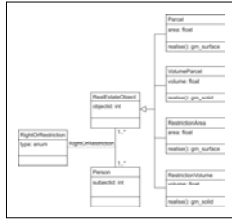
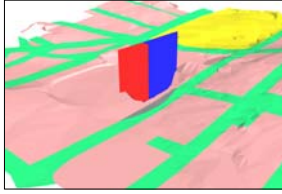


## Conceptual 3D Cadastral Model Applied in Several Countries



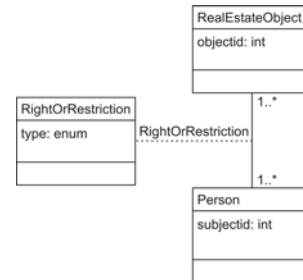
Jantien Stoter, Peter van Oosterom, Hendrik Ploeger, Henri Aalders  
November 8, 2004

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Section Geo-Information and Landmanagement



## Current cadastral model



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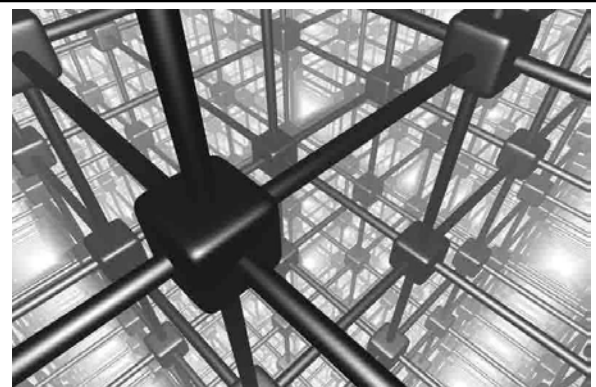


## 2D parcels and 2D registration



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## 3D cadastral registration: some outcomes

- No 3D property units in the geographical data set of the cadastre
- The footprint of 3D property units are limited to 2D surface parcels in British Colombia
- 3D property units must relate to built constructions in Norway and Sweden
- No digital description of the 3D property units
- 3D property units must be described in survey plans in British Colombia and Queensland

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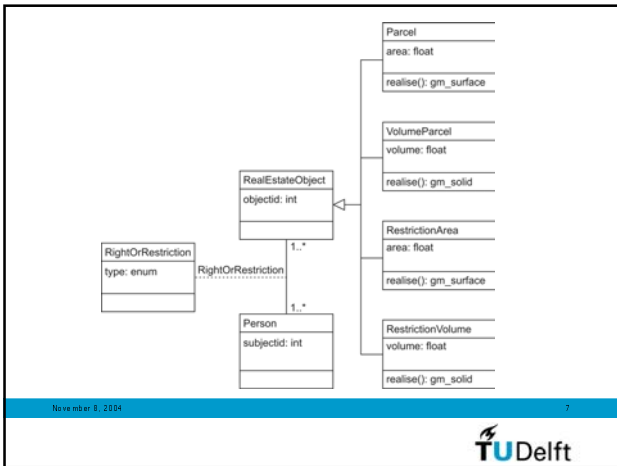
## Full 3D Cadastre

- Only 3D parcels  
Rights to space, divided in well-defined (surveyed) volumes
- Conversion of the "classic" 2D parcels into 3D parcels  
The basis of the division of the earth (and space under or above the surface) is still the surface (2D) boundary

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### Queensland: "3D parcels"

- Building parcels: defined by floors, walls, ceilings
- Restricted parcels: defined (restricted) by certain level (depth or height)
- Volumetric parcels: defined by volumetric parcel plan (using 3D points)
- Remainder parcels: remains after the subdivision of a restricted or volumetric parcel

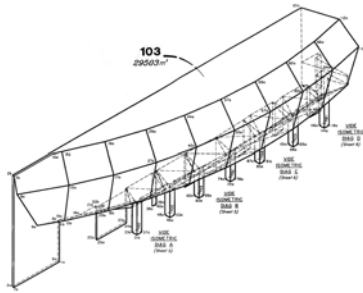
### Case study Queensland: Cricket stadium

### Brisbane, Gabba Stadium

### Gabba Stadium: cadastral map

### Volumetric parcel 101

### Volumetric parcel 103

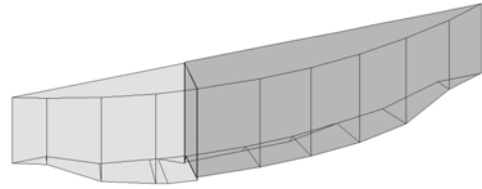


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### Parcels 100 and 101: visualisation of the 3D geometries of volumetric parcels

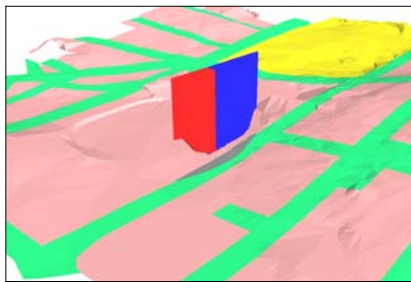


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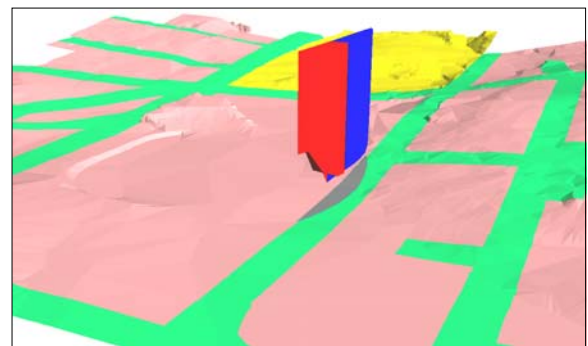


### Gabba Stadium: parcels 100 and 101 in a 3D cadastre



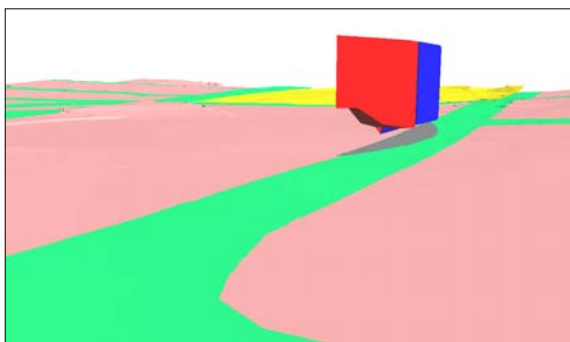
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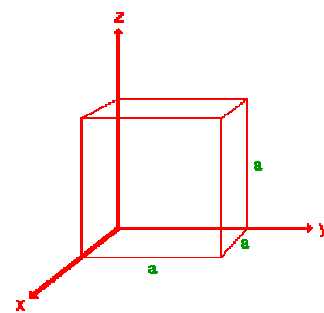
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