



Consistent representation of road features, names and other identifiers in spatial databases

Executive Summary

The Intergovernmental Committee of Surveying & Mapping (ICSM) formed the Roads Working Group (RWG) arising from Resolution R05/05/01 in May 2005. The Working Group was established to promote and develop a nationally consistent approach to the classification of roads and associated infrastructure information. At this initial meeting the Terms of Reference were discussed, refined and finalised. Two major objectives were to:

Develop and promote a nationally consistent classification and attribution scheme for the representation of roads and associated infrastructure – particularly for consistent representation of dual carriageways, entry/exit ramps (including ramp identifiers), and roundabouts.

Develop and promote a nationally consistent approach to the naming of roads and road-related features in spatial databases.

At its meeting in November 2008 the Roads Working Group resolved the following actions:

- 1. Consistent representation of dual carriageways.** Dual carriageways will be any roads with the same name and functional class, with opposing traffic flows, separated by any barrier that prevents vehicles from easily turning from one carriageway to another – that is, distance between the carriageways themselves is not a consideration.
- 2. Consistent representation of entry/exit ramps.** An entry/exit ramp is defined as an access ramp to or from one road to another to allow smooth integration of traffic, and is associated with a freeway or motorway. (Note this definition may need refining in terms of whether definitions of freeway / motorway will be included in the data dictionary.) Entry/exit ramps will be identified as a sub-type of road. Travel flow is in one direction only, they are always sealed and they have a single lane. Jurisdictions can classify ramps according to their business needs however PSMA will continue to classify ramps as per the classification of the adjacent lower-order road.
- 3. Consistent representation of roundabouts.** Emergency management require all roundabouts to be captured as they are a traffic control device. Large roundabouts also have associated connectors with appropriate rules for naming and classification – the majority of

jurisdictions follow a similar process. All roundabouts will be captured and where larger than 20m will be cloned as a point. Any existing roundabouts smaller than 20m captured as lines will be retained. Connector features will be captured and attributed as per the approach adopted by the NSW Department of Lands (which is the most consistent with other jurisdictions).

4. **Entry/exit ramp numbering.** Only exit ramps need to be numbered, and should be numbered using a distance-based numbering system as this is consistent with rural addressing schemes already administered by jurisdictions – i.e. with a datum at the middle of a “major” metropolitan centre. Ramp IDs may require a direction identifier such as inbound or outbound. The actual ramp number would be determined by the RTA. How ramp IDs would be applied to ring roads needs to be considered further. The RWG will approach ICSM, NSIM and other emergency management bodies, Roads Australia and Austroads to implement this system. A ramp ID will be incorporated into a nationally-consistent data model.
5. **Naming within roads databases.** The RWG will work with the Committee for Geographic Names of Australasia and the new ICSM sub-group reviewing AS4819. The RWG’s initial recommendations are:
 - a. No use of possessive apostrophe eg SMITH’S ROAD
 - b. Retain omission apostrophe eg O’BRIENS ROAD
 - c. Avoid use of word abbreviations unless very well known (eg ST KILDA ROAD) or consistent with signposting.
 - d. Retain hyphenated names but avoid the use of “from-to” road names.
 - e. Do not record spaces or abbreviation dots between initials (eg JW LENNON STREET)
 - f. Superscript or subscript names are recorded as uppercase (eg MCLAREN VALE ROAD)
 - g. Use single spaces between road name words.
 - h. Numeric and alpha-numeric names recorded as signposted, but may require a nationally consistent approach.
 - i. Further consideration is required for alias names; one approach may be through a model such as the *AggregatedWay* feature used by the NSW Department of Lands.

Jurisdictions should submit a proposal through the National Topographic Information Coordination Initiative (NTICI) to upgrade relevant features to these new specifications.

Roads Working Group
January 2009.