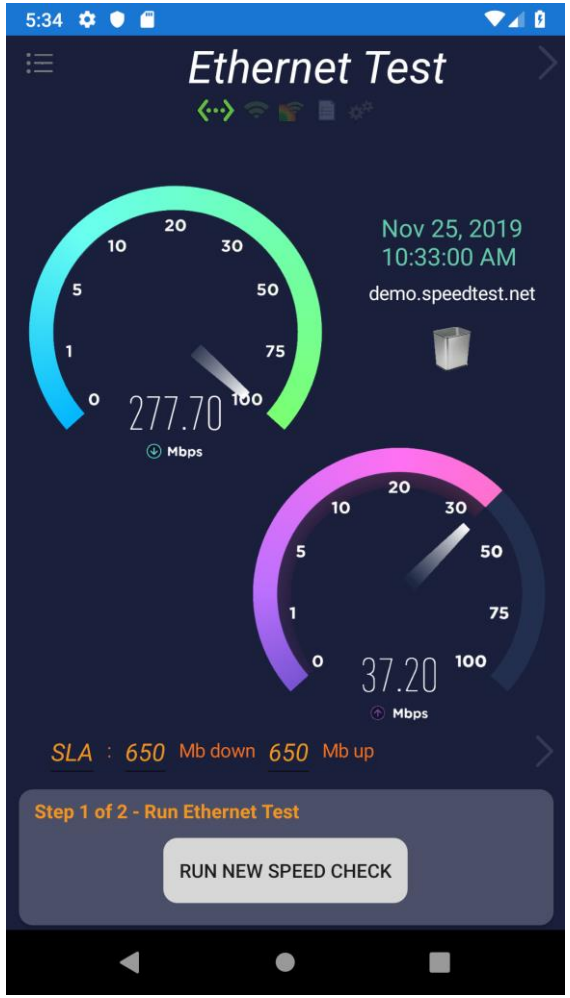


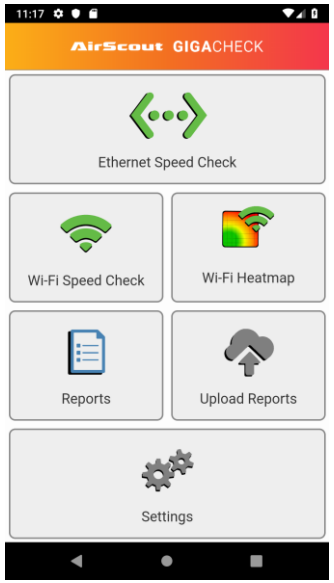
Testing Wi-Fi Mesh, Multi-Access Point networks and different frequency bands is a common requirement in many homes today. However, the current GigaCheck UI does not intuitively switch between frequency bands and access points. GigaCheck is also not capable of overlaying different datasets which causes confusion.

- Multiple APs and Extenders can be added
- Baseline Tests can be rerun for a any APs or Extenders that were previously added

Multi-Access Point

AP/Extender Placements



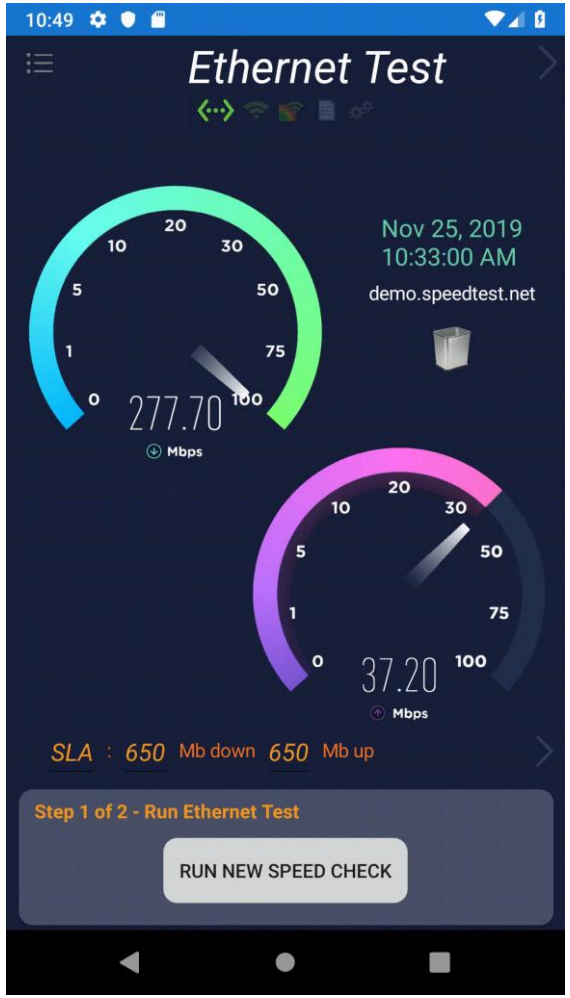


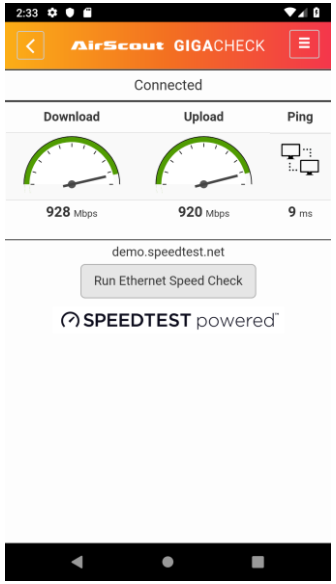
The current GigaCheck UI launches into a Main Menu.

