

Inland Waters Assessment System

Case Study

CS1709 July 2009

Conduct assessments of lakes and other bodies of water via a custom mobile phone application

Project Summary:

The application allows staff members to conduct risk and signage assessments at lakes or other bodies of water.

The assessment is conducted via a custom developed mobile phone application. The application asks the assessor a series of pre defined questions for each risk that is identified, and for any signage that is present.

A report is produced that contains recommendations specific to current standards and best practices regarding risk management and signage pertinent to the characteristics and designed applicative use of the Lake.

Client:

Royal Life Saving Society.
<http://www.royallifesaving.com.au>

Client Business Background:

The Royal Life Saving Society is an organisation that ensures the development of safety guidelines and risk management systems for aquatic environments.

Project Challenge:

When walking around large bodies of water, assessors needed something light and portable to conduct the assessment. A laptop or tablet PC was considered too heavy.

The system would need to be able to automatically synch the information to the organisations intranet when an assessment is complete. The intranet system would then need to automatically generate a standard report, replacing a time consuming manual reporting process.

Actions:

Development of a mobile phone application and supporting system with the following functionality:

- Data collection
- Full data summarisation and reporting functions
- User friendly operation
- Phone to server synchronicity via web connection

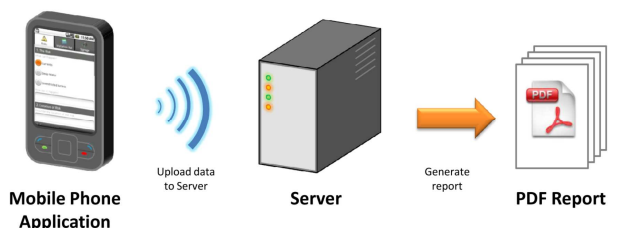


Outcomes:

The mobile phone application allows staff members to conduct assessments at lakes or other bodies of water. The risks at the location are identified and evaluated (using a series of pre defined questions). Risks may include Currents, Deep Water or Water Quality etc. The signage at the location is also evaluated. and the user can associate a photo taken on the camera with a sign being evaluated.

When all signs and risks have been identified, the assessment is complete and the details are transferred to a central server that contains all of the assessments.

The user can then login to the company intranet via a web browser and amend the assessment if necessary. A risk assessment and treatment plan is automatically built in pdf format. This report is then presented to the organisation responsible for the body of water.



Technology Used:

The Inland Waters Assessment System was created using Android, PHP and MySQL.

Android:

Android is a mobile operating system running on the Linux kernel that was initially developed by Google and later the Open Handset Alliance allowing developers to write managed code in the Java language, controlling the device via Google-developed Java libraries.

PHP:

PHP is a widely-used general-purpose scripting language that is especially suited for web development and can be embedded into HTML.

MySQL:

MySQL is a relational database management system (RDBMS). The program runs as a server providing multi-user access to a number of databases.

Extension and Application:

The Inland Waters Assessment System model could be adapted for any organisation that conducts assessments, particularly in remote areas.

Screenshots:

