

Database Views on KR Classification

— Abstract —

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Abstract. The database models for Object Database Systems (ODBMSs) include many modeling concepts that originate in semantic data models, that were formerly used for database design purposes, or in (object-oriented) programming languages. To some extent, research on data models and query languages for such ODB models has already reached a consensus, not on one particular model or language, but on the core of what should be considered furtheron. Other aspects, such as view support for example, are less common. We argue that the KL-ONE style terminological logics can provide a very convenient basis for the integration of a flexible view mechanism into object databases. KL-ONE defined concepts correspond to database views (classes of objects that are derived by a query expression). Updates to such views can be propagated to base classes if the view classes are inserted into the global class(ification) hierarchy. Therefore, object databases need the inference services that KL-ONE systems provide (classification, subsumption, ...). We report on the experiences that we gained in the COCOON project, where this approach was pursued over the last few years.