However, because the first operation a user is likely to perform is an Ethernet Test, the proposed GigaCheck UI now launches directly into the Ethernet Test screen.

If the GigaCheck's Ethernet port is not connected at the time, the user would be prompted to connect it in order to proceed.

UIX - Initial Screen



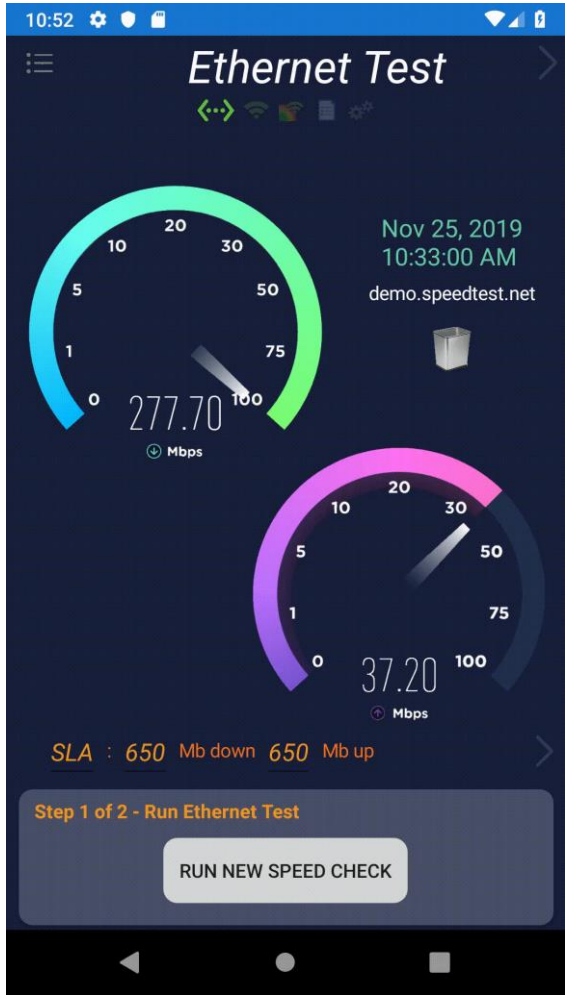


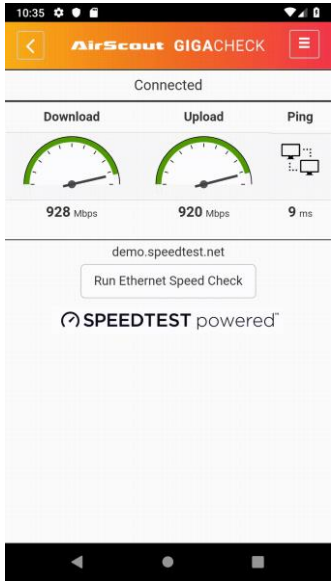
The new Ethernet Test screen employs a two step Wizard at the bottom of the screen. When the user is ready, they can swipe the Wizard forward to move to the next step.

Pressing the GO TO HEATMAPS button there will take them directly to the Heatmap Test screen while the GO TO REPORTS button will take them to the Reports screen. From the Reports screen they can add any of the current tests to the current report and upload that to the cloud.

