



## **On the use of Adaptive Grid-Enabled Wireless Sensor Networks in data collection.**

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Integrated monitoring networks for water resources management have not only to provide suitable data for operational decisions, but also to provide it in a timely manner. We seek to address this issue through the application of wireless communication technologies to transmit data within a sensor network where some sensors act as nodes in a grid computing system. The advantages of such a network include: (i) automated adaptation of sampling to the catchment response; (ii) robustness of data transmission; (iii) the ability to integrate new or temporary sensors into the network; (iv) on site processing of the data before transmission; (v) the ability to make local forecasts on site. Our presentation outlines the technology associated with the application of such a networking strategy to the monitoring of a flood plain in the North West of England and discusses its effectiveness in this situation.