

A DATA BASE MANAGEMENT FACILITY FOR AUTOMATIC  
GENERATION OF DATA BASE MANAGERS

by

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Abstract

This paper presents a facility for the implementation of data base management systems having high degrees of horizontal data independence, i.e. independence from chosen logical properties of a data base as opposed to vertical independence from storage structures. The facility consists of a high level language for the specification of virtual data base managers, a compiler from this language to a pseudo-machine language, and an interpreter for the pseudo-machine language.

It is shown how this facility can be used to produce efficient data base management systems with any degree of both horizontal and vertical data independence. Two key features of this tool are the compilation of tailored data base managers from individual schemas and multiple levels of optional binding.

Key Words and Phrases: data base management systems, data independence

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