UIX - Ethernet Test

Wizards



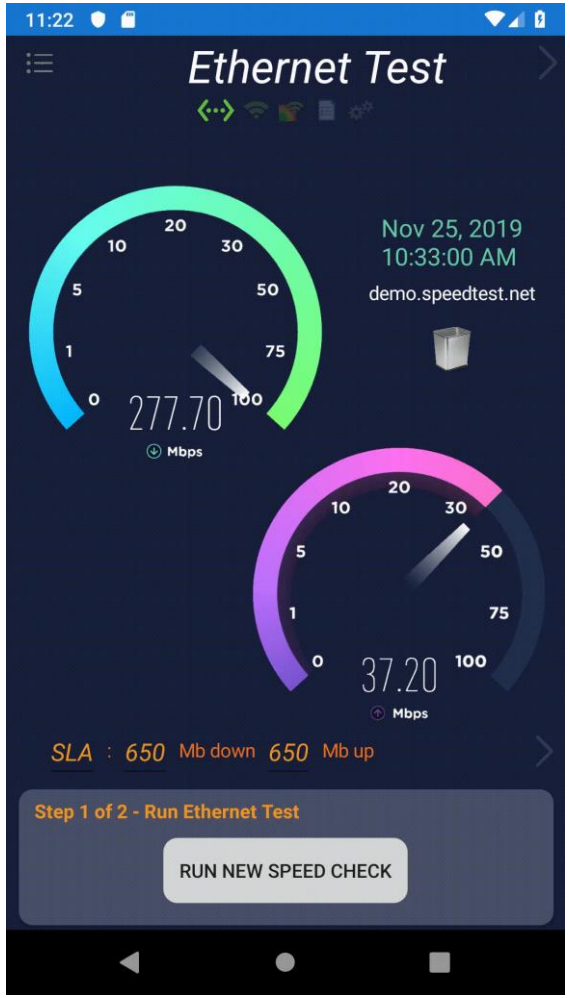


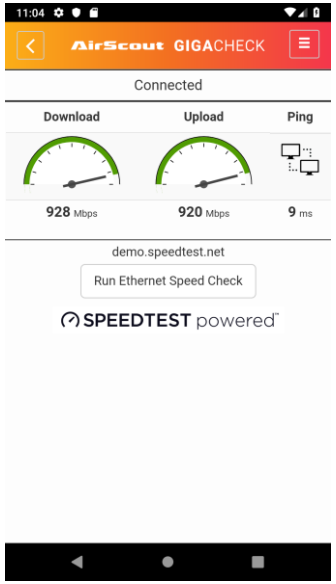
In the old UI, the user would need to go to the Reports tab before they could see any but the last Ethernet test that was performed in this session.

In the new UI, all the Ethernet tests in the session are accessible via a swipe gesture without having to leave the Ethernet Test screen.

UIX - Ethernet Test

Easier access to current tests





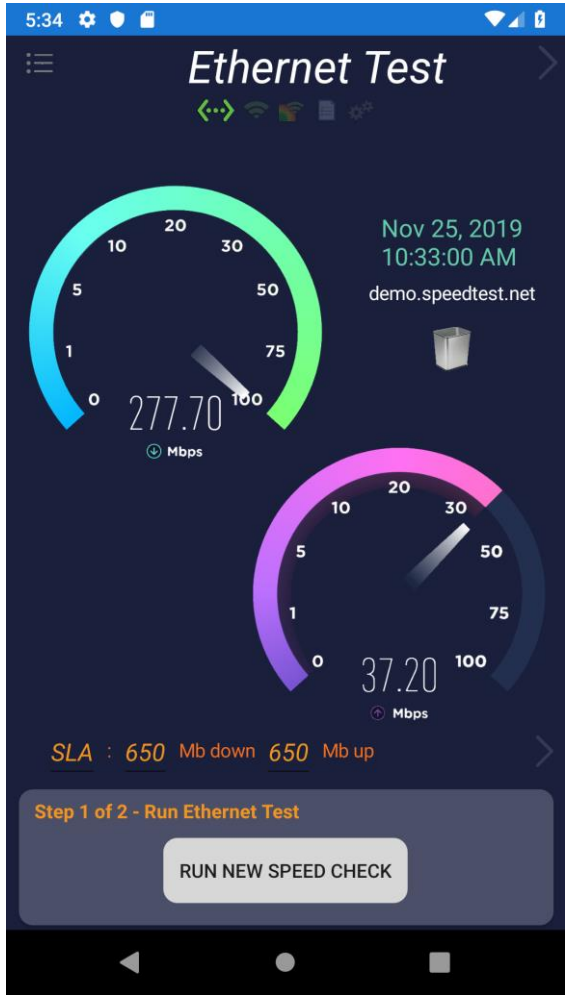
In the new UI, all test outputs can be scaled with a set of predefined and configurable parameters accessible via a swipe gesture.

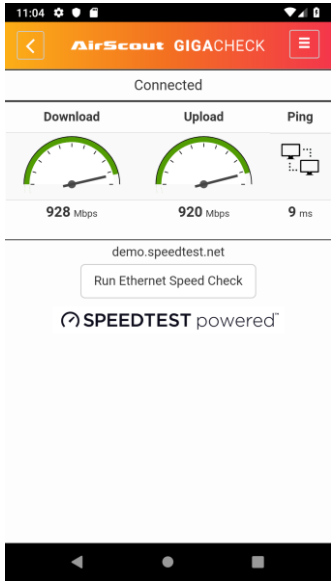
In the old UI, Ethernet tests are always scaled to 1 Gb.

