Date of Submission

July 2017

Network Innovation Allowance Project Progress Report

Notes on Completion: Please refer to the relevant **NIA Governance Document** to assist in the completion of this form. Please use the default font (Calibri font size 10) in any electronic submission. Please ensure all content is contained within the boundaries of the text areas.

Network Licensees must publish the required Project Progress information on the Smarter Networks Portal by 31st July 2014 and each year thereafter. The Network Licensee(s) must publish Project Progress information for each NIA Project that has developed new learning in the preceding relevant year.

Project Progress

Project Title		**Project Reference**
Field Team Support Tool		**NIA_SSEPD_0007**
Funding Licensee(s)	**Project Start Date**	**Project Duration**
Scottish Hydro Electric Power Distribution	April 2015	2 Years 6 Months

Nominated Project Contact(s)

David MacLeman

Scope

Network maps overlaid on geographic maps are the base of the information provided. The documentation added will be tied to the staff job function, and downloaded as needed by the operative. The background IT support work will develop the Common Information Model (CIM) so that data can be sent both ways. The project will not cover the requirement for control or switching, being a purely information supply system, to ensure that staff have access to the latest data relevant to their job function. The project will progress in 4 phases.

Phase 1 will demonstrate the benefits of using a tablet device for routine work, showing network maps, and standard documentation.
This will be trialled using Apple iPads running IOS.

Phase 2 will start the development of the app for Android devices, and confirm the final look of the app, along with the company documentation to be included.

Phase 3 will add in historical data, using data taken from other company systems via the CIM.

Phase 4 will add integration with the company Outage Management System to allow for tasking, and task updates from the field.

Objective(s)

1) To determine the user interface to be used for Field staff to interact with the data sources.
2) Demonstrate that data can be transferred between the tablet and the server in a standardised and secure format that is immune to external interference.
3) Evaluate the scalability of the system, being able to record and display many thousands of reports. The system should show that it is able to support the full lifecycle of each report.
4) Identify whether or not the system is able to maintain data integrity.
5) Confirm that data security is maintained.
6) Demonstrate the benefits for a full scale rollout, and the costs that would be involved.

Success Criteria

1) Evaluate the usability of the tablet.
2) Show back end applications being updated from the tablet, and the new data passed back to the tablet and displayed.
3) Demonstrate that the system can cope with the required level of traffic to and from the CIM.
4) Demonstrate the security of the device, and the ability to delete the device from server control, and delete access to the application remotely.

Performance Compared to the Original Project Aims, Objectives and Success Criteria

- **To determine the user interface to be used for Field staff to interact with the data sources.**

  User Interfaces have been developed that have been tested by field staff, and they are comfortable with them. Examples of the Interface used are below.

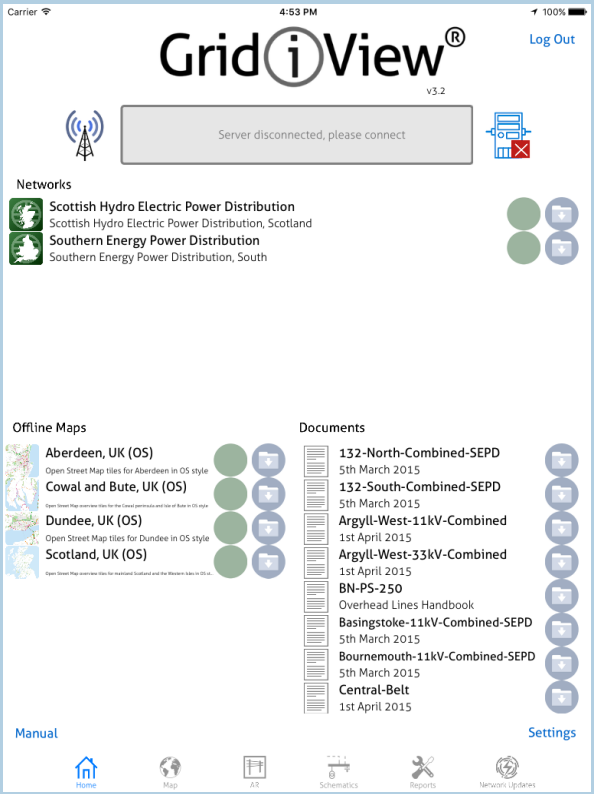

Fig 1: The Home page of the application.

