Android Walkie Mesh
Test Documentation

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Change Log

Version	Date	Comment
0.1	28/08/2013	Initial version with testing outlines
0.2	29/08/2013	Add more detailed testing requirements and procedures.
1.0	22/10/2013	Updated and finalized

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1. Introduction

Since this project continues work from an existing project which did not have any unit testing the team decide and agreed with the client that unit testing would be not be a very effective quality assurance technique. For this reason we instead placed a much greater emphasis on the Integration and non functional testing.

2. Integration Testing Procedure

The integration testing procedure is as follows:

1. First the code that the developer worked on should be tested against the pre- and postconditions for that unit.
2. After working on a piece of the project the developer should test all the major features of the application to insure that his changes did not break any noticeable features. These should be checked before changes are pushed to the remote development branch.
    a. Insure the application can connect to a hotspot .
    b. Insure the application can get mesh access.
    c. Insure that the peerlist shows contacts with both network modes.
    d. Insure that the application can make and receive a call.
    e. Insure that the messaging works, to a contact and broadcast.
    f. Insure that the settings screen is accessible.
    g. Thoroughly test any additional areas of code that the developer touched while making changes.
3. After pushing the changes to the remote branch the changes that was made should be reviewed and approved by another developer.
4. In order to promote a version of the code to the master or release version the following test should be run on at least three different devices from at least two different manufacturers. The devices should also represent at least the low, medium and large screen resolutions.:
    a. Insure the application can connect to a hotspot .
    b. Insure the application can get mesh access.
    c. Insure that the peerlist shows contacts with both network modes.
    d. Insure that the application can make and receive a call.
    e. Insure that the messaging works.
    f. Insure that the settings screen is accessible.
    g. Test all settings with the full data range and verify that the changes has the intended effect.
    h. Run through each of the use cases and insure that they work as intended.

    i. Run the application for a 10 hour duration with occasional use to insure that the application is ready for prolonged use.
5. After the promotion the application is put into beta testing with a number of beta users who are polled every few days for feedback and errors encountered.
6. If after a week no problems were picked up in the beta that version becomes the stable version.

3. Non-Functional Testing Procedure

The client did not specify many non-functional requirements but we test that each beta version does not violate the following requirements:

1. Voice communication should reach the target within 1 second even over 3 hops.
2. A new contact joining a network should show up on the peerlist within 10 seconds.
3. A node in the network should be able to handle at least 2 simultaneous voice conversations at a time.