ANDROID MESH WALKIE

PROJECT TENDER

CLIENT: CSIR

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CONTACT DETAILS

CONTACT PEOPLE

Pieter Botha:

Email: pbotha2@csir.co.za

Alex Terlunen:

Email: aterlunen@csir.co.za

TEAM MEMBERS

Clark Fourie:

Email: gacfourie@liv.com

Phone: 082 886 6377

Ivan Du Toit:

Email: ivandtoit@gmail.com

Phone: 076 092 6242

Adriaan Louw

Email: adriaanlw@gmail.com

Phone: 082 706 3208

EXECUTIVE SUMMARY

The team will use agile methodologies to achieve high quality integration between existing frameworks and new code as well as delivering working software early and often.

THE PROBLEM

Create an android application that allows a Wi-Fi enabled device to connect into a network mesh of other devices to allow connected devices to communicate with each other. This network should then be used to carry voice over internet protocol communication between at least two connected devices. This network should be formed in a peer to peer fashion without any control server.

OBJECTIVES

The application should provide the following features:

- Automatic device discovery (Other devices running the software in range.)
- Peer status discovery, allowing the user to see the status of contacts.
- User contact management that includes aliases and blacklists.
- Bidirectional real time VOIP and push to talk communication.
- Zero configuration for first use.

TECHNICAL APPROACH

The first step in the project will be to determine which libraries provide the features that are required and prototype them to see which pitfalls and benefits each provides. This process might lead to addition or changes to the scope of the project.

Even after choosing the frameworks the design of the application should be modular and make extensive use of interfaces to allow the modules of the application to be switched at any stage of the project.

This project will require a lot of integration of existing libraries and frameworks so one of the biggest tasks will be to create integration tests to insure that over all iterations the applications behave as designed.

PROJECT MANAGEMENT

The team will use agile methodologies to allow rapid development, flexible design and frequent working software delivery.

MILESTONES:

1. Mesh network communication established (including routing).
2. Device discovery and status information exchange.
3. VOIP communication between devices.

The given milestones are the bigger objectives of the project but not the only times that working software will be delivered.

COMMUNICATION AND COORDINATION

Because of the agile methods that will be used on the project, short interval communication between the client and the team is very important. This short interval communication can be done by email but the team believes that in person meetings are very important especially before and after the big milestones.

TEAM QUALIFICATIONS

CLARK

Has experience working with Java and network applications.

IVAN

Has experience working on large projects and tight deadlines. He has extensive java experience and some experience developing for android devices. Also has experience with network based applications and communication as well as currently taking a networks course (COS332). He also enjoys learning new things from the experts in the industry.

ADRIAAN

Has experience working with Java and extending functionality of Java Components and Utilities.