

2.3. CADD Data Acceptance Testing Procedure

2.3.1. Approval Sheet

TITLE:	CADD Data Acceptance Testing Procedure
VERSION NUMBER:	3
REVISION NUMBER:	1
APPROVED BY:	SIGNED: David Reid DATED: 30 th April 2004 MANAGER PROJECT DESIGN SERVICES

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For further information, contact:
CADD Policy Officer
RTA CADD Advisory Group
Telephone: (02) 8837 0522

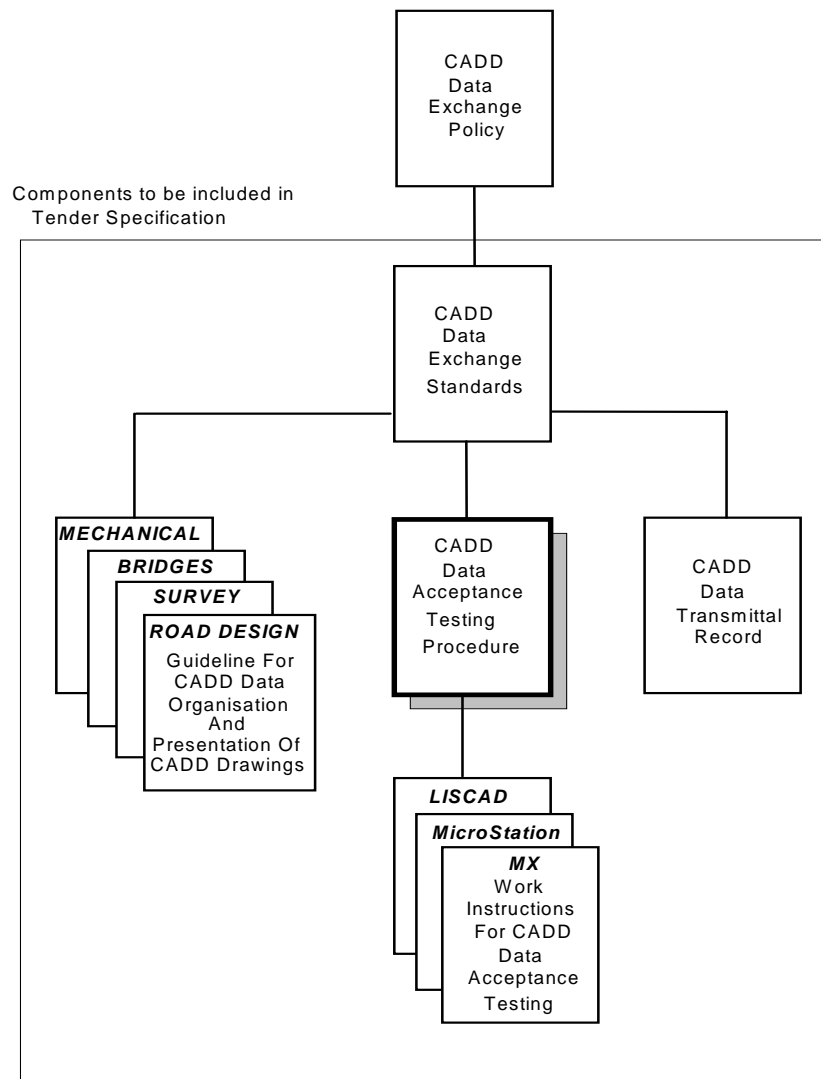
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2.3.3. Scope

This document describes the procedures used in testing CADD data exchange products. Testing will include the verification of physical media, media file formats and the logical structure and content of data files.

Acceptance testing will be invoked at two occasions. Firstly, Pre-tender Acceptance Testing will be used on a representative sample data set to confirm the exchange process prior to awarding a contract involving CADD products. Secondly, Delivered Product Testing will be used at each CADD product delivery to verify conformance with the relevant CADD Data and Presentation Guidelines.



Overview of CADD Data Exchange Components.

This document details CADD data testing procedures acceptable to the RTA.

2.3.4. Pre-Tender Acceptance Testing

In order to identify and alleviate problems in the data transfer process, pre-tender acceptance testing will be carried out before any tender involving CADD products is awarded. This can be considered mutually beneficial, establishing a successful exchange process prior to commencement of work.

Before a Tenderer is selected, they must be able to demonstrate their ability to complete a CADD data transfer process by:

- Reading into their CADD system the CADD test data set provided by the RTA and producing a plotted output of the results for comparison with a known output.
- Rewriting the CADD test data set to media in a format consistent with that specified in the CADD Data Exchange Standards.
- Providing the deliverable CADD product as described in the relevant CADD Data and Presentation Guidelines with the accompanying indexes and plotted output.

