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Stitch in time: software tracks buildings' 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 is a maintenance manager's dream.

Dr Richi Nayak, Queensland University of Technology senior lecturer in the Faculty of Information Technology, said 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," Dr Nayak said.

"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 downpipes, 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 could significantly lower the maintenance bill on buildings while improving safety."

Dr Nayak said 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."

Dr 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.

The Department of Public Works is investigating ways of utilising this tool in its day-to-day decision making in both building design and maintenance.

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**** High res pic of Dr Nayak available for media use**



Dr Richi Nayak