Users can select which network they are going to be working on, and which map they need to use if they have no network connection.

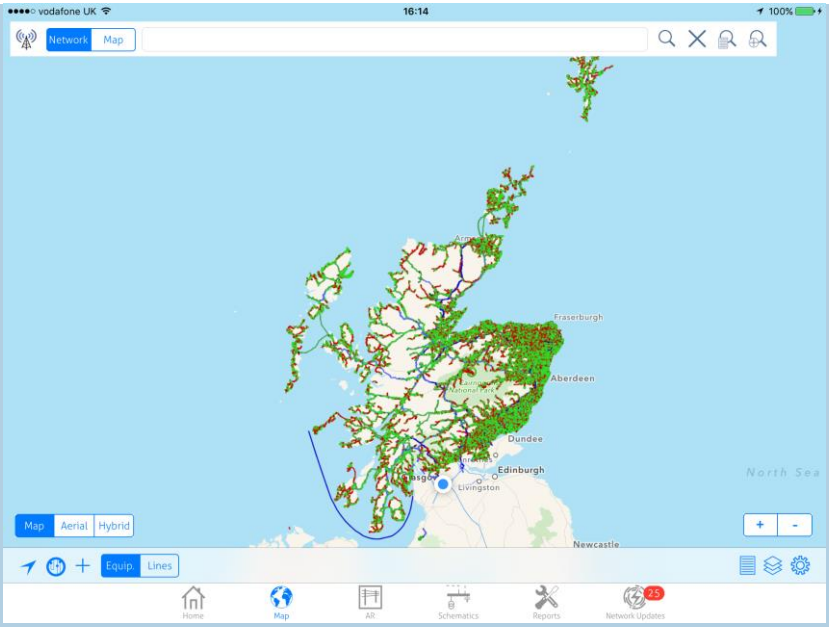

Fig 2: The network map overlaid over the geographical map.

