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Fluid innovation - The secrets of our success



Paving the way is in the culture of South East Water, and this case study looks at how the business has succeeded once more in creating the future blueprint for mobile working. South East Water has a track record of quality technology implementations. In the second part of this case study we hear from the utility's IT services manager to understand how the culture, approach to projects and successful partnerships with suppliers has been used to overhaul and improve mobile working.

South East Water has always been at the cutting edge of mobile working. Its field operatives were using toughened laptops as early as 2001, and became the first water operations team in the UK to make use of the embryonic GPRS data network. This pioneering spirit remains, with wireless hotspots the most recent development helping to ensure the best mobile working experience, while reducing costs and creating the most accurate and reliable data connection possible today.

Martin Giel, South East Water's IT Operations Systems manager, explains the backdrop which led to this radical approach. "Roughly three years

ago we started to outstrip the network. With an ever expanding workforce and growing reliance on the system, we began investigating how to make data communication to our mobile workforce more robust." The problem is that the mobile system had become so central to the effectiveness of the operation, network failures are extremely frustrating and troublesome. Adding to the pressure is the amount of regulation in the industry; South East Water needs to be able to prove that it's staff are onsite at the right times and the data connection is therefore paramount. As Giel puts it: "if the network provider decides to take down three cells where you are working, how do you get a signal?"



A conversation with Martin Morey of the Mobile Computing User Group proved to be a breakthrough moment, with the two Martins thinking about the possibility of making use of wireless network access(802.11) which, if available, would be faster and more reliable than any other available network connection. "We began thinking about the 100-plus telemetry sites we have located throughout the south which our maintenance staff already use to update work and assets. By adding ADSL to these sites, we would potentially be creating our own network."

By using standard Cisco equipment, we could provide a network footprint that extended beyond site boundaries offering the robust network South East Water desired. The issue of security was quickly identified as a potential hurdle, and for this Martin Giel and the team turned to NetMotion. "By installing NetMotion Mobility XE", the software acts as a layer between the PC and the network, improving the connectivity experience and ensuring security. The software automatically switches to the highest bandwidth available, so if it sees the wireless connection it grabs it without any intervention from the engineers, or moves down to 3G or GPRS if this is all that is available." Ongoing, Giel is overseeing the creation of a map that plots the range and scale of the wireless network.

In addition to offering South East Water the reliability it craved, the arrangement with NetMotion has also offered a number of other significant improvements.



"We have a significantly more reliable real time connection now, updates to jobs are available to all people on the network as they happen." With NetMotion managing the network link the ability to connect to the company's core business systems, Geographic Information System, Maximo works management and a purpose-built mobile system to deliver and sort jobs, the business now enjoys a more complete view of the operations as they happen.

An additional benefit is the ability to utilise a home broadband connection as an extension of the company's network "I now connect directly through my wireless router at home and can access all of our applications as if at my desk. I don't have to copy files between machines and consolidate databases, the home or the field is an extension of the office."

In the field, the connection is now far more reliable, and because the systems and data are centralised admin requirements are greatly reduced. South East Water reports that substantial savings have been made thanks to the reduced need for GPRS data costs. Before the wifi solution was introduced, some field workers had individual mobile bills of close to £300, this figure has now dropped to a more manageable average of £50.

Giel's experiences with NetMotion have been extremely positive, and the partnership approach is best summed up by this example. "When we had to move licences to a new server, NetMotion loaned us the licences we needed for three months. We didn't have to push to get them either, they were offered immediately."

Implementation of the NetMotion technology took weeks rather than months according to Giel and, because the communication layer is essentially invisible to the field staff, there were no issues in terms of the new way of working being accepted.

Part II – Project approach and supplier partnerships to overhaul and improve mobile working.