For the purpose of this presentation, the scaling actions are not being reflected here but, if they were, the gauge maximums and current readings would adjust accordingly as each scaling was applied

UIX - Ethernet Test

Configurable results scaling



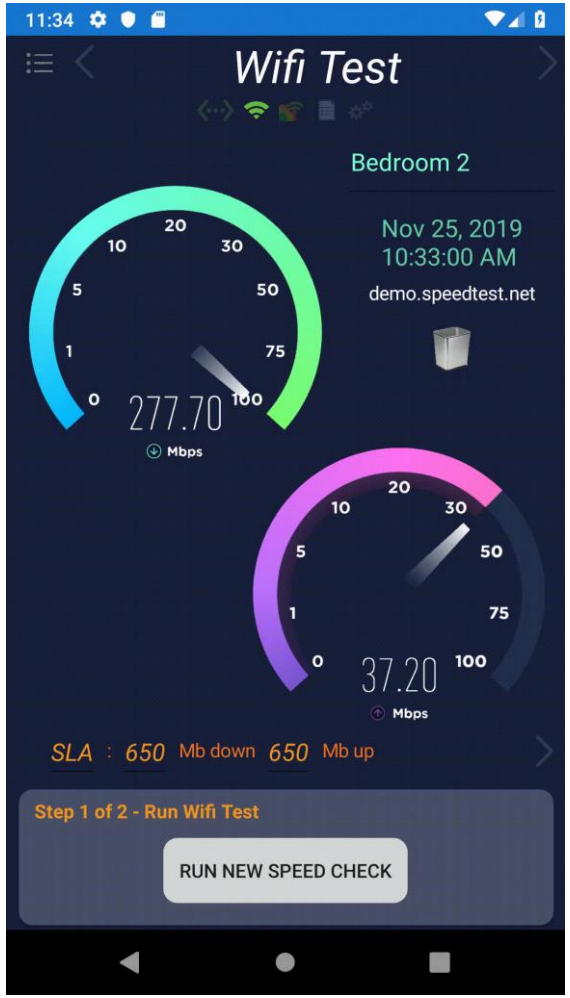


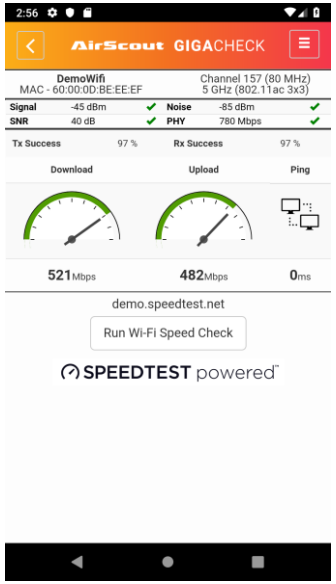
In the new UI, any unwanted tests performed can be deleted via the trashcan icon.

In the old UI, all tests had to be sent to the cloud or the entire report deleted.

UIX - Ethernet Test

Ability to delete individual tests



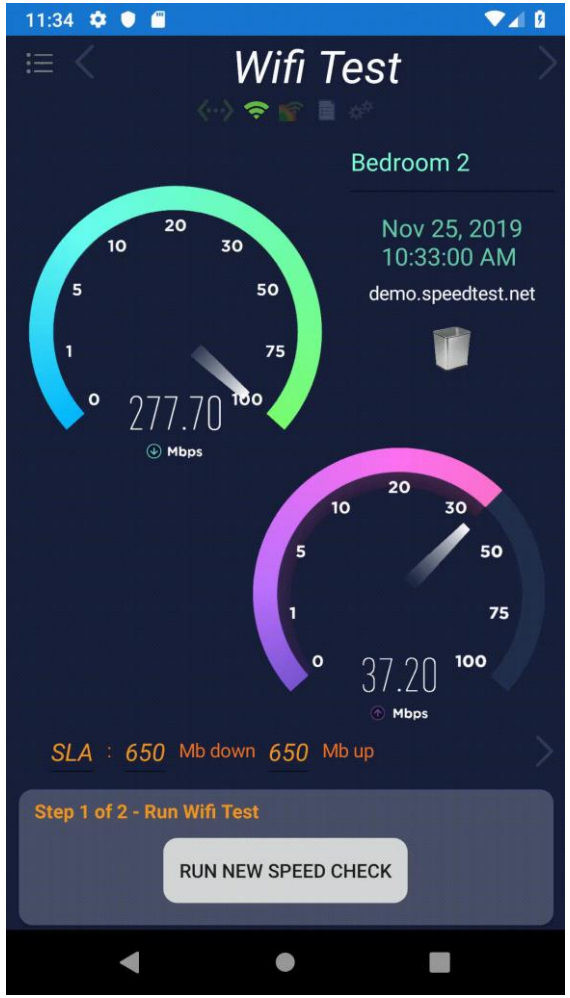


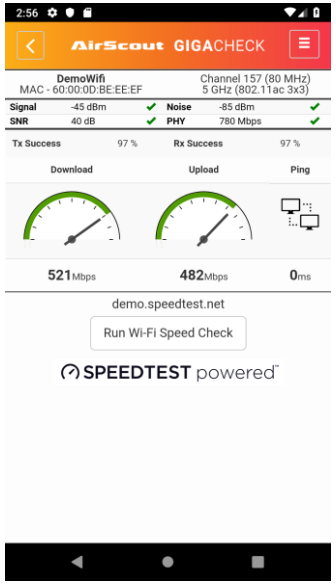
The new Wi-Fi Test screen mirrors the new Ethernet Test screen's feature set with regards to Wizards, Access to Current Tests, Results Scaling and the Ability to Delete Individual Tests.

