



Shaping the Cadastral Infrastructure for a Digital Future

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NT Australia

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Presentation Content

- Digital Cadastral Databases
- The Requirements for a Successful Cadastral Infrastructure
- A Practical Approach
- The Future

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Digital Cadastral Databases

- Visual Representation of the physical cadastre
- Its importance is growing exponentially
 - GIS Systems
 - Location analytics
 - Land information systems
- It is being used by consumers without them knowing or caring and they are relying on it

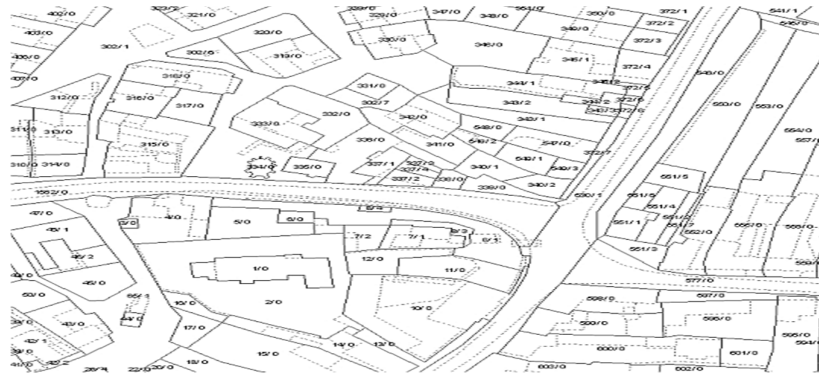


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The Requirements for a Successful Cadastral Infrastructure

- A Geodetic Control infrastructure
- Capture of Digital Survey Data
- Creating and Exporting the Cadastral Fabric
- Statutory requirements
- The role of 3D

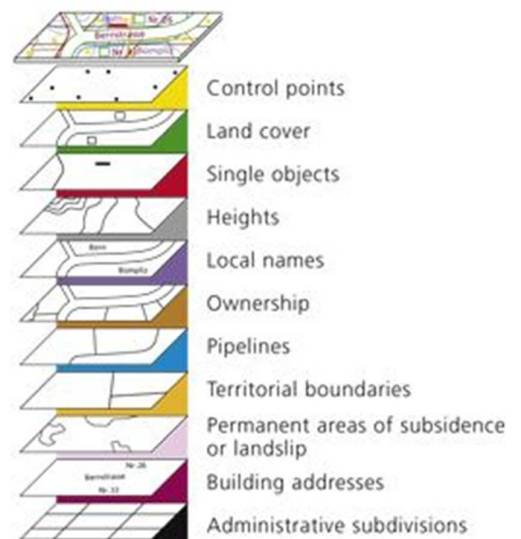


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Geodetic Control

- It provides the platform for the Fabric
- It constrains the fabric and improves the accuracy
- For this to occur the geodetic control must be linked to the cadastre
- CORS networks enable the maintenance of the geodetic control and the reinstatement of the cadastre

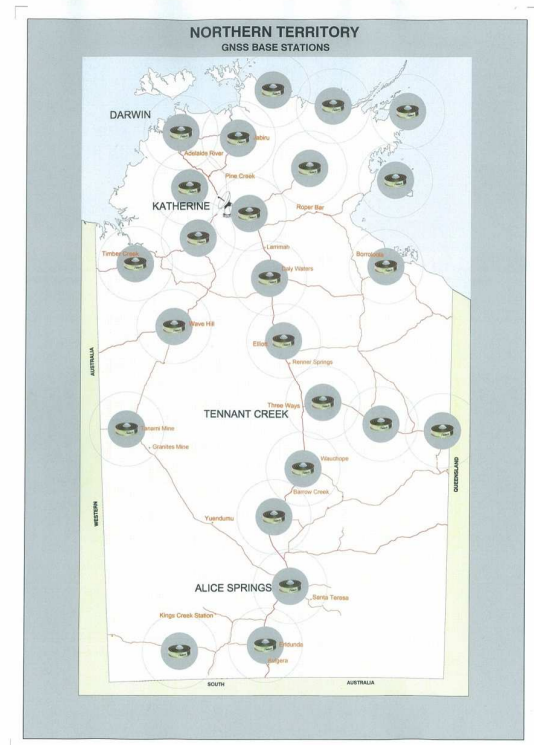


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Capture of Digital Surveying Data

- Key working with the surveying consultants
- Provide a method for transferring of digital survey data
- Need to have data models, suitable process and examination applications
- Supporting IT systems

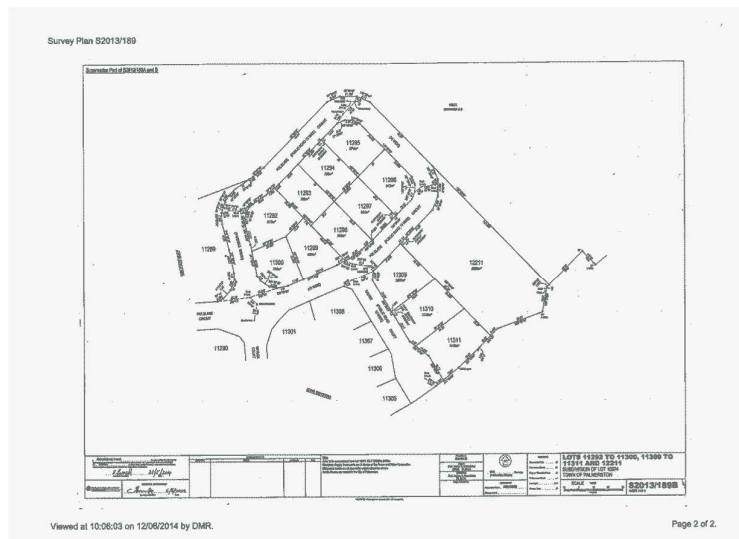


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Creating and Exporting the Cadastral Fabric