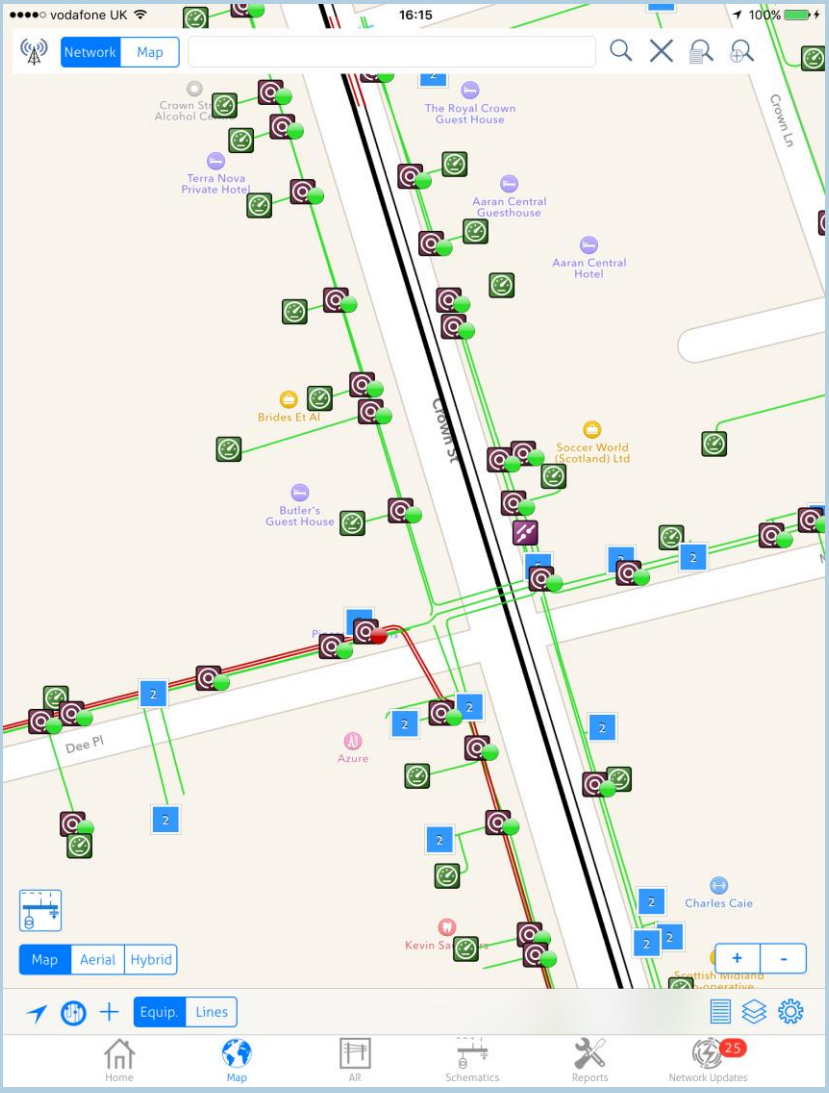

Fig 3: A close in view of the network.

