



Software tracks metal health

WHEN you consider the average building has more than 300 metal components, many of them containing two to three materials, software developed by QUT could be considered a maintenance manager's dream. Dr Richi Nayak, Queensland University of Technology senior lecturer in the Faculty of Information Technology, says software developed for the Queensland Department of Public Works would allow the department to monitor the metal health in buildings across the state.

"The system we have developed allows maintenance officers to look up each building and ask for a particular metal component and ask how long it will last," explains Nayak. "The service life prediction made by the system then allows them to plan its maintenance schedule. The system also helps to make cost effective material selections for new buildings or replacement parts.

"This means metals used in down-pipes, ridge capping, roof fasteners and roofing, steel supports and window frames can all be efficiently monitored and maintained for corrosion. Timely maintenance rather than reactive repairs



Metals used in a building can be efficiently monitored for corrosion with QUT's new software

could significantly lower the maintenance bill on buildings while improving safety," says Nayak who adds that the system based on data mining was a first.

The system accesses a number of different databases of component lifetimes, derived in different ways, making it more

robust. It avoids the need of physically going and inspecting a building to find out if metal was corroded. Nayak's work was completed under the auspices of the Cooperative Research Centre (CRC) for Construction Innovation based at QUT and in collaboration with CSIRO, Materials Science and Engineering.