Capture and Three Dimensional Projection of New South Wales Strata Plans in LandXML Format

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spatialservices.finance.nsw.gov.au
New South Wales Digital Cadastral Database (DCDB)

- 3,186,739 lot parcels
- Around 890,000 Plans (628,000 DP’s)
- Updated as new plans are registered
- Ongoing upgrade of spatial accuracy
- Does not indicate land ownership above or below ground surface

Digital Survey Plan back capture project

- Captured in LandXML
- Service Provider capturing plans for all of NSW
- Quality assurance of plans
- Currently limited to Deposited Plans
Benefits of LandXML Capture

- Remove duplication of effort
- Versatile format
- Improve accuracy of DCDB
- Useful for surveyors, utilities, state and federal agencies

Strata and Stratum Plans in LandXML

- Easily create basic 3D models for quality assurance
- 3D easier to visualise than 2D
- Can be combined with other datasets
- Further stakeholder benefits
Recipe: ________________________________________________________________
From the Kitchen of: _________________________________________________

Proposed additions to allow for 3D strata capture

1. Z-Values
   <CgPoint name="1" pntSurv="boundary" state="proposed">84.5000000 140.0000000 3.0000000</CgPoint>

2. Naming conventions and acronyms
   <Annotation type="Plan Note" name="1" desc="CY-Courtyard"/>

3. Building Levels (as per plan)
   <Parcel name="1A/77271" class="Lot" state="proposed" parcelType="Part" parcelFormat="Strata" area="298" buildingLevelNo="Ground Floor">

www.hooverwebdesign.com
Method:

Capture Strata Plans in LandXML Format
Capture the Base Deposited Plan
Georeference and Trace Floor Plans
Traced Parcels
Conversion of LandXML to Shapefile
Projection:

LandXML Strata in basic 3D models
Simple Extrusion
SP464: Building in Vaucluse - is it ugly?
SP464 – Vaucluse NSW
Floor Plan Slices - ArcGIS Pro
Building Footprints, Height Data and Floor Plans

3D Strata Plan

Height data X Building Footprints

strata-paramatta.mp4
Conclusion:

Issues and Future Work
Issues to be resolved

S - STAIRS
D - DECK
V - COVERED VERANDAH
P - COVERED PORCH
PA - PATIO

90° ANGLE
C - COURTYARD

P - PATIO
S - STAIRS
PO - COVERED PORCH
C - COURTYARD
RW - RETAINING WALL
CP - COMMON PROPERTY

SP77271
SP80111
Further Investigations

- Issues to be resolved
- Strata and Stratum plans needed for full dataset of LandXML
- Valuable data for stakeholders
- Simple 3D models may be integrated with other data
Questions

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