2.3.5. Delivered Product Testing

Prior to acceptance, the delivered CADD product will be tested for conformance with the relevant CADD Data and Presentation Guidelines by the following process:

- Completion of the physical exchange process to the RTA's computer system will be undertaken.
- Some or all files will be read into the relevant CADD program.
- Reports and plotted output will be produced for comparison with the contractors supplied indexes and plotted output.

2.3.6. CADD Test Data Set

The RTA maintains CADD test data sets for each CADD program in use. The test data sets are specifically designed to be representative of the type and size of typical CADD files in use by the RTA and will be modified from time to time by the RTA.

CADD test data sets are issued for the sole purpose of data acceptance testing and remain the property of the RTA.

2.3.7. CADD Test Data Set Specification

2.3.7.1. MX Genio Files

Individual files are provided for each string type.

2.3.7.1.1. *MX2D.GEN*

MX 2 dimensional strings with a constant elevation. i.e. contours.

Dimension	1	-	East coordinate
	2	-	North coordinate

The string level is held in the header record

2.3.7.1.2. *MX3D.GEN*

MX 3 dimensional strings (general feature string).

Dimension	1	-	East coordinate
	2	-	North coordinate
	3	-	Level

2.3.7.1.3. *MX4D.GEN*

MX 4 dimensional strings (traverse string).

Dimension	1	-	East coordinate
	2	-	North coordinate
	3	-	Level
	4	-	Point label

2.3.7.1.4. *MX5D.GEN*

MX 5 dimensional strings (interface string).

Dimension	1	-	East coordinate
	2	-	North coordinate
	3	-	Level
	4	-	Offset
	5	-	Bearing

2.3.7.1.5. *MX6D.GEN*

MX 6 dimensional strings (master alignment string).

Dimension	1	-	East coordinate
	2	-	North coordinate
	3	-	Level
	4	-	Station (chainage)
	5	-	Bearing
	6	-	Radius

2.3.7.1.6. *MX12D.GEN*

MX 12 dimensional strings (geometry string).

Dimension	1	-	East coordinate
	2	-	North coordinate
	3	-	Level
	4	-	Station (chainage)
	5	-	Bearing
	6	-	Radius
	7	-	Grade
	8	-	M value
	9	-	Horizontal point code
	10	-	Vertical point code
	11	-	Horizontal element label
	12	-	Vertical element label

Default GENIO output by MX is

Record	1	-	GENIO Major Option and Model name
	2	-	Fortran style FORMAT statement for following data
	3	-	Data order statement
	4	-	String header record (label, string level and End of String value)
	5-n	-	Data records formatted as per record 2.

2.3.7.2. **MX DXF FILES**

2.3.7.2.1. *MX2D.DXF*

2 dimensional DXF created from a MX picture file (.dpf).

Layer name is MX string label

2.3.7.2.2. *MXSTR.DXF*

3 dimensional DXF created from a MX string model.

Layer name is MX string label

2.3.7.2.3. *MXTRIA.DXF*

3 dimensional DXF created from a MX triangulation model.

Layer name is MX string label or group label

2.3.7.3. **MICROSTATION DXF Files**

2.3.7.3.1. *MS2D.DXF*

2 dimensional DXF created from a MicroStation drawing file

2.3.7.3.2. *MS3D.DXF*

3 dimensional DXF created from a MicroStation drawing file.

2.3.8. Work Instructions

2.3.8.1. Pre-Tender ACCEPTANCE Testing

- Determine the appropriate test suit components based on the sending and receiving CADD systems. (ie GENIO, DXF etc)
- Determine the appropriate media type and format based on the sending and receiving systems. (i.e. CD/DVD, e-mail etc)
- Supply the CADD test data product to the contractor with the accompanying documentation. (i.e. CADD Data Exchange Procedure, CADD Data Acceptance Testing Procedure)
- Take delivery of the contractor's re-written CADD test data product with accompanying plots and indexes.
- Record testing results on the CADD Data Transmission Record form.

2.3.8.2. Delivered Product Testing

- Take delivery of the contractors CADD data product with accompanying plots and indexes.
- Upload some or all files to the RTA's computer system and open in the relevant CADD program.
- Produce adequate reports and plotted output to verify conformity with the CADD data transfer standards.
- Record testing results on the CADD Data Transmission Record form.