Herman Willem Keuris

(Photo)

**Interests:**

My two greatest interests are music and IT (especially Artificial Intelligence, Web design and multimedia orientated software).

**Technical Skills:**

Experienced in coding in the following languages/mark-ups/standards:

C, C++, Java, Python, Delphi, HTML, CSS, XML, JavaScript, JNode, PHP, AJAX, JQuery and MySQL

Experience in working in the following fields:

* Operating Systems
* Networks
* Web Systems (server- and client side processing)
* Database management

**Relevant experience:**

I am very experienced in coding in C and Java and have some experience in working with simple operating systems which might prove useful when working with android systems.

**Non-technical strengths:**

Work well in group settings.

Hard working.

Practically orientated (like to plan out things in advance rather than progressing without clear goals or expectations).

Good at abstracting complex data systems into more understandable and manageable segments.

Quick learner.

**Why I want to do this project:**

I am very interested in programs associated with social media (e.g. social networking) and designing mobile applications. I’m also interested in how programs handle different types of multimedia (such as video and recordings) and would be very interested in learning more about, and using, Session Initiation Protocol elements. I’m also interested in the chance to learn more about cryptography in social applications such as IM’s.

**Project Execution:**

**Methodology:**

As the specification states we will be making use of the waterfall development methodology.

The waterfall method is a sequential and logical design process which “flows” through various stages of the software development process. Our design process will be split into the following phases:

* Requirements: Deciding on requirements.
* Design: Writing out requirements (System Requirements Document) and Design Documentation (including Plan for Software Aspects of Certification (PSAC) and Software Development Process (SDP) documents).
* Implementation: writing source code and Software Verification Cases and Procedures (SVCP).
* Verification: Testing and writing of the Software Versions Repository (SVR) (i.e. reviewing the code).
* Maintenance: Writing of the final reports such as the Statistical Analysis System document (SAS), the Software Configuration Management Record (SCMR) and a Software Quality Assurance document (SQA).

**Client communication:**

As stated in the specification we will be kept in constant contact with Kobus Coetzee in the form of emails and in person meetings every ±3 weeks (these meetings will be more frequent during the implementation phase). We will also make a GitHub repository available so that any interested party can keep tabs on our progress.

**Initial ideas:**

* Group chat:

Each group will have an admin user which can kick members and invite new members (optionally, all members could be admin members).

Each member in a group can have a distinct colour associated with their name to better distinguish their messages from the others.

* Profile: User profiles can have a profile picture and a custom (or default) status.
* Multimedia: Allow users to send pictures, videos, voice recordings, contacts and GPS locations to each other

**Technologies:**

As stated in the specifications, all development:

* will be done in a Linux environment
* using Eclipse IDE
* and the Android Developer Tools (ADT) plugin.

We will also be making use of the Zest T1 Android phones provided to us.

All source code will be coded in either C or Java.

**Final product:**

The final product will have the following functionality:

* Group chat (invite other members, delete members, delete groups, all members receive posts on the group).
* Secure communication thanks to basic message encryption.
* Voice recorder which immediately sends the recoding over the IM.
* Better GUI in general (pictures for the profiles, clear text, clearly indicate who said what, indicate what a user is doing, e.g. typing, online, last online, etc.)