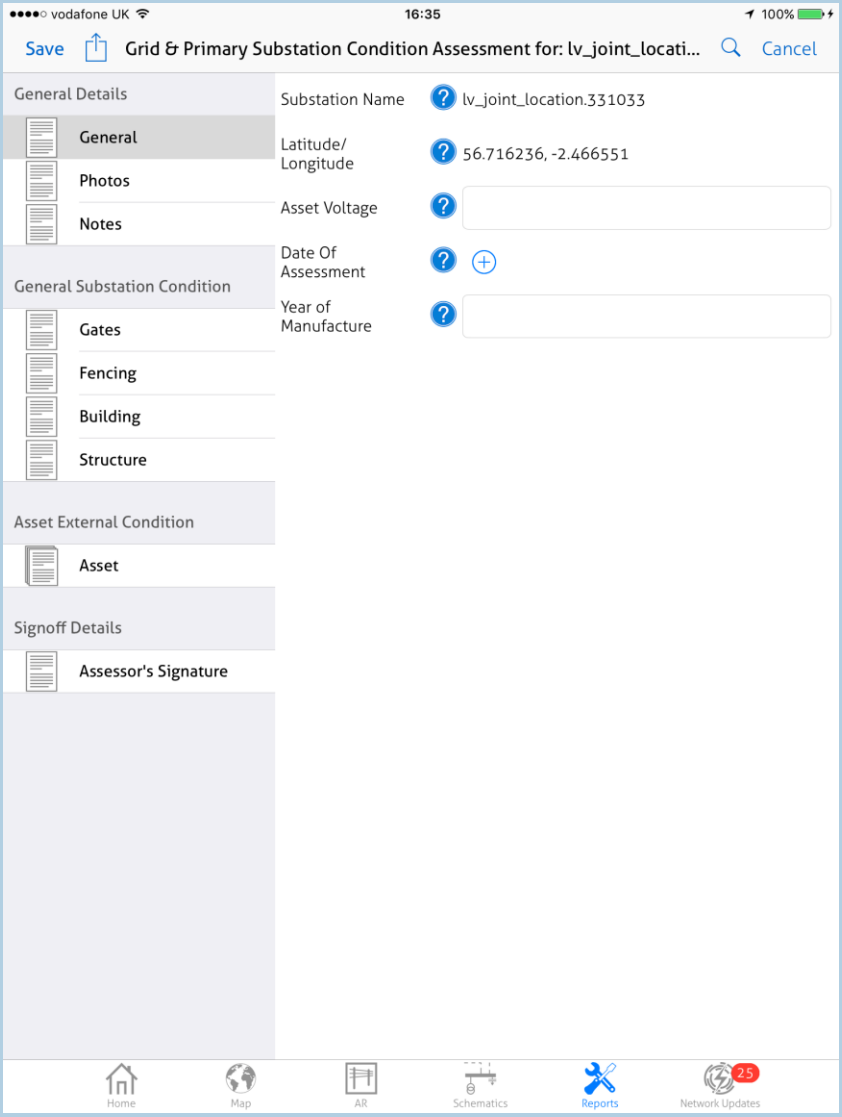

Fig 4: An example of a built in form

Names and locations can be picked up directly from the network map.

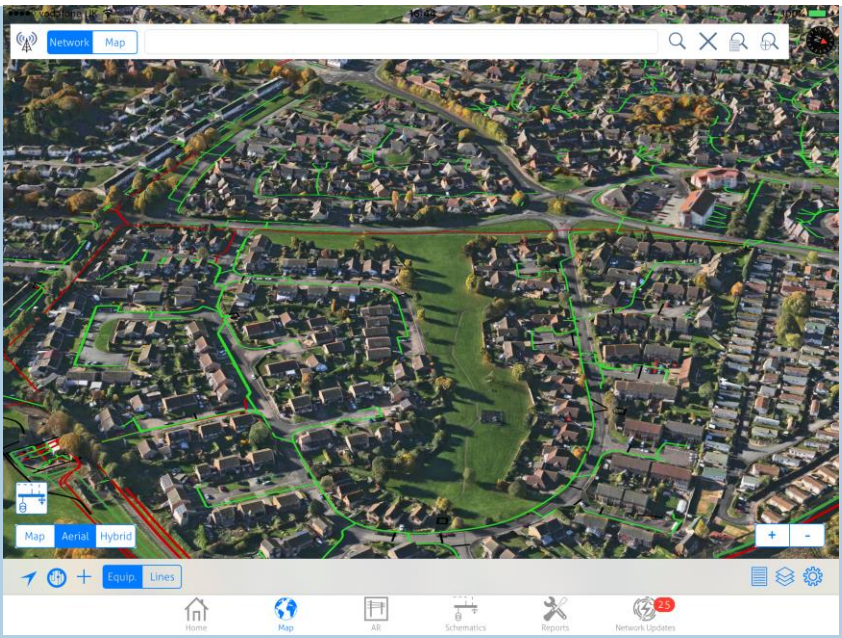

Fig 5: A view of the network using a Google Earth style background.

