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GeoKettle HSR

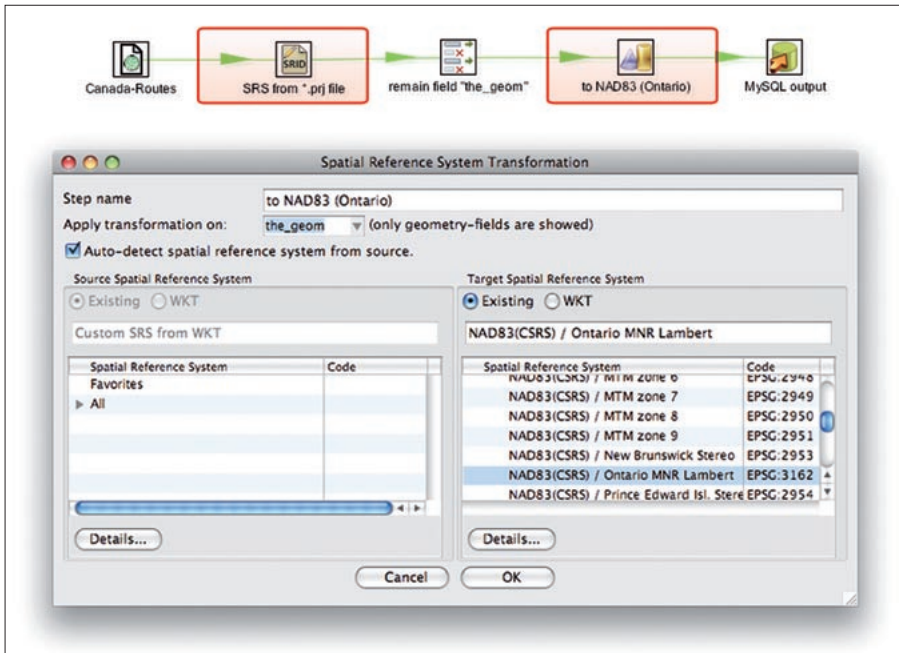
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Subject Area	Software
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Initial status: Modern data warehouses are not limited to processing numbers, texts and multimedia contents, but also have the ability to put all kinds of spatial data into context and to analyze them. This allows questions like «Is a parcel within Québec?» to be analyzed flexibly and on demand. In order to fully apply its strengths, raw data has to be loaded into the data warehouse. This is the purpose of an ETL-tool. It extracts data from different sources, transforms it into the designated form and loads it into the data warehouse.

Goals: GeoKettle is such an ETL-tool that supports processing spatial data. Until now, spatial support is limited to reading and writing geometry types in PostgreSQL/PostGIS databases, reading geometry types from an ESRI-Shape file and the application of the most common spatial analysis functions.

Solution/Realization: After an accurate analysis of the «state-of-the-art» in ETL-tools supporting spatial data, in a first step support for more database systems like Oracle and MySQL was implemented for GeoKettle. It is not that easy to integrate systems like Microsoft's SQL Server, Ingres or



GeoKettle Transformation

DB2 into a Java application. Therefore, solutions on how to integrate these systems in GeoKettle were investigated. In a second step, a mechanism for GeoKettle was implemented that allows geometry types to be transformed from a source spatial reference system into another one. This task was realized by the combination of two so-called «steps» in GeoKettle: 1. «Change SRID»: force a spatial reference system identifier, 2. «SRS Transformation»: transform geometry types.

The Bachelor's Thesis was realized at the Institute of Geomatics at University Laval in Québec, Canada, in collaboration with the GeoKettle development-team. Info: <http://wiki.hsr.ch/StefanKeller/>