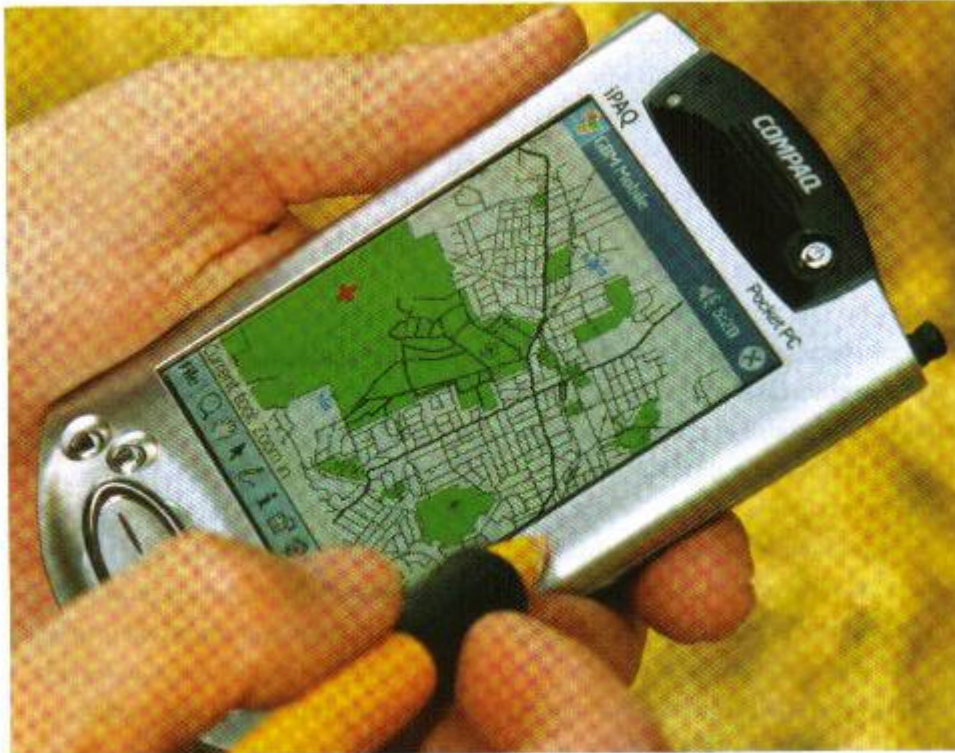


# mobile technology

asset mapping and maintenance

## On yer bike



GBM Mobile's map-based software can locate and log assets such as pipes and fittings using remote GPS mapping technology.

**F**or those in the plumbing trades, all the clever technology in the world means nothing if it does not save time and is easy to use. Thankfully, a clever new data collection software package from Exa-Min Technologies is proving to be both accessible and efficient for trade applications.

Exa-Min's GBM Mobile package is currently being used to drive small hand-held computers or PDAs (personal digital assistants) to log the position and condition of stormwater gully pits for Logan City Council in Queensland.

According to Logan Council road assets engineer, Anthony Southon, the project is already proving successful.

"Operators using the PDAs with real-time

GPS can easily locate and identify existing gully pits. From there, they can provide a condition score in less than a few minutes, which can be readily transferred back to Council's records.

"With more than 16,000 gully pits to inspect, ease of identification and minimisation of data entry and handling are of high importance to Council."

PDAs are pocket-sized computers, not much bigger than mobile phones. They are lightweight, easy to use and can store large amounts of information that can be transferred into an office computer with the push of a button.

Exa-Min's director, Harvey Ryan, explains that GBM Mobile's map-based software is designed to allow the user to locate specific

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assets like pipes and fittings “in real world coordinates so they relate to other services and clearly defined surfaces like property boundaries and streets”.

“Putting these position coordinates into a PDA opens a whole world of data collection and storage for any business with assets in the field,” adds Harvey.

“For plumbers and engineers, the software eliminates any confusion about what pipe, valve or other fitting they need to be working on. They carry out the maintenance and simply ‘tick’ the right boxes on the PDA’s screen.”

Field work for the Logan City Council project is being carried out by operators with no prior experience of either the software or PDA data entry. Field inspectors can work alone to locate the gully pits using GPS (global positioning system) satellite devices that are connected to PDAs and log the pit

condition using the GBM Mobile software.

It may sound complicated, but the actual operation couldn’t be easier, according to David Copley of North Surveys, the company engaged to carry out the field work.

“Operators don’t need to understand anything more than how to turn the GPS on, because the corrected signal is automatically sent to the PDA. They follow the arrow on-screen to the right gully pit and simply input the data.

“The process is so straightforward that with minimal training they can learn the whole thing in about four hours on the job.”

To enter the data, the operator chooses from five or six statements on pull-down menus that are customised for the job, and clicks the one that fits the precise condition of the pit they are examining.

Even entering measurements is foolproof, because the software has ➤



The light weight of the PDA gully-trap plotting system means that Logan City Council inspectors can get around on bicycles.

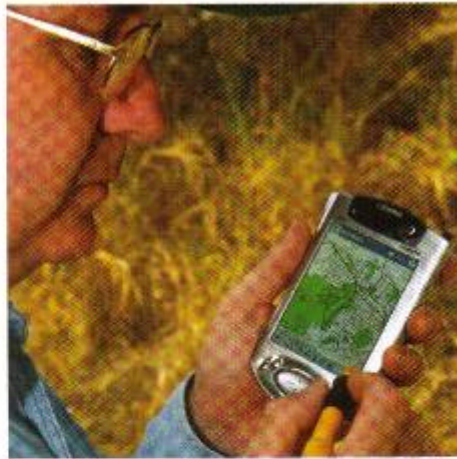
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built-in validation rules. For example, an operator can't enter the length of a grate in centimetres instead of metres.

The GBM Mobile system also reduces the tedious problem of keying in data and the risk of operator error.

But the real beauty of the system is that it eliminates paper records. Data is captured digitally on the spot. At the end of the day, the operator returns to the office and downloads the information, which is merged automatically with the primary database. The updated data can then be displayed and analysed in the office using a more sophisticated program such as MapInfo professional GIS software.

It's as easy as riding a bike, which also happens to be how the teams get around Logan's streets, because pits are either too close together to warrant driving or too far



apart for them to walk. They carry the 3kg GPS module in a small backpack connected to the PDA via a cable.

David Copley says the PDA cable connection is the only weak link and is currently being changed to a wireless connection, which is more robust and easier for operators to handle.

Anthony Southon says Logan City Council commissioned the work for a number of reasons.

"It is important for council to have details of its stormwater gully pit network including physical condition," he says.

"With this information, appropriate levels of service can be set for the infrastructure. Council can program its future requirements for maintenance and ultimate refurbishment or replacement.

"From these future works programs, it is possible for the council to quantify its future funding requirements, including having the opportunity to proactively address future funding peaks or anomalies." ■

## Contact

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