The test location can be edited by clicking on the name in the upper right.

Information about the current Wi-Fi connection and a button for switching to a different AP can be found in the application menu.

UIX - Wi-Fi Test

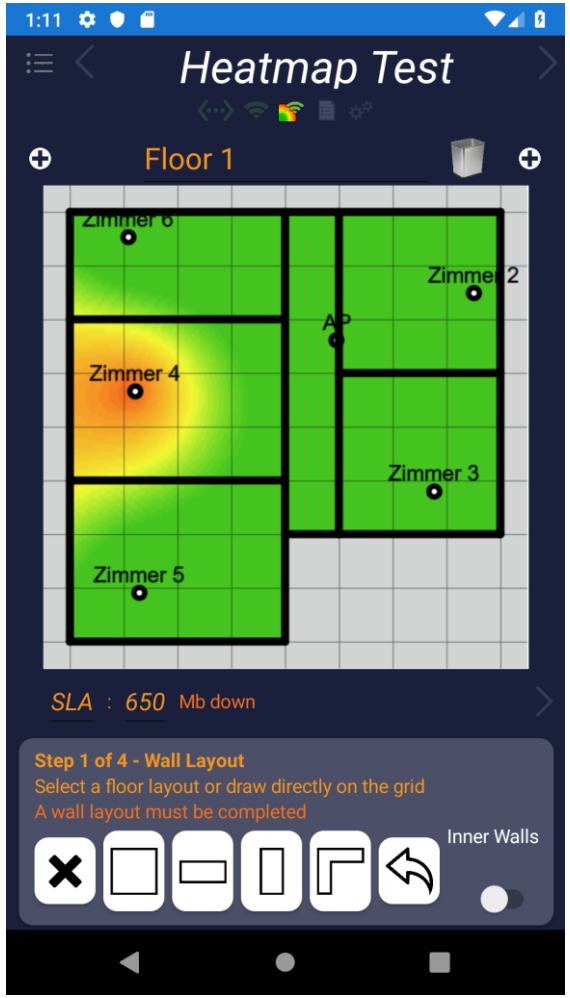


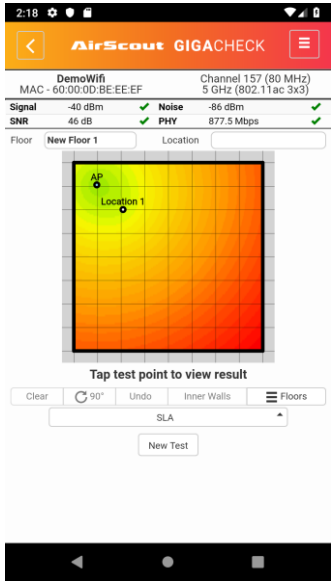


Advanced Feature

1. Make switching to second AP more intuitive
2. Locate second AP and associate test results and heatmaps

UIX - Wi-Fi Test

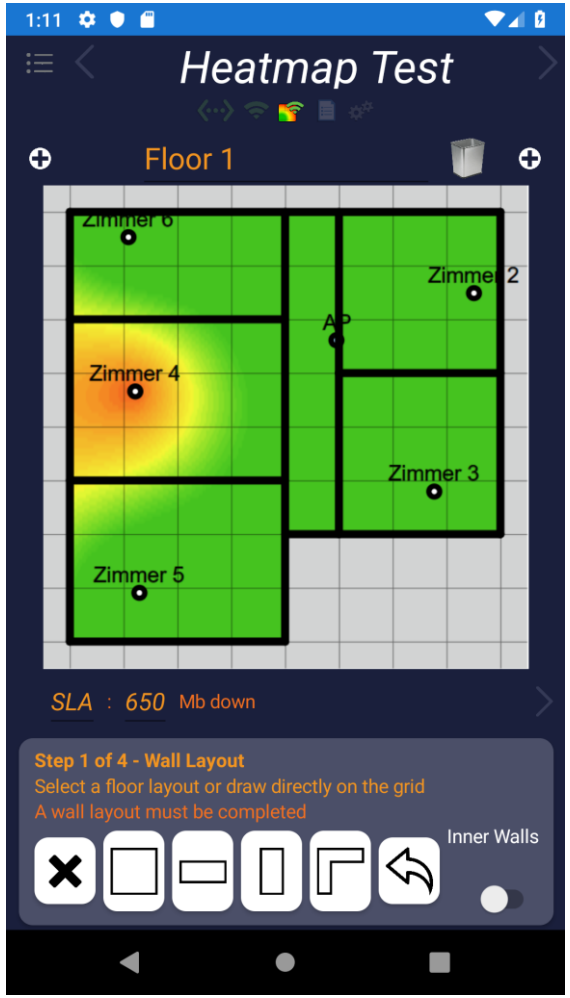


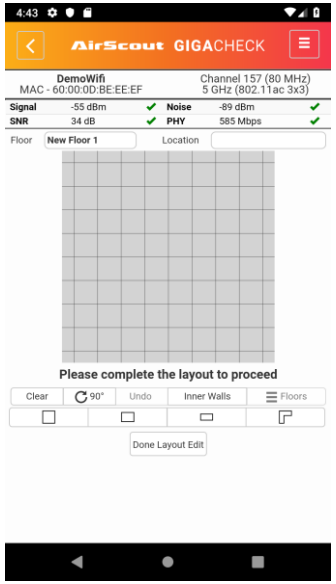


