

DesignSpec

A prototype computer software tool demonstrating the creation and modification of building specifications and linking them with a 3D CAD Building Information Model.

An industry need

Specifications are a critical part of contract documents. Lack of consistency between plans and specifications can create ambiguities and lead to variations or errors. DesignSpec assists designers in preparing consistent and accurate specifications.

What is DesignSpec?

⇒ **DesignSpec** is available as a plug-in to Construction Innovation's central DesignView application.

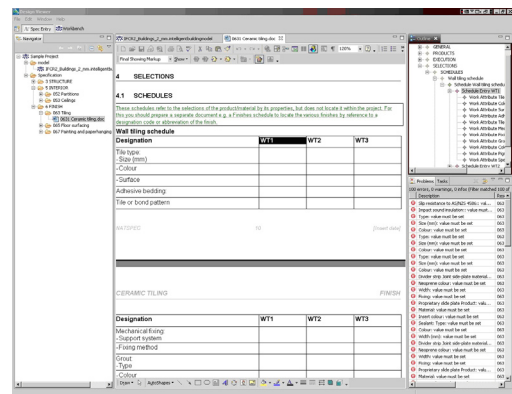
⇒ **DesignSpec** provides the ability to import, view and modify specifications. A specification is explored/navigated using an outline view. Specifications are modified using Microsoft Word.

⇒ **DesignSpec** specifications are currently based around a subset of the NATSPEC collection of specification templates.

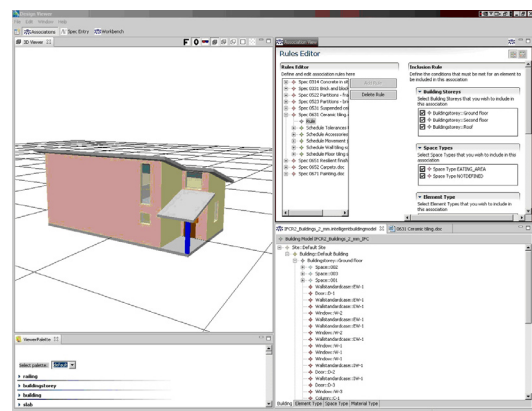
⇒ **DesignSpec** highlights missing data in the specification.

⇒ **DesignSpec** links building specifications with a 3D CAD Building Information Model thus enriching the Building Information Model. A building element or set of building elements may be associated with one or more specification worksections, schedules or schedule entries. The links between the specification and the building elements are displayed visually in the viewer.

⇒ **DesignSpec** enriches the Building Information Model by adding finishes to elements in the building model that are associated with relevant schedules (e.g. wall and floor tiling, carpeting, paint, etc.). These finishes are displayed in the viewer.



The "spec entry" perspective provides a default configuration of views and to inspect and edit the specification documents. It can embed Microsoft Word into the application for viewing and editing purposes, and provide an outline of the specification model



The "association" perspective is used to define the details of the relationships between a specification document and building model. This perspective allows the user to define which parts of the document are associated with which parts of the building model, and to visually inspect those relationships.

Benefits of Using DesignSpec

- Enriches the Building Information Model by adding specifications
- Keeps building specification and building model in line with each other
- Building elements covered by a specification are easily identified (visually)
- Specifications linked to a building element are easily identified (visually)
- Enriches the Building Information Model by adding finish objects
- Highlights information missing in the specification



Likely users of DesignSpec

- Architects/Designers
- Specification Writers
- Building contractors
- Subcontractors
- Academics/Educational Institutions

CRC for Construction Innovation

DesignSpec has been developed by the Cooperative Research Centre (CRC) for *Construction Innovation*. Construction Innovation is a national research development and implementation centre focused on the needs of the property, design, construction and facility management sectors. It takes ideas and turns them into collaborative research to produce industry-relevant results for our partners and the whole industry.

Partners in progress

DesignSpec is supported by CSIRO, Brisbane City Council, Queensland Department of Public Works, Rider Levett Bucknall, and Woods Bagot. NATSPEC was also a core contributor to this project.

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