

Software

Copain

Model-Ontology Stylesheet Transformation (MOST)

Workflow XML pour l'intéropérabilité des données

ICSOLAP: UML Profile for designing conceptual models for complex Spatial OLAP applications

Spatial Data Warehouse and SOLAP systems allow analyzing huge volume of georeferenced data. SOLAP applications are usually complex needing advanced static and dynamic modelling properties. In particular, SOLAP applications require: multi-granular measures and complex aggregations based on aggregate functions depending on dimensions, hierarchies and levels. In this demo paper, motivated by the lack of conceptual spatio-multidimensional models based on standard languages and supporting such complex modelling requirements, we present a new UML profile for complex spatial data cubes. We implement our profile in the commercial CASE tool called MagicDraw. Using a real environmental case study, we show the theoretical and technical effectiveness of our proposal.

image example



ProtOLAP: OLAP prototyping

The approaches to data warehouse design are based on the assumption that source data are known in advance and available. While this assumption is true in common project situations, in some peculiar contexts it is not. This is the case of the French national project for analysis of energetic agricultural farms, that is the case study of this paper. Here, the above-mentioned methods can hardly be applied because source data can only be identified and collected once user requirements indicate a need. Besides, the users involved in this project found it very hard to express their analysis needs in abstract terms, i.e., without visualizing sample results of queries, which in turn would require availability of source data. To solve this deadlock we propose ProtOLAP, a tool- assisted fast prototyping methodology that enables quick and reliable test and validation of data warehouse schemata in situations where data supply is collected on users' demand and users' ICT skills are minimal. To this end, users manually feed sample realistic data into a prototype created by designers, then they access and explore these sample data using pivot tables to validate the prototype.

video is [here](#)

SimOLAP: OLAP for simulation data

Data Warehouses and OLAP systems allow decision-makers exploring and analyzing huge volumes of data modeled according the multidimensional model, and extracted from heterogeneous data sources. Usually, DW design is a complex, and time and resources consuming task. Then, DW experts are necessary during design and implementation phases. In this paper, we present a new methodology and a tool allowing modelers (DW unskilled users) to design and implement DWs for analyzing simulation results data by themselves, without any intervention of DW experts.

Spatio-multidimensional integrity constraints tool

Spatial OLAP systems are Business Intelligence technologies allowing efficient and interactive analysis of large spatial data cubes. In this type of systems the correctness of analysis depends on: the warehoused data quality, how aggregations are performed and how data cubes are explored. In this paper we study quality control techniques (based on integrity constraints) related to exploration of spatial data cubes. We extend our UML framework previously proposed with a UML profile allowing the conceptual design of several classes of exploration integrity constraints. We also propose a tool for their automatic implementation.

video is [here](#)

Lisc

Leviathan

Leviathan is an opinion dynamics model described in ([Deffuant et al., 2013](#)).

Try the [online version](#)! (Or [download the demo application](#) (Java JAR))

The source code is available on [sourcesup](#) ([svn](#))

Various Bounded Confidence

Discover the dynamics of [bounded confidence models online](#).

The source code is available on [sourcesup](#) and [github](#).

Prima Regional Model

You can play with the [demo software of the prima regional model](#) developed for the [European Project Prima](#), with the example of the Cantal case study (a French department).

EasyABC

The package [EasyABC](#) enables to launch a series of simulations of a computer code from the R platform, and to retrieve the simulation outputs in an appropriate format for post-processing treatments. Four sequential sampling schemes and three coupled-to-MCMC schemes are implemented.

OpenMole

A software tool for developing experimental designs and launching them on simulation models: [OpenMole](#).

ViabiliTree

A viability kernel approximation library that uses kd-tree-based algorithm [Source code](#) – [Technical doc](#) – [Reference publication](#) (in press)

KAVIAR

Tool for computing viability kernels corresponding policies of actions: [KAVIAR](#).

DemoWei

A [software tool](#) for approximate viability kernel with independent modules

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