

Demo: Accessing Diverse Geo-Referenced Data Sources with the SAND Spatial DBMS

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Abstract

Many government and private sector servers host numerous data sets on the Internet. These data sets are in various data formats. The need to access multiple data sets located at different locations arises frequently. Systems that aim to work with multiple data sets need to implement powerful data conversion tools. This demo shows the data conversion capabilities of SAND. SAND (Spatial And Nonspatial Data) is a prototype spatial database system that is developed at the University of Maryland. The SAND Internet Browser, which is mainly a spatial data browser, provides a graphical user interface to the facilities of SAND over the Internet. Users can specify queries by choosing the desired selection conditions from a variety of menus and dialog boxes. The demo exhibits the data conversion capabilities built on top of the SAND Internet Browser. Real online data (spatial and nonspatial data) is used and is converted into the internal SAND data format. A demonstration is also given of how various data sets obtained from different data sources can be used interactively with the SAND Internet Browser to infer useful results. The demo illustrates the following aspects of SAND's data conversion capabilities:

- a. Different data formats supported by SAND,
- b. Ease of use of the data converter,
- c. Issues involved in data conversion,
- d. Using the SAND Internet Browser to access multiple data sets for inferring meaningful results.

The demo consists of the following steps:

- a. Locating the data sets on the Web,
- b. Uploading them into the local system,
- c. Opening the data sets in SAND's data conversion spreadsheet,
- d. Demonstrating the online editing capabilities of SAND's data conversion spreadsheet,
- e. Combining the data sets, if needed, with spatial data,
- f. Verifying the data for correct conversion of the data,
- g. Converting and putting the data into the SAND database,
- h. Querying on the imported data sets using the SAND Internet Browser.

These steps are repeated for a number of different data formats. Viewers will have the opportunity to discuss issues in data conversion and result generation capabilities of SAND using multiple data sources.

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