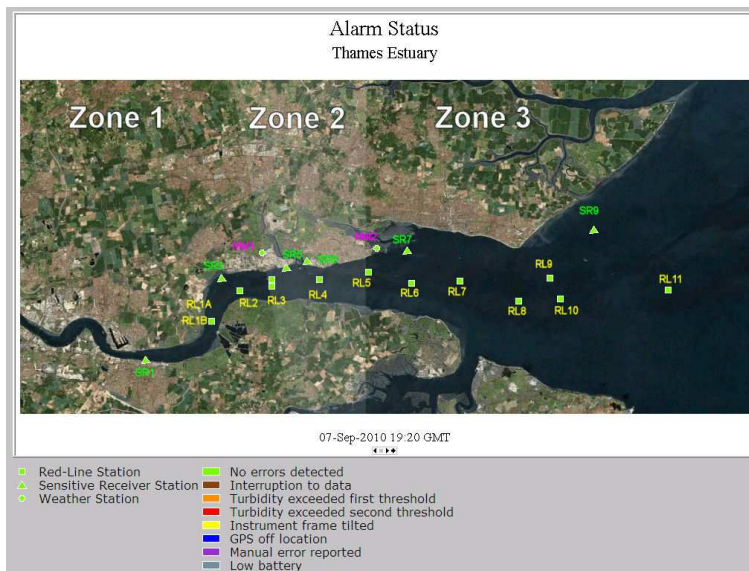


ARTEMeS ENSURES ENVIRONMENTAL COMPLIANCE DURING MAJOR PORT DEVELOPMENT

September 2010

Alphecca Systems have provided an ambitious Internet-based real-time measuring system as part of the major London Gateway port development. The system, known as ARTEMeS, allows environmental measurements to be acquired and accessed using the Internet. Data from instruments at eighteen different locations are used to monitor water quality and ensure environmental compliance during dredging and reclamation work on the Thames estuary.

Measurements are transmitted in real time using the mobile phone network to a server on the Internet, where the data may be viewed on secure web pages using interactive graphics components or downloaded as spreadsheets for further processing. In addition to the acquisition and display of measurements, ARTEMeS performs automatic quality control tests that provide notification by SMS and email of potential non-compliance with environmental criteria.



Instrumentation is provided and managed by the UK-based GEMS Survey Limited, and comprises about thirty instruments of nine different types, including one that has never before been used in a real time application. Each instrument communicates with the ARTEMeS server through a common hardware interface that minimises equipment costs and ensures the rapid development and deployment of new systems.

This technology, which was developed by Alphecca Systems, has been

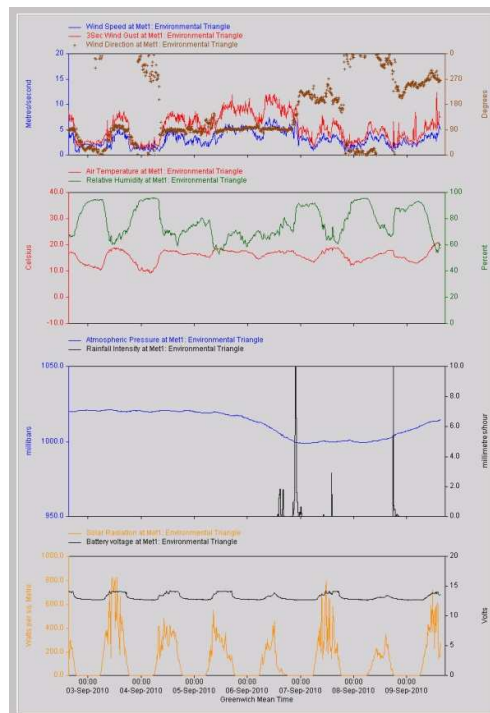
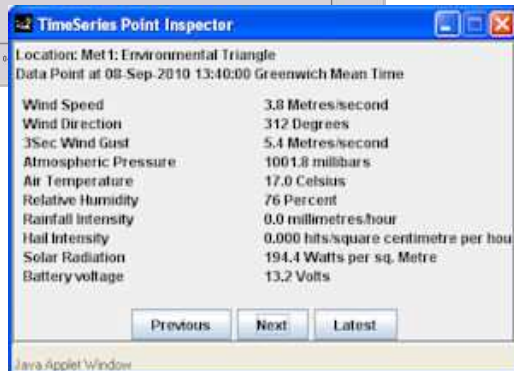
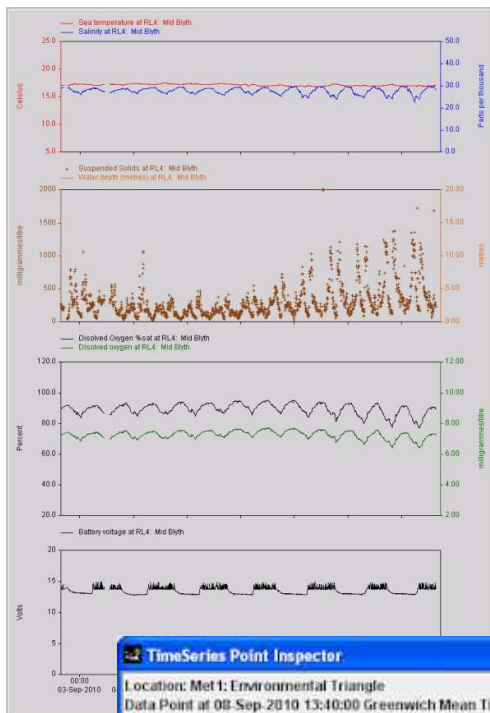
successfully used in other GEMS' projects in France, Yemen, Nigeria, Malaysia, Indonesia and elsewhere in the UK. Recent enhancements that allow the remote control of attached instruments using an embedded web server and Internet browser have dramatically reduced the number of service visits to remote locations.

Instruments on the London Gateway project are deployed from a variety of platforms including land, buoys, jetties and submerged systems on intertidal mud flats.

The instrumentation is expected to be deployed for a further three years.

Data Displays

Measurements are available to authorised parties and dredging contractors as display components on web pages, controlled by a relational database central to the ARTEMes server. All displays are interactive; scales can be changed and details examined by simple mouse clicks.



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Environmental data acquisition for the global network