The new Heatmap Test screen, like the new Ethernet and Wi-Fi Test screens include the same Wizard, Results Scaling and Ability to Delete Individual Test features.

As with these other screens, information about the current Wi-Fi connection and a button for switching to a different AP can be found in the application menu.

UIX - Heatmap Test

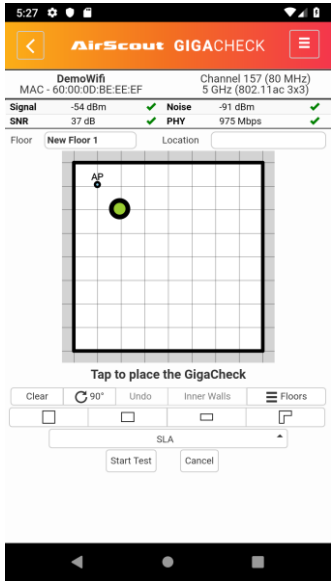


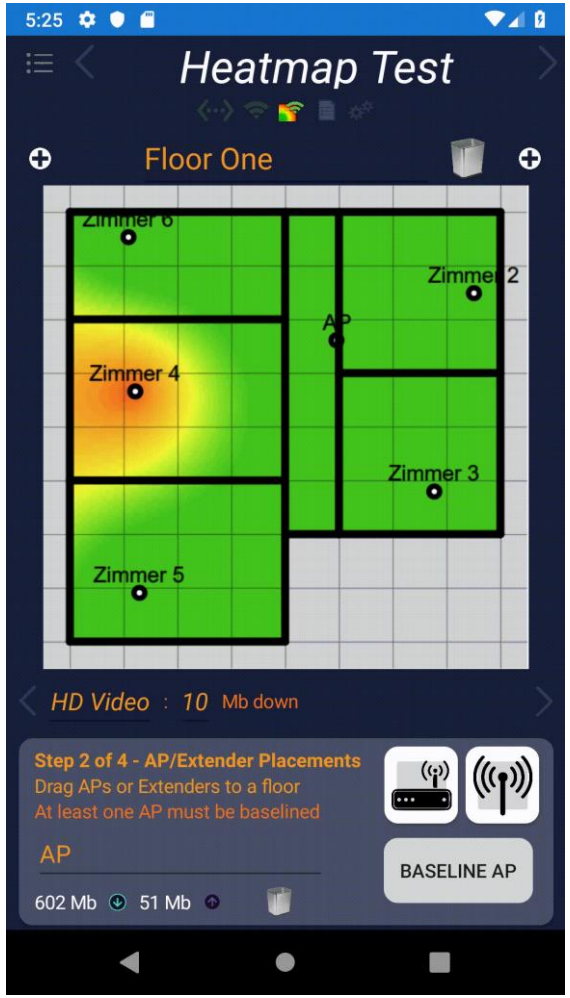


- User can swipe to switch between floors
- Floors can be added before or after the current floor using the + icons at the top of the screen, or removed using the trashcan icon
- Buttons for the preconfigured floor plans in new UI are larger and more accessible

