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Preface

Object-orientation is currently within the mainstream of computer science research and development in general. It is therefore little wonder that a substantial part of the database community has turned its interest towards exploiting the ideas behind this concept during the past couple of years.

Object-oriented database systems have been approached with mainly two major intentions in mind:

- to better support new application areas including CAD/CAM, office automation, knowledge engineering, and the like where units of interest in the real world tend to be composed out of other such units in more or less arbitrary ways and where a broad variety of application-specific unit types (including of course appropriate ways of operating on them) has to be dealt with,

- to overcome the 'impedance mismatch' between data models and programming languages that has always been a severe problem with relational, network, and similar models.

Accordingly, the notion of object-orientation in database systems is a broader one than e.g. in the area of programming languages. **Structural object-orientation** provides for data model mechanisms that allow the direct representation and manipulation of highly-structured entities; **behavioral object-orientation** cares for facilities to associate arbitrary user-defined type-specific operations with data entities; finally, **full object-orientation** tries to combine the advantages of both categories.

Though data model concepts are the decisive feature of object-oriented database systems, numerous other system aspects have to be reconsidered or allow better solutions, respectively, in this light. They include e.g. transactions, implementation techniques, optimization, formalization, the inclusion of rules, and the integration with other systems. A number of research prototypes and even some commercial systems are meanwhile available. Both, approaches to extend databases with object-oriented capabilities and approaches to extend object-oriented programming languages with database features have been and are being investigated. As the table of contents shows, object-oriented database systems are a good meeting ground for specialists from both areas.

This volume contains the accepted submissions for the 2nd International Workshop on Object-Oriented Database Systems that was held at the Ebernburg, a 13th century castle located near Bad Münster am Stein in the southwest of Germany. No need to mention that the relaxing atmosphere within the historic walls of the 'shelter of justice' and, of course, the tempting products coming from the surrounding vineyards create a stimulating environment for good work, and thus a large number of people from many countries responded to the call for participation.

As attendance had to be limited, every applicant was required to submit either a full paper or a position statement. All committee members undertook to read all sumissions; less than half of them have been accepted for presentation and publication in these proceedings, among them 13 full and 25 short (i.e. up to six pages) papers. A small number of additional applicants have been invited for participation in the extensive workshop discussions.

The idea for the ooDBS-workshop was first phrased at an early (1984) informal meeting on this subject organized by Alex Buchmann in Mexico City and including only a handful of people. A first open (but also limited attendance) workshop has been held at Asilomar/California in 1986 (proceedings have been published by IEEE Computer Society Press). The 1988 workshop shows how fast progress has been made since then. Meanwhile, the topic has been integrated into all major database conferences and some others (e.g. OOPSLA). Thus our mission to provide a forum for exchanging ideas in a young area is fulfilled, and as we never intended to add another regular event to an already ever increasing calendar of conferences and workshops, what might be ´ooDBS-III´ will probably be on some different topic.

I would like to thank all colleagues for preparing such a large number of good submissions, in particular those who finally had to live with being turned down for one reason or another. Though some of them have not been satisfied with the committee´s decision, I sincerely hope they will forgive us and nevertheless find some interesting reading in this volume. Next time, it will be your turn for being accepted, folks! Many thanks also to my fellow committee members for their hard work in reading that many submissions and making a decision, especially to Umesh Dayal and Alex Buchmann from the original Mexico crew who from the first day contributed so much of their time to make it all happen. Angelika Kotz and Gisela Schlimm have to be commented for their cheerful and expert engagement in local arrangements and finances. The sponsorship of Gesellschaft für Informatik (GI) and Forschungszentrum Informatik an der Universität Karlsruhe (FZI) and the cooperation of the IEEE Computer Society, TC on Data Engineering, is greatly acknowledged.

Klaus R. Dittrich

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