

DATA COHERENCE EVALUATION IN CARTOGRAPHIC DATABASES USED BY PARANÁ STATE MUNICIPALITIES – BRAZIL

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The main object in this work is the database maintained by PARANACIDADE produced for the use in the most of the Paraná State Municipalities in Brazil. This database was produced by conventional photogrammetric restitution and whose symbolization was achieved by means of CAD tools in MaxiCAD software. Cartographic data present in this database is intended to produce cartographic documents at least for urban planning and for evaluating some kind of taxes. The content of this database has spaghetti format and is therefore intended for producing printed maps. To be possible to evaluate these data we intend to implement a data structure in a computational program and implement functions for coherence evaluation. Two lines has to be followed in this work: one oriented to data quality evaluation, that is, to work on geometry aspects of the data (cartometric evaluation) and possibly propose guide lines for producing metadata for these data; and another oriented to add some value to these data by mean of applying known algorithms for geometry computation and for generalization. The use of another data structure than that of the original data is justified by the operational freedom achieved in an open program, despite of having coding and algorithm constraints. The set of operations intended to be part of this program include geometry operations for checking coherence, completeness and homogeneity and common GIS like tools. From the point of view of data management the operations are those for writing files in the original format, selecting layers, add regions, creating metadata, and for data inventory. It is our intention also to provide tools for geodetic reference system transformation. This is a part of an academic project intended also to proportionate a view into computational programming oriented to digital cartography.