UIX - Heatmap Test

Wall Layout



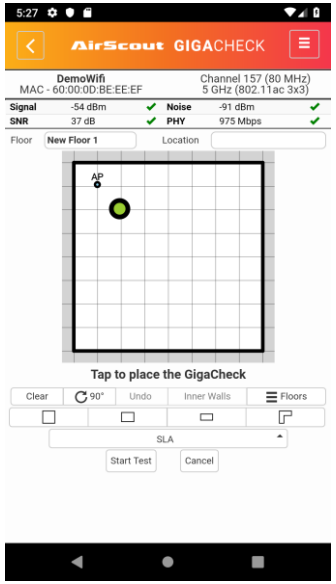


In the new UI…

- Speed Tests can be rerun for any GigaCheck that were previously added

UIX - Heatmap Test

GigaCheck Placements

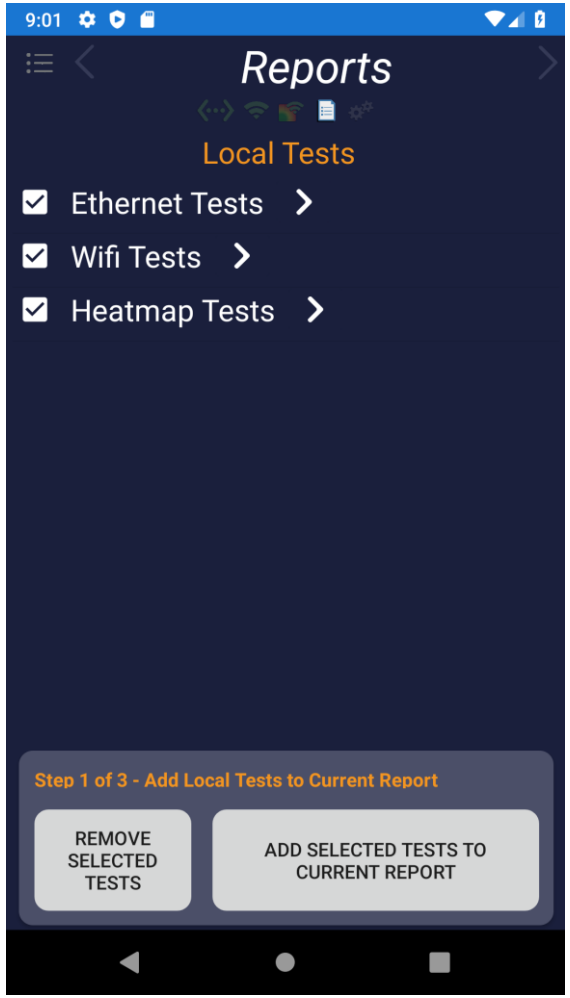


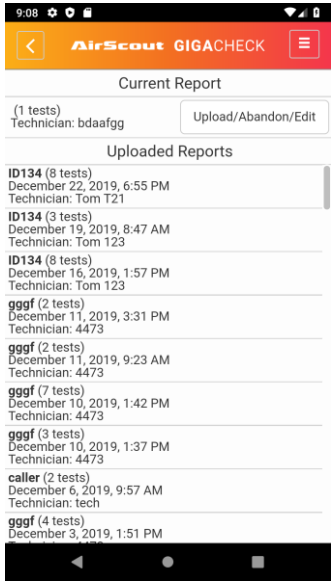
In the new UI…

- Once finished, a button is provided to take the user directly to the Reports screen for upload to the cloud