South East Water has a culture of making technology work in the right way. Following on from our Part I above looking at South East Water's field service capabilities, in this section, we hear from **David Chung, IT Services Manager** to understand how technology is so successfully deployed. It all begins with having the right approach to IT. "All of our projects are driven by the business requirements. The only changes we make without consulting the relevant business units would be purely technical, server related issues. Our steering groups always have a combination of people from IT and the business unit to make sure the work we are doing will deliver business benefit," insists Chung.

This thinking extends into the field, where IT employs a person whose job role entails working offsite with the field service teams. "He finds out how the mobile workers are using our technology, looks at their requirements and feeds back to us. He attends the field meetings, helps with training and his next task is to consult with our remote workers regarding what mobile devices we will buy to replace in 2010/11 what we already have," says Chung. Many field service technology programmes struggle to get buy-in from mobile workers because they consult the people using the technology last, but this approach by South East Water hints at why innovation has become part of the culture.

All IT support for South East Water is handled through a single service desk. A three-tier support system and dedicated teams for different issues mean that all 'customers' have one point of contact, but can be assured of the specialised care they need once they make the call.

Looking specifically at the wireless project, Chung explains how the genesis took place before the merger that formed what is now South East Water. "I was working for Mid Kent Water at the time, Martin for South East Water, and he had already started piloting the use of wifi. The thinking was always sound, working 'out in the sticks' means we often can't get a mobile signal, but my main concern was how secure would it be."

The threat of other people being able to access the network was a big security issue for Chung and his team. The other issue was how you would manage the transition from a mobile connection to wifi in a useable way. "If the field worker was processing a job and the connection died half way through, would we have to drop the whole job, reconnect to wifi and then start again?"

Technology alone doesn't often solve problems, but for South East Water it really did, as in NetMotion Mobility a solution was found that addressed both of these

problems. "NetMotion essentially acts as a firewall on the device, locking it down and stopping people getting in. Rather than connecting to the internet in the usual fashion, NetMotion creates a 'tunnel' to our servers, which means that the laptop is essentially invisible. We also didn't want people piggybacking the network, so NetMotion and the network are set up in such a way that connection is only possible by going via our servers. It doesn't broadcast, it is totally secure and totally robust." On the latter point, Chung says that the network infrastructure at South East Water has been improved to accommodate the additional traffic. "We have two production servers which we can use to load balance if there is a problem with one of the servers. It is vital for us to keep the connection because we are so reliant on it now."

Chung says that the system set-up was relatively short and painless, with just a small client required for installation on each laptop to get it running. It is also simple to maintain. "We needed guidance during and just after roll-out, but we are able to configure it ourselves as it has a user friendly interface."

As well as saving on the mobile network charges, the wifi project has allowed South East Water to end the lease it had on a fixed line with the mobile operator. "This was essential to us and cost around £60k every year." Productivity and usability have also improved. "We are able to send more detailed information to technicians now, they are able to access work and asset management system, GIS and email as though they are in the depot. We are able to provide remote support without having to send technicians to an office location., this keeps the technicians more productive and means less time waiting around for information," concludes David Chung.

NetMotion Wireless enables mobile workers to maintain and optimize connections to applications as they move across various networks and in and out of wireless coverage areas. NetMotion's mobile VPN software, NetMotion Mobility XE™, solves today's key mobile deployment challenges including:

- Ⓒ Bulletproof wireless network security – make any network a trusted network
- Ⓒ Shield users from coverage gaps and interruptions – focus on the task at hand
- Ⓒ Inter-network roaming – applications are not impacted by roaming between networks
- Ⓒ Application performance – applications survive when network coverage is poor
- Ⓒ Management of multiple devices over multiple networks – including those you do not control
- Ⓒ Mobile deployment complexity – central client configuration and lowering end user training

Mobility XE has helped organisations worldwide fully realize the benefits of their mobile deployments, increase mobile worker productivity and efficiency, and improve customer service.

Contact us on info@netmotionwireless.eu to discover more, or visit www.netmotionwireless.eu