- Ability to create a seamless fabric
- IT Systems that support the replication of the Fabric
- Business systems with the ability to use the fabric
- An upgrade process that is timely and mostly automated

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Statutory Requirements

- Ensuring that planning requirements are met
- Survey data complies with survey legislation and directions
- Local government approvals are in place
- Registration of Titles and Rights requirements are met

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LAND TITLES OFFICE FAX NO. 89998239 P. 14


NORTHERN TERRITORY OF AUSTRALIA

Record of Administrative Interests and Information

Record of Administrative Interests and Information (See section 38 of the Land Title Act)	17/01/2005 14:16:41
Title Reference: CUFT 681 904	
Tenure Reference: ESTATE IN FEE SIMPLE	
Tenure Status: Current	
Parcel Reference: Lot 261 Town of Nightcliff from plan(s) A 000118	
Custodian - Registrar General (+61 8 8999 6252)	
Tenure Type ESTATE IN FEE SIMPLE	
Previous Titles CUFT 846 800 CUFT 524 829 CUFT 490 024 CUFT 357 002 CUFT 107 138 GUCL 171 058	
Transfers 86/132004 for \$500,000 03/03/2000 for \$340,000 04/03/1999 for \$180,000 31/03/1994 for \$170,000 16/05/1984 for \$65,500 16/06/1980 for \$38,500	
Tenure Comments (None)	
Custodian - Surveyor General (+61 8 8999 7334)	
Property Address 11 CLEMATIS ST, NIGHTCLIFF	
Survey Plan A 000118	
Parcel Status CURRENT	
Parcel Area 1000 square metres	
Map Reference Code 200 Scale 2500 Sheet 30.27	

Printed by L38 2005-01-17 14:16:41.375600 Northern Territory Government Page 2 of 5

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The Role of 3D

- The key to 3D is ensure that 2D is correct and accurate
 - Plan the appropriate use of 3D data to provide tangible benefit
 - It is not going to solve all challenges in the fabric
 - 3D has limited benefit in most areas of Northern Territory
 - » Most benefit in Darwin – Capital City



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A Practical Approach

- The Northern Territory – Department of Lands, Planning and the Environment Survey Branch
- Small in population under 200,000 people
- Large in area, equivalent to Mongolia, Peru, Chad, Niger
- Well established Geodetic network with CORS
- Long history of capturing survey data digitally
- Consulting surveyors about to lodge digital survey files (1 July 2014)
 - First step in progressing to full digital lodgement
- A seamless cadastral fabric has been created
- Working to use this data to replace existing DCDB
- Coordinated Cadastre
 - Legislation in place
 - First areas will be declared July 2014

The Future

- Survey data will be transferred in two directions
- No survey plan, as such, a table of added and deleted data
- Survey information will be presented on PDF or as an image
- Almost instantaneous update of DCDB
 - Still requires Registrar-General approval

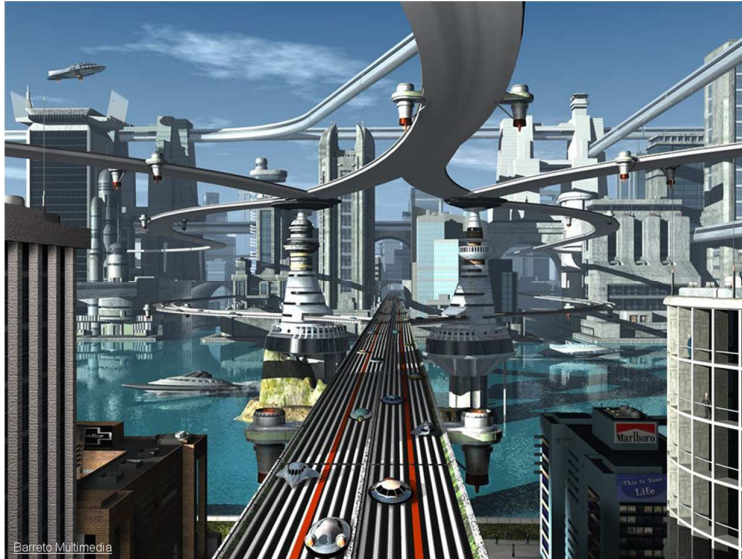


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Summary

- The future maybe changing but the role of surveyors in establishing, and maintaining a cadastral infrastructure is more critical than ever.
- The community is utilising the information we acquire without realising it.
- Spatial accuracy is becoming more important
- Our skills as land professionals are needed as much now as ever before.
- The challenges are complex and surveyors are needed to assist in creating the solutions.
- The concepts are still emerging but practical steps are needed to progress the management of the cadastral fabric and have it ready for the future uses.

The Process

Capture

- Capture Once
- Crowd Sourced from Surveyors

Compile

- Compile – create the Fabric
- Check Statutory Requirements

Share

- Disseminate
- Allow anyone to use it

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References

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Questions

- Thank you for the contribution of the Staff of DLPE Survey Branch
- Geodata Australia – Ian Harper and Michael Elfick



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