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ICIS Delegates' Assembly  
Auckland

# ICIS Project # 2 (sub-project # 1) – **Specifications and geometry in BIM**

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(on behalf of David Watson & sub-project group: ARCOM, BIPS, CSC,  
NATSPEC, NBS, SIACAD, STABU)

- ❖ The goal is to identify types of specification information that can or may exist in a BIM.
- ❖ The report assumes the concept structure of a project BIM being made up of (at least) two linked models: geometry “model” and specification “model”.
- ❖ The report identifies which data may best live in the geometry model and which should reside in the specification model.
- ❖ The approach should apply regardless of country, classification, or software used.

- ❖ Where information resides in both locations (e.g. names or IDs) the information must be synchronized to ensure co-ordination.
- ❖ The guidelines offered by the report should result in a minimum of duplication between model environments, and enable/promote automatic (computerized) monitoring and notification of activity and changes.



# Content

- ❖ Definitions
- ❖ History of co-ordination, assumptions & scope
- ❖ Role of the specification v. geometric object model data
- ❖ Project phases (desired, required, recorded/actual)
- ❖ Specifying methods
- ❖ Geometry model data
- ❖ Specification model data
- ❖ Data common to both geometry and specification
- ❖ Model data charts

## Model Data Charts (Tables)

Any Stage

This table describes general types of data, and data that applies to all stages of development.

<b>Any Stage - Data Type</b>	<b>Geometry</b>	<b>Performance Specification</b>	<b>Descriptive Specification</b>
<b>Object/element names/IDs</b>	X	X	X
<b>Derived property values<sup>1</sup></b>	X		
<b>Administrative requirements</b>		X	X
<b>Existing conditions</b>	X		
<b>Temporary structures<sup>2</sup></b>		X	X
<b>Spaces</b>	X	X	
<b>Space properties</b>	X	X	

## Contract Requirements Stage

This stage moves the design to a point where procurement and implementation may occur. This is equivalent to the Coordination and Implementation Phases in OmniClass Table 31 – Phases.

Contract Requirements Stage - Data Type	Geometry	Performance Specification	Descriptive Specification
<b>Installation requirements</b>		X	X
<b>Simple elements</b>	X	X	X
<b>Complex Elements</b>	X	X	X
<b>Complex element properties</b>	X		X
<b>Constituent products/materials</b>	X		X
<b>Constituent material properties</b>			X
<b>Spaces</b>			
<b>Dimensions and space properties</b>	X	X	



## Specifications and geometry in BIM:

- ❖ Report completed and delivered to ICIS board in January 2016
- ❖ Tables warranted further discussion, but were generally agreed as good first drafts by the group
- ❖ Need to determine if further work is required or increased scope e.g. cost data, contracts, ownership, project management etc.



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Thank you