UIX - Heatmap Test

Finished With Testing

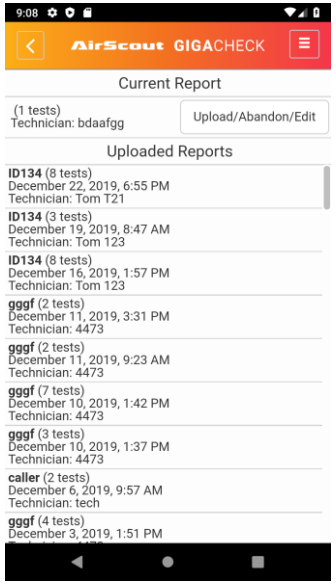


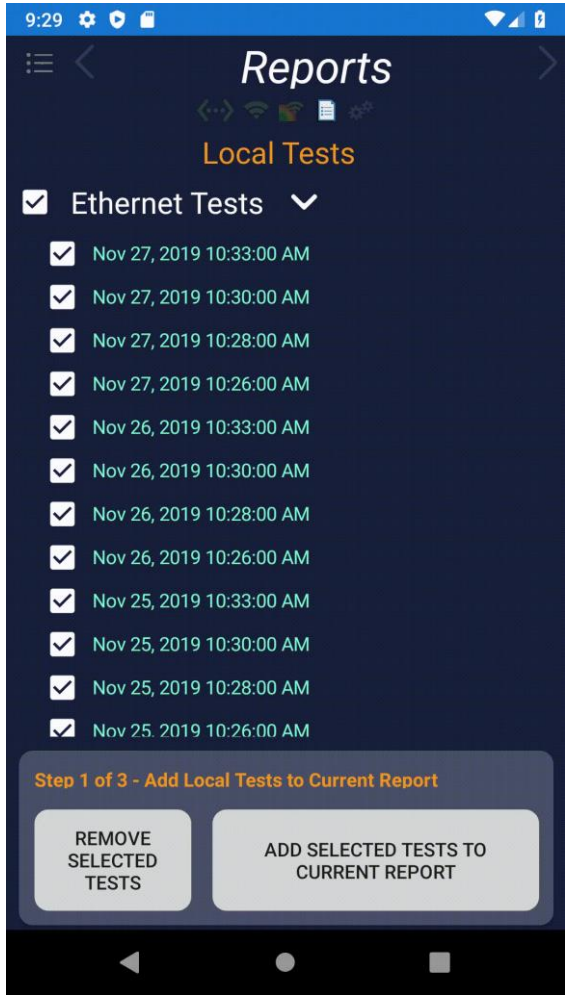


The new Reports screen breaks the reports workflow into three sections

- Local Tests
- Current Report
- Cloud Reports

UIX - Reports

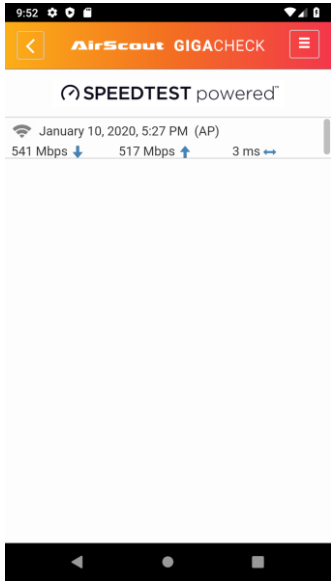


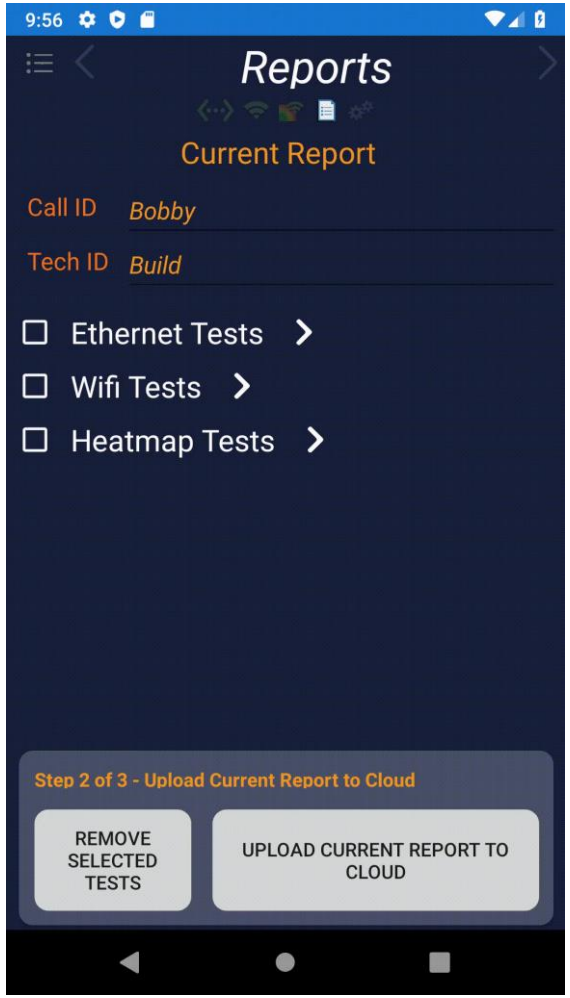


- The Local Tests section contains the list of tests that were performed during the session
- The user selects which tests they want included in the Current Report and which tests to exclude
- Once all selections are made, the Add button is clicked and the selected tests are added to the Current Report

UIX - Reports

Local Tests

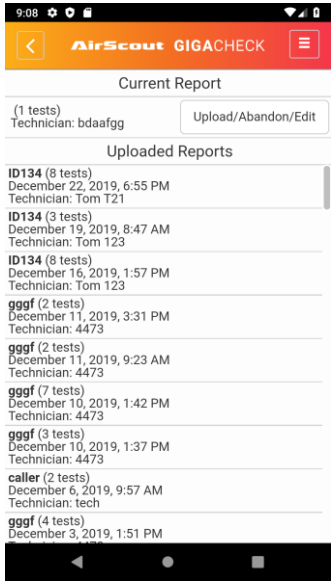




- The Current Report section contains the Call ID, Technician ID and list of tests that form the Current Report
- Selecting various tests to be removed and clicking on Remove Selected Tests will remove those tests from the Current Report
- Clicking the Upload Current Report To Cloud will send this report to the cloud for viewing in the app or in a browser at a later time

UIX - Reports

Current Report



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- The Cloud Reports section displays the list of reports in a tree view for the current user login
- Expanding various nodes in the tree will allow the user to navigate to and view any test for any report the user has access to

UIX - Reports

Cloud Reports

Tempo Product Development Stage Gate Process

Use the Tempo Stage Gate process as a project planning guide. The best engineers plan and validate before committing to code. Tempo can share more SG detail if you are interested.