

CRC collaboration produces software to verify code conformance

Automated design checking system will make life easier for disabled – effectively checking that design conforms.

The Cooperative Research Centre for Construction Innovation (CRC CI) has developed a unique system called DesignCheck which is an automated design checking system that quickly assesses if a building design meets the requirements of Australia's new building disabled access code. The project, lead by Dr Lan Ding, is the first step towards a comprehensive program that would cover all of Australia's diverse building codes.

DesignCheck turns complex codes into a readable format and then automates the checking process against the sketch designs, detailed designs and specifications. Through early identification of potential problems, the software overcomes inefficiencies in code compliance checking by reducing both time and costs.

Australia's building codes exist to protect the community however the codes can be complex and non-compliance expensive. In one situation a compliance failure in a high-rise residential building required \$5 million in design and construction changes. Even for smaller projects, such as single dwelling home buildings, a building professional may make many visits to the local council to negotiate approval.

Using DesignCheck, when a designer loads a sketch file into the system, it allows a path of travel to be checked against accessibility by the disabled. When a detailed design is loaded, elements such as door type, door width and handrail height can be checked. If designers want to check more details such as fittings in a disabled toilet, they can be checked through specifications.

Building designers are not the only professionals likely to benefit from DesignCheck. It will also be useful to building certifiers, consultants, building code authorities and specification writers, and could smooth the way for everyone involved in complex building projects – from office blocks to home extensions.

Partners in this CRC CI project include the CSIRO, the University of Sydney, the Building Commission (Victoria), Woods Bagot and the Australian Building Codes Board (ABCB).

