SITE NAME AND SITE CONFIGURATION EXAMPLES

Individual towers at a site separated by more than ± 10m

Tower/Building Name	Street Number/Address	Town/Geographical Location	Site Configuration
CFA Tower		BASS HILL	Tower Centre
NTL Tower		BASS HILL	Tower Centre
Telstra CMTS Tower		BASS HILL	Tower Centre
NTA Tower		MT NARDI	Tower Centre

Localities, town names and geographic features

Tower/Building Name	Street Number/Address	Town/Geographical Location	Site Configuration
	105 Miller Street	NORTH SYDNEY	As appropriate
BHP House	11 Rundle Street	ADELAIDE	As appropriate
	55 Edward Street	CARLTON	As appropriate
Motorola Site		DARK MTN (where MTN is the standard for a mountain geographical feature)	As appropriate
	11 Alfred Street	CLEAR MOUNTAIN (where mountain forms part of the town name)	As appropriate
	via Bourke	DYNEVOR HOMESTEAD (where the homestead is a gazetted location and `via Bourke' provides useful information)	As appropriate
	Survey Camp 15 km SW of	DIRRANBANDI (where the location has no recognised name and the nearest geographical location is recorded)	As appropriate

Building with a tower at each end of the building

Tower/Building Name	Street Number/Address	Town/Geographical Location	Site Configuration
North Tower	350 Elizabeth Street	MELBOURNE	Tower Centre
South Tower	350 Elizabeth Street	MELBOURNE	Tower Centre

Sites on sides of buildings

The preferred approach is to use a common site name and antenna height to distinguish where the antenna is located. This is consistent with the approach that the building is the antenna support structure.

Tower/Building Name	Street Number/Address	Town/Geographical Location	Site Configuration	Site Height	Antenna Height
	North Face, 286 Victoria Street	PERTH	Nominal	100	10
	North Face, 286 Victoria Street	PERTH	Nominal	100	40

Buildings with towers and microwave dishes that are grouped together

Tower/Building Name	Street Number/Address	Town/Geographical Location	Site Configuration
Bourke Place	600 Bourke Street *	MELBOURNE	Tower Centre
	120 Collins Street **		Tower Centre
	101 Collins Street ***	MELBOURNE	Tower Centre

* Left picture
** Left tower in right picture
*** Right tower in right picture

Nominal location terminology for sites on buildings

Sites on Sides of a Building
North Face
South Face
East Face
West Face

Sites on Top of a Building	
North	SE Cnr
South	SW Cnr
East	NE Cnr
West	NW Cnr

or as appropriate depending on orientation of building.

Where the above terminology is not used, it should be assumed that the site is in the centre of the building.

RESPONSIBILITIES FOR SITE DATA

Overview

An apparatus licensed radiocommunications service authorises the licensee to operate the service at the location specified on the licence. If a licensee operates from a location not specified on the licence, the licensee may be subject to regulatory action by the ACA.

Devices to be operated under a spectrum licence cannot be operated unless the location of the device is recorded in the Register of Radiocommunications

Licences. If a licensee of a device operates from a location not specified in the register, the licensee may be subject to regulatory action by the ACA.

Licensees
It is the licensee's responsibility to ensure that the specified site (ie the combination of coordinates, site name, site configuration) accurately reflect an antenna's location as determined using the procedures outlined in this document.

Accredited Persons
The responsibility of accredited persons is limited to checking to see if the supplied data is "reasonable" and asking the licensee/licence applicant to check coordinates when in doubt. An example of a "reasonable" test is whether the site name, site coordinates and site configuration description are consistent.

ACA
Frequency Assignment and Licensing
The responsibility of the ACA is limited to checking to see if the supplied data is "reasonable" and asking the licensee/licence applicant to check coordinates when in doubt. An example of a "reasonable" test is whether the site name, site coordinates and site configuration description are consistent.

Auditing and Quality Control of Site Data
The ACA approach to ensure quality control of site data is to assume that the requirements and procedures of this document are being consistently applied, and to audit site data as a part of the ACA audit program of frequency assignment certificates and through random site audits

ENTERING RADIOCOMMUNICATIONS SITE DATA INTO RADCOM

Information required to create a site in the ACA RADCOM database is outlined below. More detailed information is at Appendix 2.

Mandatory
- Site Name which comprises of the fields building/tower name, street number/name, town/geographic location
- Coordinate Datum
- Coordinates
- Coordinate accuracy/precision
- Coordinate source.
- Site Layout/Configuration

Optional
- Site Elevation
- Site Manager Surname (or trading name)
- Site Manager Given name(s)
- Site Manager Phone number
- Site Manager E-mail

- Contact Person Surname
- Contact Person Given name(s)
- Contact Person Phone number
- Contact Person E-mail

Note that the ACA collects site contact details to assist with interference investigations and site audit activities. Currently, due the privacy requirements, site manager and contact person details are not made available once collected as that information is supplied on the basis that it is not publicly available.