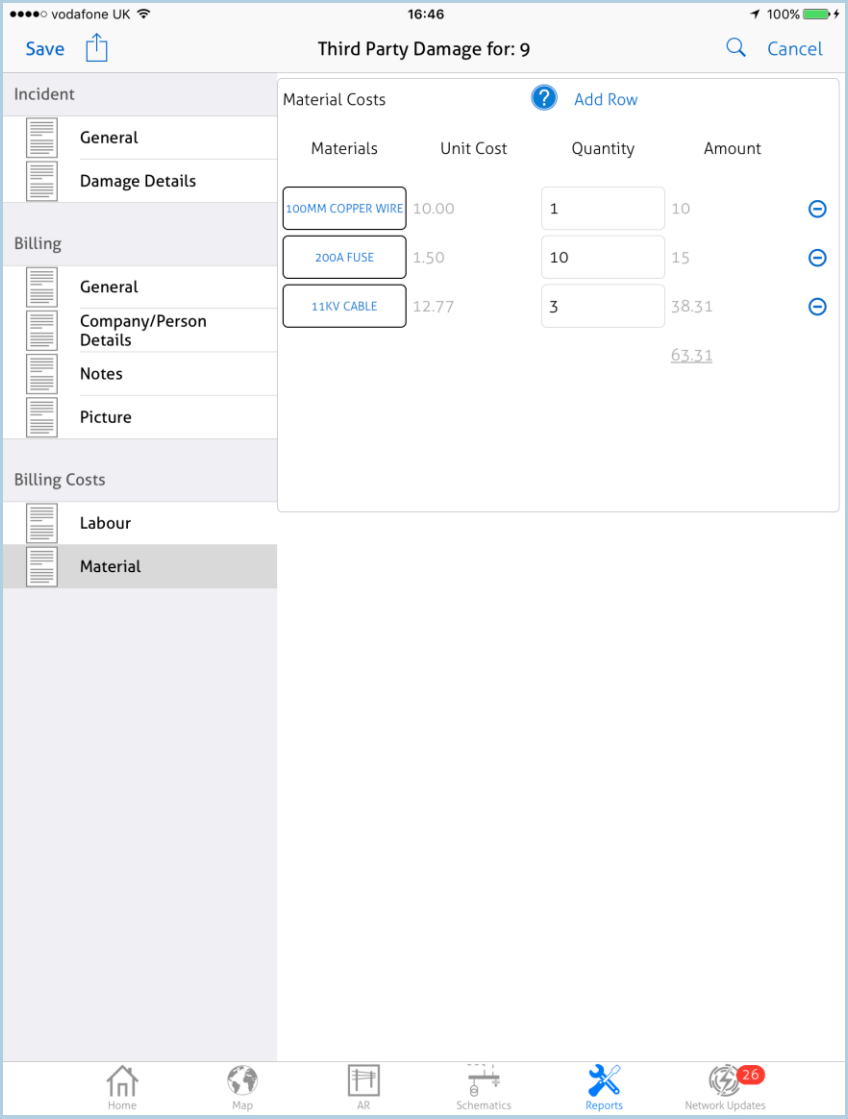

Fig 6: Another form showing how it can do calculations in the background.

- **Demonstrate that data can be transferred between the tablet and the server in a standardised and secure format that is immune to external interference.**

  Data transfer has been carried out using appropriate encryption techniques to encrypt the data during the transfer. This has proven to be successful, with data transfers maintaining integrity.

- **Evaluate the scalability of the system, being able to record and display many thousands of reports. The system should show that it is able to support the full lifecycle of each report.**

  The levels of records received have not yet met full expectations. The servers have seen over 6000 reports received without problems in organizing or searching the data.
  The use case currently being developed should show a marked increase in the levels of reports received over the next few months.

- **Identify whether or not the system is able to maintain data integrity.**

  Comparisons between the data entered on the tablet and the data held on the server have shown that data integrity is maintained.

- **Confirm that data security is maintained.**

  Data Security is to be tested once the final system configuration has been implemented.

- **Demonstrate the benefits for a full scale rollout, and the costs that would be involved.**

  A proof of concept rollout is underway, which will provide further learning on the viability and utility of a full roll out, along with the costs.
  A further use case for the app is being developed to allow the app to show the location of lightning strikes relative to the distribution network.

Required Modifications to the Planned Approach During the Course of the Project

A requirement to produce a version to run on the Windows platform was identified, and further development work was successfully carried out to accomplish this.
The planned approach has been changed from the development of an app as a solution to a company wide problem, to an approach based on specific use cases, to focus the development effort and show case the apps adaptability.

Lessons Learnt for Future Projects

At this stage there have not been any significant lessons
The lessons learnt from the latest stages of the project are that it is not necessary to have all of the potential data integration in place in order to derive value and learning from the project.

Note: The following sections are only required for those Projects which have been completed since 1st April 2013, or since the previous Project Progress information was reported.

The Outcomes of the Project

Not Applicable

Planned Implementation

Not Applicable

Other Comments