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Toughbooks in Action

Toughbooks help power Integral Energy's asset management

Integral Energy (Integral) line inspectors are using Panasonic CF-18 Toughbooks to improve the reliability and efficiency of Integral's asset management network.

Inspectors carrying out Overhead Line Inspections (OLI), Transmission Line Inspections (TLI) and Ground Line Inspections (GLI) use the Toughbooks to perform routine analysis of transmission and sub-transmission steel tower lines and pole lines; distribution substation lines and overhead lines; and street light columns.

Power lines and poles generally have a life span of around 55 years and are inspected every four and a half years for damage such as from storms or termites, as well as the functioning of the power line itself.

Integral began using an earlier Toughbook model in 2002 and upgraded to the CF-18 in early 2006. So far, 50 CF-18 Toughbooks have been purchased.

TOUGHBOOK®
Computers for the *Outside World™*

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John Roberts, OLI/GLI Manager, Integral Energy, said "Our inspectors don't sit behind desks – they're on the road, digging and excavating around poles to check for termites, dry rot and other damage. Our main criterion for choosing the Toughbook was to give the inspectors equipment that would withstand the environments they were working in, as well as the people using them."

The Toughbook CF-18's robust design protects valuable data from impact, moisture, water and dust. Built-in ruggedised features include a full magnesium-alloy case, sealed port and connector covers, ruggedised case hinge and moisture and dust-resistant LCD, keyboard and touchpad. Both the screen and hard drive are impact-isolated and the entire unit has been tested for compliance with MIL-STD-810F requirements (US Military standards) for drop shock and vibration absorption, and liquid, dust and dirt ingress in extreme operating environments.

Using the Toughbook allows inspectors to save time usually taken up by paperwork by performing pole inspections and recording data on site, without the risk of notebook failure.

When an inspection commences, a work order is retrieved from the GIS (Geographical Information System) and Ellipse systems on Integral's asset database and filed into a folder on the FIS (Field Inspection System), a mobile computing system run on the Toughbook. The FIS is used in the inspection of Integral Energy's poles and power lines.

"For Integral, there's a lot more to consider than just the cost of a notebook. There's also down time of the inspector as well as lost data – since our inspectors are on the road, they might not get a chance to upload their field data back on to the main asset database for up to a fortnight. The Toughbook's ruggedness dramatically reduces the chance of a breakdown, potentially saving two

weeks' worth of work." said Roberts. The CF-18 also features a tilting and swiveling 10.4 inch high-visibility (daylight readable) XGA display panel that flips and closes over the notebook's keyboard to convert it to a rugged touchscreen tablet PC.

"Since Integral's inspectors are outside every day performing asset analysis, the daylight readable screen is a huge advantage. The tablet is also a great feature as the FIS utilises an interactive map and drop-down windows on-screen, enabling inspectors to control the program with one hand via the touchscreen," said Roberts.

OLI, TLI and GLI work are allocated in maps tied to land-based data. Maps in urban areas are generally smaller due to pole density, whereas maps in rural areas are larger. Over 85,000 poles are inspected per year.

Integral's network serves 2.1 million people across 24,500 square kilometres over Sydney's Greater West, Blue Mountains, Greater Lithgow City and Rylstone Shire, the Illawarra and Southern Highlands regions, providing electricity to 738,000 residential customers and 73,500 commercial and industrial customers.



www.toughbook.com.au

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