Identifying Objects by Declarative Queries

Martin Gogolla
Bremen University, FB 3, Informatics
Postfach 330440, D-28334 Bremen
Germany
e-mail: gogolla@informatik.uni-bremen.de

One of the central issues in object-orientation is object identity. In object models with identity, objects can exist independent of the values of their attributes. Advantages of such identities are object sharing and object updates. The importance of the identity concept with different perspectives from programming and database languages and philosophy has also been emphasized.

In this talk we study object identification in data models, especially in semantic, Entity-Relationship, and Object-Oriented data models. Various known approaches to object identification are shown, and an alternative proposal to the topic is put forward. The main new idea is to attach to each object type an arbitrary query in order to observe a unique, identifying property of objects of the corresponding type. This proposal seems to be more general than the well-known "deep equality" approach.

The talk is organized as follows. First we introduce an example schema which will be used throughout the paper, and sketch the interpretation of object schemas in an informal way. Several known and our new proposal (the so-called observation term approach) to object identification are studied afterwards. The advantages of our new proposal are discussed, and its formal definition is mentioned. The talk ends with some concluding remarks.