Registration Mapping Guide 10
Glossary of terms

Table of Contents

Tailte Éireann (TÉ) Surveying
Formerly Ordnance Survey Ireland, the national Mapping agency for Ireland.

County Series/Cassini Maps
County Series maps are often referred to as 'Cassini Projection' Maps. Cassini used a system of triangulation to produce the first accurate topographic map of an entire country. The Cassini method of triangulation was used by the Ordnance Survey (1824 – 1846) to map Ireland at 1/10560 scale whereby each county was mapped on an individual basis using a North-South central meridian for each county. One of the effects of the Cassini Projection is that points furthest away from the central meridian in each county experience a greater degree of distortion. The Cassini Projection worked better for counties with a lesser East-West extent (e.g. Dublin and Louth) than for counties with a greater East-West extent (e.g. Galway and Waterford).

NPS Maps
The National Photogrammetric Survey (NPS) maps were introduced by OSi circa 1990. These maps were derived from aerial photography and are referenced to the Irish Grid/National Grid. The resultant collection of aerial photographs are referred to as orthophotos after they have be rectified and referenced to ground control points.

Irish Grid Maps/National Grid Maps
The Irish Grid/National Grid Maps were produced by OSi using a single projection for the island of Ireland. A 'false origin' was selected at a point located off the South West coast of Ireland. The reason for selecting this position as the origin arose from the requirement to attribute a positive Easting and Northing (Coordinate) value to all points in the country.

ITM Maps
The Irish Transverse Mercator (ITM) coordinate reference system was jointly designed by Ordnance Survey Ireland (OSi) and Ordnance Survey Northern Ireland (OSNI) in 2000 as part of a Global Positioning System (GPS) compatible coordinate reference system for the island of Ireland. A different 'false origin' from the Irish Grid was selected. Improvements from the previous Irish Grid/National Grid coordinate system include:
   • Adoption of GRS80 ellipsoid (i.e. shape of the Earth instead of the Airy modified ellipsoid) to ensure the system is GPS compatible.
   • Adoption of a sub-unit scale factor for the central meridian of the projection ensures that projection distortions are symmetrical across Ireland.

Orthophotos
An orthophoto is part of a series of overlapping aerial photographs that are rectified and referenced to a set of ground control points.

Map Scales
Irish Transverse Mercator (ITM) maps are published by TÉ Surveying at the following scales: 1:5000 (Rural Areas), 1:2500 (Rural, Periurban & Suburban Areas) and 1:1000 (Urban Areas).

Digital Maps
The term digital map is used to describe a map held in electronic format. There are two models for storing maps in a computer environment. The **Raster** model (Grid based) and **Vector** model (coordinate based geometry). We have completed a major programme of converting its entire paper map base into a vector digital format. This result is 32,000 or so paper map sheets containing circa 2.4 million registered land parcels have been digitised (vectorised).

Raster Map
Raster data provides an image formed by a matrix of pixels arranged in rows columns, which can be displayed on a computer screen. The raster image, in the case of the TÉ Registration, is derived by scanning its paper maps to a resolution of 200 and 300 dots per inch (dpi). As the raster image is taken directly from the source map all inherent flaws or visual imperfections on the source map will be contained on the raster image. While raster images can be manipulated and used for some applications they are not considered to be suitable for land registration purposes where boundaries and features are dynamic in the sense that they are always subject to continuous revision.

Vector Map
Vector maps consists of a series of nodes stored as x y coordinates that define points and line segments. The line segments when joined together form map features such as land parcels, roads, buildings and rivers etc. Point features are used to depict wells, lamp standards, post boxes, telephone boxes etc. TÉ's Digital Mapping System is based on Tailte Éireann Surveying vector spatial data in the ITM coordinate reference system. Vector data are considered to be 'intelligent' because a high volume of attributes can be attached to the points and lines contained therein. Both the TÉ Registration seedpoint and GeoDirectory address point use a point features to attach and link attribute data to the vector map. GeoDirectory points represent postal addresses and are generally positioned within buildings.

CAD files
Computer Aided Design drawings. Computer software used for the design, drafting, and display of graphically oriented information. CAD packages allow users to precisely specify sizes, shapes, and positions of vector elements, and to assign elements to separate layers.

Layers
Map features or objects are usually organized onto different layers for organisational purposes and for ease of drawing, viewing and editing. Layers often can be named and have default colours and line types associated with them. CAD and GIS packages use layers to separate different map features or objects in order to control the display of those features or objects. This enables different features or objects to be displayed in different colours and to be viewed, edited and manipulated separately.

