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Titre / Title:

Access Control for Geographical Databases: Issues and Possible Approaches

Résumé/ Abstract:

Access control is an important component of any database management system. Several access control models have been proposed for conventional databases. However, these models do not seem adequate for geographical databases, due to the peculiarities of geographical data.

The aim of this talk is to first present issues related to access control in geographical databases. Then, two specific solutions to this problem will be described. The first approach consists in a discretionary access control model for geographical maps. We assume that each map is composed of a set of features. Each feature is represented in one or more maps by spatial objects, described by means of different spatial properties: geometric properties, describing the shape, extension and location of the objects, and topological properties, describing the topological relationships existing among objects. The proposed access control model allows the security administrator to define authorizations against map objects at a very fine granularity level, taking into account the various spatial representations and the object dimension. The model also supports both positive and negative authorizations as well as different propagation rules that make access control very flexible. The second approach consists in a spatially aware extension of the well-known role-based access control model (RBAC) to deal with location-based services and mobile applications.

Merci d'afficher et de diffuser le plus largement.