

IV. Cartographic databases and medium and small scale topographic cartography

Topographic cartography at 1:25 000

June 2005/Version 2



**Topographic database of Catalonia
1:25 000 (zone of Ripoll).**

The ICC creates topographic cartography at 1:25 000 to order, without forgetting that its mission is to cover the whole of Catalonia.

Database

The first version of the Topographic database of Catalonia at 1:25 000 (BT-25M) was obtained by applying cartographic generalization to the Topographic database of Catalonia at 1:5 000 scale (BT-5M).

The data model is similar to that of the BT-5M. It is a 2.5D vectorial database, with polygons in some areas, with hydrographic and communications networks, and it incorporates the attributes of the road information layers. In general, the structures of the hydrography, population and land cover have been maintained as they were in the BT-5M; only a small number of changes have been made - those necessary in order to adapt these features to the new scale.

If hard copy or raster files are required, automatic symbolization processes are carried out during the digital drawing phase, which include the representation of some concepts with linear patterns and the incorporation of the topographic database and the cover sheet.

Content. The relief is represented by means of contour lines, spot heights at significant points and taluses. The contour lines are at 10 meter intervals, with master contour lines every 50 meters. In very flat zones interlinked auxiliary contour lines are generated every 5 meters. The planimetric data gathers information on hydrography, drawing a distinction between the linear hydrographic network and water masses, and between natural and artificial elements; communication routes, classified as paved and unpaved roads; railways and cable transport; settlement, which includes buildings, constructions, sports fields, fences, enclosures and auxiliary urban elements; and land and vegetation cover such as woods, rocky areas, marshes, beaches, areas of sand dunes and flood-prone stream beds.

The road network shows differences with respect to the BT-5M. The roads are drawn by their center lines, over which the existing attributes are added to the layers of road information that do not make reference to the graphic representation. In the case of the railways, the existing attributes in the BT-50M that do not make reference to the graphic representation are also added. The majority of the junctions are drawn as elevated sections of roadways or pipelines and the structures of bridges are only drawn when they are constructions of an unusual nature.

Some items that were represented to scale are now represented as specific symbols, such as small isolated buildings and covered tanks. Others are grouped together, such as groups of trees and woods.

All the polygons are flat. In the case of the constructions, these are set at the height of the highest point. In the case of flat polygons such as reservoirs and ponds, they are set at a constant height.

Distribution. The BT-25M is distributed on paper or in raster format. In paper format, the user may select the desired area, and the size available are A1 or A2, with a horizontal or vertical orientation. Their delivery includes a sheet indicating the acquired area, the sources of information, the date and the version of the data, the date of the flights with which the sheet has been updated and the legend.

The raster is distributed free of charge (the only cost is for the medium on which it is supplied and the recording of data) in GEOTIFF and in automatic symbolization (PDF). It can also be downloaded free of charge from the ICC web site with MrSID.

Map

The *Mapa topogràfic de Catalunya 1:25 000* (topographic map, MTC-25M) is a cartographic series made up of 84 sheets with overlaps, which have been defined with a geographic perspective of the territory:

- Regional capitals: 41 sheets centered on the capitals of the *comarques* (administrative divisions in Catalonia).
- Nature reserves: 19 sheets centered on nature reserves with special protection.
- Geographic units: 24 sheets centered on orographic or subregional units not included in the previous sheets.

Applications

The BT-25M and MTC-25M have been prepared and designed with a very broad objective: to be an informative tool for the general public and a tool for professional work.

- Cartography for local administration. Sufficient territorial information is provided and the degree of precision is sufficient for it to become a basic tool for local territorial administration. This is why it has been created in accordance with metric standards in altimetry and planimetry.
- Cartography for outdoor pursuits and tourism. 1:25 000 is the most suitable scale for the walker, the climber and the cyclist. Elements of content and graphic expression have been introduced with these users in mind, while maintaining the principal objective of providing topographic cartography of the highest quality.

Mapa topogràfic de Catalunya 1:25 000.
Parc Natural del Cap de Creus sheet.