LR_PLAN_NEW
LR_PLAN_NEW layer is the name that practitioners must use for the layer on which new boundary polylines are to be digitised.

DWG
DWG is a binary file format used by AutoCAD for storing two and three dimensional design data and metadata.

Polyline
A term for a line used by some GIS packages to describe a line created by a series of shorter straight line segments. Line features in themes such as boundaries, roads, streams and streets are usually created using polylines. For example, a rectangle is a polyline with four segments.

TÉ Surveying Topographic Detail (in the ITM vector dataset)
TÉ Surveying topographic detail uses point and line data to represent topographical features in the vector dataset. The TÉ Surveying vector datasets have all features coded or multi-coded to represent topographical features. This vector (point and line) data can be displayed at any scale. The current TÉ Surveying datasets consists of 179 levels, and a standard 35 levels as required. In the paper based product topographical

features are printed a solid black lines on the TÉ Surveying map. It should be noted that some pecked or broken lines appearing on TÉ Surveying maps may not depict a physical feature that exists on the ground and are therefore not always considered to be TÉ Surveying detail.

Digitisation
Digitisation was the process whereby features displayed on the now archived Land Registry's paper maps were converted into vector points and lines and areas for the digital mapping environment. As a result of digitisation process the TÉ Registration Map information and Folios are now stored, managed and maintained as attributed vector Spatial Data in a database.

Spatial Data
A geographic dataset which is a collection of data that are individually or collectively attached to geographic locations, such as points, lines, or polygons. Also known as *geospatial data* or *geographic information* it is the data or information that identifies the geographic location of features and boundaries on Earth. Spatial data is usually stored as coordinates and topology, and is data that can be mapped. Spatial data is often accessed, manipulated or analyzed through Geographic Information Systems (GIS).

GIS Geographical Information System (GIS)
Term used to describe a computer-based system for storing, analyzing, and displaying map and database information.

Geo-Rectification
The current TÉ Registration map record is comprised of a range of maps, which have been derived using different map projections (i.e. County Series Maps, Irish Grid Maps, and NPS Maps). As part of the Digital Mapping project, it is necessary to position the images of the Registry's map record to fit into with the newly-published OSi ITM projection. This transformation is known as georectification. The geo-positioned raster image can then be overlaid by the new OSi ITM map allowing the digitising process to proceed. The georectification process uses coordinates supplied by OSi to fit the county series and Irish Grid projection maps to the ITM projection using mathematical transformation algorithms. The second element of geo-rectification is the positioning of imagettes using local control points (topographic features common to both source and target maps) in order to get a 'best fit' that will support the accurate digitisation of registered boundary data that are not shown as OSi topographical detail.

www.landdirect.ie (tm)
www.landdirect.ie is the portal that facilitates the delivery of TÉ Registration on-line services. It includes all services previously available through the Electronic Access Service (EAS) together with additional services made possible by the implementation of its digital mapping programme.

ITRIS
The TÉ Registration *Integrated Title Registration Information System* (ITRIS), is the system used internally to process applications and to store Folios, Maps and related casework information. It also incorporates the '*Digital Mapping System'* (DMapS).

EULIS
European Land Information Service. EULIS is an international initiative with the overall objective of providing stakeholders with cross-border access to land and title information via the Internet.

ISDI
Irish Spatial Data Infrastructure.

Geo-centre

The geo-centre of a plot, parcel or polygon is the mathematical centre of that plot, parcel or polygon.

GeoDirectory

The GeoDirectory provides a complete database of every building in the Republic of Ireland. There are approximately 1.5 million building records contained in the GeoDirectory, which includes information such as postal address, building usage (commercial or residential), a unique eight digit identity number and coordinate values.

Gazetteer

Geographical reference book a dictionary or index of places.

Plan

The term "Plan" is used by TÉ Registration to denote an individual registered land parcel or polygon.

Seedpoint

The Seedpoint is digitised in each registered land parcel creating a link between the Folio and the TÉ Registration map. Each land parcel is assigned a unique identifier to create the link with the relevant Folio. This process enables the extension of on-line services to include a graphical location search facility and support extensive electronic searching.

MSB (Multi-storey building) Seedpoint

MSB seedpoint provides a link to registration details in multi-occupancy properties. The MSB seedpoint returns information to the user in the form of a tree structure with the Development name, the Building/Block name or number, the floor levels within the building/block, and each of the units Folio numbers where registered.

MUD (Multi-Unit Development)

Multi-Unit Development Act 2011 defines a MUD as a development being land on which there stands erected a building or buildings comprising a unit or units and that as respects such units it is intended that amenities, facilities, and services are to be shared.