ONLINE SITE DATA MANAGEMENT

The site data management facilities will be included in the "Online Services for Accredited Persons" application in the next phase of the application due for release in early 2005. The online site data management facility will support site creation, site updating and site deletion. When creating a site online an accredited person will be required to state that the site has been created from information supplied by a licence applicant using the ACA's radiocommunications site data requirements specified in this document.

The online system will also allow an accredited person to request the ACA to assess submitted site information. An accredited person may use that facility in cases where the site information provided by a licensee conflicts with information recorded in the ACA database, and that conflict cannot be resolved using the ACA site data procedures. Coordination of those assessments will be managed by the **National Licensing and Enquires Centre** in the ACA's Canberra Central Office.

The online system is only available to accredited persons who have registered to use the system. More detailed information about the online system (including how to register) is contained in the online services user guide available on the monthly Radiocommunications Record of Licences (RRL) Database on CD-ROM or by contacting the ACA's Communications Operations and Service Group Business Systems Integration Team BSIT@aca.gov.au.

Online Site Creation

The creation of a new site using the accredited persons online submission system is subject to the following rules:

- That the information listed in section 10 "Entering Radiocommunications Site Data into RADCOM" is provided.
- There is no other site within 10m of the proposed new site.
- That in high and medium fee density areas coordinate source is a surveyor's certificate or GPS and that the accuracy is 10m or 100m.

Note: mobile sites (used in spectrum licensing) cannot be created online.

Online Site Deletion

The deletion of an existing site in the RADCOM database using the accredited persons online submission system is subject to the following rules:

- No sites with devices attached can be deleted.
- No mobile sites (used in spectrum licensing) can be deleted.
- No site can be deleted that was created or updated in the last 30 days unless the user created or updated the site.

Online Site Updating

The updating of an existing site in the RADCOM database using the accredited persons online submission system is subject to the following rules:

- No mobile sites (used in spectrum licensing) can be updated.
- Site manager and contact person details cannot be updated. (As this information is not publicly available it is unlikely that an accredited person would know what information would require updating.)
- Coordinates and site elevation cannot be updated for sites with devices attached.
- No site can be updated with devices attached unless:
  - all the devices are spectrum licensing devices; and
  - the user is authorised to supply technical information for the licences that the devices are attached too.
- No site can be updated that was created or updated in the last 7 days unless the user created or updated the site.
- Coordinates cannot be updated if the new coordinates would be within 10m of an existing site.
    - If the coordinates are updated the precision:
        - in high density fee areas must be 10m;
        - in medium density fee areas must be:
            - if already 10m, 10m;
            - otherwise (ie if 100m, or unknown), 10m or 100m
        - in low density fee area must be either 10m or 100m

APPENDICES

Appendix 1: Site Data Conversion

Purpose
This Appendix provides information relating to Site Data, and the conversion of this data into a standard information base within the RADCOM system.

Background and Explanation
The Geocentric Datum of Australia (GDA) is the new Australian coordinate system, replacing the Australian Geodetic Datum (AGD). GDA is part of a global coordinate reference frame and is directly compatible with the Global Positioning System (GPS). It is the culmination of more than a decade of anticipation and work by the Intergovernmental Committee on Surveying and Mapping (ICSM) and its predecessor the National Mapping Council (NMC). When the NMC adopted the AGD84 coordinate set in 1984, it "recognised the need for Australia to eventually adopt a geocentric datum". This was further recognised in 1988 when ICSM recommended the adoption of an appropriate geocentric datum by 1 January 2000.

Background to GDA
In 1992, as part of the world-wide International GPS Service (IGS) campaign, continuous GPS observations were undertaken on eight geologically stable marks at sites across Australia, which form the Australian Fiducial Network (AFN). During this campaign, GPS observations were also carried out at a number of existing geodetic survey stations across Australia. These were supplemented by further observations in 1993 and 1994, producing a network of about 70 well determined GPS sites, with nominal 500km spacing across Australia. These sites are collectively known as the Australian National Network (ANN).

The GPS observations at both the AFN and ANN sites were combined in a single regional GPS solution in terms of the International Terrestrial Reference Frame 1992 (ITRF92) and the resulting coordinates were mapped to a common epoch of 1994.0. The positions for the AFN sites are estimated to have an absolute accuracy of about 2cm at 95% confidence, while the ANN positions are estimated to have an absolute accuracy of about 5cm. These positions of the AFN sites were used to define the GDA, and were published in the Commonwealth of Australia Government Gazette of 6 September 1995.

