

RESEARCH DIRECTIONS

Keeping information on track

Professor Athula Ginige, from the School of Computing, Engineering and Mathematics, has been awarded funding by Transport for NSW to investigate new ways of creating, managing and accessing the huge bank of content needed to keep the state on the move. With co-researcher Dr Yogesh Deshpande, Professor Ginige will devise a system that will serve customers, contractors and employees.

'Over time, organisations tend to develop large repositories of content such as policies, standards, technical documents and procedure manuals,' says Professor Ginige. 'When the document repositories become large it is more difficult to keep the information in them current, as well as to find required information in an efficient manner.'

As part of an overhaul of transport provision in NSW, Transport for NSW (TfNSW) was established in 2011 to ensure coordinated planning and policy. Within TfNSW is the newly formed Asset Standards Authority (ASA), which has the daunting task of taking over existing standards relating to the state's rail services. Key among its challenges is bringing a cumbersome information network up to scratch, removing inconsistent, redundant and out-dated information, and integrating the remainder in an accessible and user-friendly fashion.

The solution to an unwieldy database, in which things are hard to find, change or update, is suitable information architecture that breaks down information to an acceptable level of "granularity" – in other words, that subdivides data to make it as accessible as possible while balancing the expense involved; the finer the grain, the higher the cost.

This research project will explore different levels of granularity, and develop an optimum process for easy access to information in the right context. For example, a contractor might need information about



a railway station to support design activities or procurement of materials during construction. The contractor might want that information on paper, but also on a mobile device. Such needs would require segmentation based on tasks and location.

Over time, Professor Ginige's study will help to improve transport in NSW. Engineers and other contractors will know what the standards are and be able to find them easily. Experts writing subject matter will be able to keep track of links and modifications. The ASA will know when documents were created, updated and amended. And passengers should reap the benefits of integration, reliability and an investment in the information technology of the future.

Project Title: Development of Information Architecture, Processes and Technologies for creating, converting and managing large repositories of architectural content

Funding has been set at: \$122,751
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