

CREATION OF AN INDIVIDUALLY-CONFIGURED MODEL FOR CARTOGRAPHIC PUBLICATION AND FOR OPTIMIZING EDITING TIMES

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Introduction

Currently, with modern technology and progress made in all the various spheres of the geocartographic sciences, it is necessary to have awareness and knowledge of the new tools and their benefits that software manufacturers place at the disposal of users. This enables them to improve processes and to obtain greater efficiency in the making of the products to deliver.

It is in this competitive and demanding environment that the design and implementation of these new methodologies, models and tools enable their adaptation to the needs of each business and specific area.

Objectives

1. To create an individually-configured model of cartographic publication.
2. Optimize the times for editing cartographic features.

Methodology

The “ArcGis” software, as a platform for editing, developing processes and techniques enabling the reduction of times taken in editing increase the quality of the products delivered to the final user. For this process, the module called “PLTS – Production Line Tool Sets” is used (this is specific to the production and publication of maps at various different scales). This comes from a line of products made by ESRI. With this software one can develop a map from its beginnings up to the end of the cartographic process, including the graphic output both on paper and on digital media.

The above-mentioned processes involve all the steps necessary for editing the information and subsequently publishing the maps. Among these one can point out, for example: the assignment of graphic attributes to the features (Render), editing in the graphic environment of the features (Layout), visualization during the editing of each one of these last in the appearance as they will be published, and the management of the active coordinate grids, with the aim of facilitating the georeferencing of the features present in the cartography.

This set of tools enables, moreover, the creation of a whole range of features belonging to the map. However, given the fact that they are specific to one individual agency, new point symbols and line compositions can be defined, giving each user organization a unique identity. Another important factor in this process is the creation of an individually-configured set up of margins and inset boxes in the maps, also know as a template, this having the characteristic of being modifiable in accordance with the environment or the scale to be worked in, according to the users needs.

The cartographic margins developed by each user have a special characteristic; they are active in the geographic space, thus facilitating the actions of the cartographer responsible for producing the map and reducing the percentage of error occurring in the geographic referencing of the mapped features, also in the graphic portrayal when published.

By the modification and continuous revision of the databases created and used by a cartographic agency, likewise the individual configuration given to these, the time taken to edit and display the information is considerably reduced, without damaging the relations between the attributes and their corresponding geographic features in the map.

This methodology therefore involves as its first stage the editing of geographic features, then these are checked both in their attributes and in their geometric correctness. A second stage, related to the graphic assignment of attributes (for publication on paper) is followed by a third and final stage in which the final product to be published is checked and revised.

Results

The result of the application of the processes and techniques created and adapted for the publication of a customized cartography shows that the production time is reduced as a consequence of optimizing the processes for editing information, at the same time reducing the time taken to edit and process the information on the map to publish.

Conclusions

The customization of the models to publish implies a rigorous order in the processes and methodology used for production, establishing an order or logical sequence in both the production line and the storage and backup of the information created and then edited. All of the above, with the aim of ensuring access to a unique final product, prevents in this way the duplication of information in the geo-spatial database geospatial. This is reflected in a faster access and more agile management of the features present in the database used.

The checks and verification of the editing of the information entered into the database, before the publication stage, is vital for a flow of production that is reliable and rapid. For this, currently there is available a range of tools in ArcGis and the PLTS module.

All of the above has as its aim the development of a cartography to be made with tools and software that have a reputation recognised internationally and that are widely used, yet at the same time that cartography has its own identity and high levels of reliability in the information used, thus enabling a suitable level of quality in the product delivered to the user.