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Foreword

The British National Conference on Databases has been held annually since 1981 with this year's event, BNCOD14, being held at Napier University, Edinburgh, in July 1996. The aim of the conference series is to act as a forum for database workers and as a focus for database research by attracting high quality papers from many countries and providing an excellent opportunity for academics and industrialists to meet, discuss ideas, debate current developments and anticipate the future.

The conference has maintained its record of international appeal by attracting 47 paper submissions from 21 countries: Argentina, Australia, Belgium, Canada, China, France, Germany, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Russia, Slovenia, South Africa, Spain, Sweden, UK, USA, and Venezuela. Each paper received at least three reviews and 13 were selected for presentation at the conference. The selected papers join two invited lectures, an invited industrial session with three speakers, one panel session and six five-minute formally presented poster sessions to complete the programme.

The first invited speaker is Professor Stan Zdonik from Brown University, USA. His talk entitled "Dissemination-based information systems: your data may be where you least expect it" examines a new architecture for distributed information systems that is based on the idea that asymmetry in communication channels will require a new approach to data delivery. He discusses the use of broadcast as a method of delivering data, analyses how servers should organise broadcasts, and says how clients should utilise their local cache to tune to a particular broadcast.

The second invited speaker is Dr Matthew Chalmers from Ubilab, the Union Bank of Switzerland. His talk entitled "Pearls, swines and sows' ears: interface research inside a multinational bank" analyses the mismatch in expectation between what bank employees, such as traders and analysts, and computing researchers see as state-of-the-art. The talk discusses the risk of new technology unbalancing established business practices, and goes on to highlight some of the contrasts and similarities between the bank's database use and Ubilab's research in systems and interfaces.

An innovation this year is a session based on three invited talks from industry. Nigel Stanley, from ICS Solutions Ltd., presents "Microsoft database technologies: an inside view" which gives a technical overview of Microsoft database technologies and their application within commercial settings. Steve Ross-Talbot, from Nomura International, presents "Predicate-maintained queries: an active OODBMS for financial applications" which describes part of a system claimed to be one of the largest object-oriented developments being undertaken in the City of London's financial community. Andy Bailey, from Oracle, presents "Universal data management for all types of data and all types of applications" which starts by highlighting some of the key industry trends and basic computing models and moves onto information management within these models, highlighting

the requirements and techniques for managing different types of data, such as relational, multimedia, spatial and text.

The selected papers are partitioned for presentation into four themes: Object-Oriented Databases, Integrity, Query Optimisation/Performance, and Database Language Issues. It is the contents of these papers that constitute this volume.

Acknowledgements

The staging of BNCOD14 was made possible by the cooperation of many different organisations and people. In recognition of this fact we would like to extend our thanks to everyone who contributed to the success of the conference:

- To the authors, both those whose papers were accepted and those who were unsuccessful this time. A conference is nothing without papers and we are grateful to those people who submitted work to the programme committee.
- To the programme committee who ensured that all papers received at least three reviews, and whose hard work in selecting the 13 accepted papers is reflected in the quality of the conference.
- To the invited speakers who took the trouble to travel a considerable distance to give the British database community the benefit of their experience and knowledge.
- To the industrial speakers who brought to the conference their practical experience of the application of database technology.
- To Alfred Hofmann and everyone at Springer-Verlag involved with the publication of the proceedings.
- To the British Computer Society who recognised the conference as a contribution to their Continuing Professional Development (CPD) scheme.
- To the conference sponsors: Lothian and Edinburgh Enterprise Ltd who provided seed funding; International Thomson Publishing who sponsored the céilidh; VIGLEN who provided financial assistance; Office and Training Consumables who supplied part of the conference kits. We also wish to acknowledge sponsorship received after the proceedings went to press!
- To the steering committee for their help and guidance in the organisation of conference.
- Finally to the organising committee who made it all happen. In particular we would like to mention Dr Peter J. Barclay for his work in putting together the proceedings, Kenny Mitchell for constructing the WWW pages, and Amanda Coulter for her help with the administration of the conference.

May 1996 Ron Morrison and Jessie Kennedy

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Table of Contents

Technical Papers

OODB Issues

Schema Integration Meta-knowledge Classification and Reuse . . 1
R.M. Duwairi, N.J. Fiddian, W.A. Gray (UK)

View Mechanism for Schema Evolution in Object-Oriented DBMS 18
Zohra Bellahsene (FRANCE)

An Active Rule Language for ROCK and ROLL 36
Andrew Dinn, Norman W. Paton, M. Howard Williams, Alvaro A.A. Fernandes (UK)

Integrity Issues

Integrity Constraints in Multiversion Databases 56
Anne Doucet, Stéphane Gançarski, Geneviève Jomier, Sophie Monties (FRANCE)

The Development of a Semantic Integrity Constraint Subsystem for a Distributed Database 74
H. Ibrahim, W.A. Gray, N.J. Fiddian (UK)

Understanding the Tension Between Transition Rules and Confidentiality 92
Xavier C. Delannoy (FRANCE)

SPEAR: Extending ER for Dynamic Behaviour and Refinement 107
Simon Wiseman, Bryony Pomeroy (UK)

Optimisation/Performance Issues

Speeding up Knowledge Discovery in Large Relational Databases by Means of a New Discretization Algorithm 124
Alex Alves Freitas, Simon H. Lavington (UK)

Integration of Load Measurement Parameters into the Cost Evaluation of Database Queries 134
Guntram Flach, Holger Meyer (GERMANY)

High Performance OO Traversals in Monet 152
Peter A. Boncz, Fred Kwakkel, Martin L. Kersten (NETHERLANDS)

Language Issues

A Modular Compiler Architecture for a Data Manipulation Language 170
Suzanne M. Embury, Peter M.D. Gray (UK)

Querying Graph Databases Using a Functional Language Extended with Second Order Facilities 189
Robert Ayres, Peter J.H. King (UK)

SQL+i: Adding Temporal Indeterminacy to the Database Language SQL 204
Antony Griffiths, Babis Theodoulidis (UK)

Invited Papers

Full Paper

Pearls, Swines and Sows' Ears: Interface Research Inside a Multinational Bank 222
Matthew Chalmers (Ubilab, Zürich)

Abstract

Dissemination-Based Information Systems: Your Data May Be Where You Least Expect It 230
Stanley B. Zdonik (Brown University, USA)

Abstracts of Industrial Papers

Microsoft Database Technologies – An Inside View 231
Nigel Stanley (ICS)

Predicate Maintained Queries: An Active OODBMS For Financial Applications 232
Mark Butterfield, Nicholas Caine, Stephen Ross-Talbot (Nomura Research Institute)

Universal Data Management 233
A. Bailey, (Oracle)