The positions of both the AFN and ANN sites were used to constrain a re-adjustment of the Australian geodetic networks, which included all observations from the previous AGD66 and AGD84 adjustments, conventional observations added since that time, and the extensive GPS networks established by the State and Territory authorities at about 100km spacing between the ANN sites. This resulted in a data set of more than 70,000 observations and produced GDA94 coordinates at almost 8,000 stations. These GDA94 coordinates are now used by the State and Territory authorities to adjust their subsidiary survey networks onto GDA.

GDA and AGD
ITRF92, on which GDA is based, was realised using Very Long Baseline Interferometry (VLBI), GPS and Satellite Laser Ranging (SLR) observations at 287 globally distributed stations. However, the coordinates for Johnston, the original station for the AGD, were based on a selection of 275 astro-geodetic stations distributed over most of Australia. The adoption of this option, and the best fitting local ellipsoid, the Australian National Spheroid (ANS) meant that the centre of the ANS did not coincide with the centre of mass of the earth, but lay about 200 metres from it. Hence the GDA94 coordinates of a point appear to be about 200 metres north east of the AGD coordinates of the same point.

The precise size and orientation of the difference will vary from place to place.

Datum Data and the ACA
The Radcom database uses AGD66 as the basis for its site information and consequently all site information is stored using this datum, and printed to licence documentation where applicable.

Computing Services have changed the "Location Management" frame within the RADCOM application that will allow the entering if site information in Zoning Easting Northing, Decimal Degrees and Degrees Minutes Seconds in AGD66, AGD84 and GDA94.

Where site coordinates are entered using GDA94, the application will use a formulae (known as Molodensky's Formulae) to convert the coordinates into AGD66 to be stored within the GIS, and store the original GDA94 coordinates in new fields within the existing site table in RADCOM. Similarly, when site coordinates are entered in AGD84, the application will firstly use Molodensky's formulae to convert the coordinates to GDA94 to be stored in the new fields within the existing site table, and again to convert the GDA94 coordinates into AGD66 to be stored in the GIS.

The ACA Form RF77 has been amended to allow clients to stipulate what Datum reference they have used when providing site information. The RADCOM site management screen will allow for the selection of the Datum specified, and the entry of subsequent details.

Sometime in the future, all AGD66 coordinates within RADCOM will be converted to GDA94. However, before then it should be noted that AGD66 will continue to be the Datum of choice within RADCOM.

Appendix 2: Site Data Entry Requirements

The following data is required when creating a new radiocommunications site. Fields to be introduced in the 1st quarter 2005 are indicated as "*(2005)*".

Mandatory

Field	Values	Comments
Building/tower name *(2005)*	Character, maximum combined length 96 characters	Must provide one of Building/tower name or street address
Street address *(2005)*		
Town/geographic location *(2005)*		Mandatory
Datum	AGD66, AGD84 or GDA94	Mandatory
Coordinates as either: • Zone, Easting, Northing • Latitude, longitude (DD) • Latitude, longitude (DMS)	As below for details	Mandatory
Zone, Easting, Northing	Zone (two digits) valid range 41-59 Easting (six digits in metres) Northing (seven digits in metres)	Latitude should be south (negative) Longitude should be east (positive)
Latitude, longitude (DD) Decimal degrees	Up to six decimal places Eg Lat -43.123456 Long 143.123456	
Latitude, longitude (DMS) Degrees Minutes Seconds	To 3 decimal places Eg Lat: -43 34 56.678 Long: 145 45 567.345	Latitude should be south (negative) Longitude should be east (positive)
Coordinate Source *(2005)*	Surveyor, GPS, Map 1:100,000; Map 1:50,000; Map 1:25,000; Map 1:10,000; Map 1:5,000; Map 1:2,500	Mandatory, addition values can be added by ACA if required
Accuracy/Precision	Within 10 metres, or Within 100 metres	Mandatory
Configuration *(2005)*	Tower, Rooftop centre, Rooftop nominal, reference point	Mandatory, addition values can be added by ACA if required
Site Elevation	Numeric	Optional
Site Manager Surname (or trading name)	Up to 50 characters	Optional
Site Manager Given name(s)	Up to 40 characters	Optional
Site Manager Phone number	Up to 15 characters	Optional
Site Manager E-mail *(2005)*	Up to 50 characters	Optional
Contact Person Surname	Up to 50 characters	Optional
Contact Person Given name(s)	Up to 40 characters	Optional
Contact Person Phone number	Up to 15 characters	Optional
Contact Person E-mail *(2005)*	Up to 50 characters	Optional