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Douglas Mann, Secretariat, ISO/IEC JTC 1/SC 32

Pacific Northwest National Laboratory \*, 901 D Street, SW., Suite 900, Washington, DC, 20024-2115,  
United States of America

Telephone: +1 703 575 2114; Facsimile: +1 703 681 9180; E-mail: [MannD@battelle.org](mailto:MannD@battelle.org)

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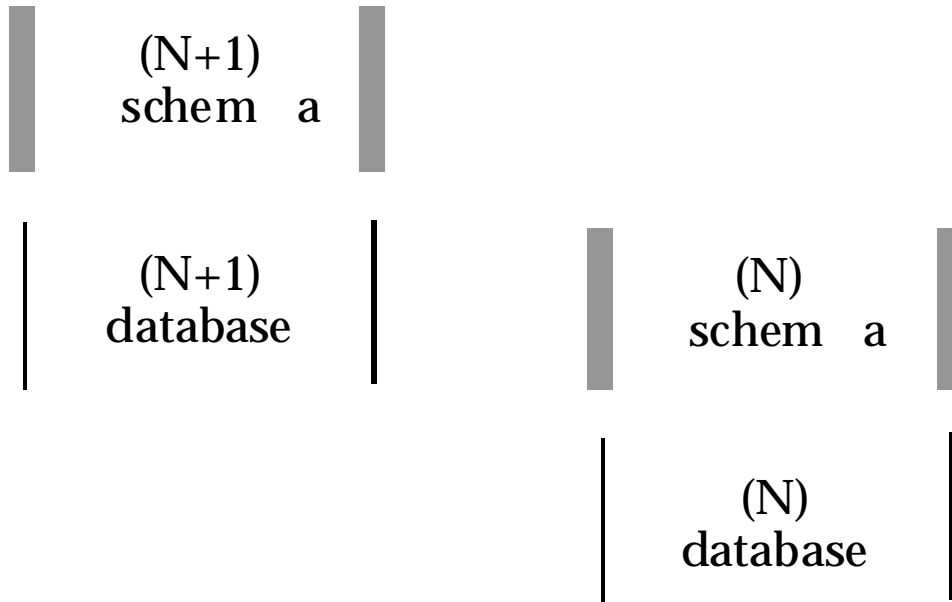
# **Reference Model** **of Data Management**

Mike Newton  
Rapporteur

# Reference Model of Data Management (RMDM)

- Published as ISO/IEC 10032:1995
- Available at [www.iso.ch/ittf](http://www.iso.ch/ittf)
- Developed by Rapporteur Group within SC21/WG3
- Rapporteur: David Jefferson, USA
- Contributing National Bodies:  
Canada, Japan, Netherlands, UK, USA
- Purpose of a reference model:  
framework for co-ordination of standards
  - Network Database Language (NDL)
  - Information Resource Dictionary System
  - SQL
  - Remote Database Access (RDA)
  - OSI (ODP)
- Scope of RMDM
  - standards for management of persistent data within information systems
  - defined in terms of services provided at an interface

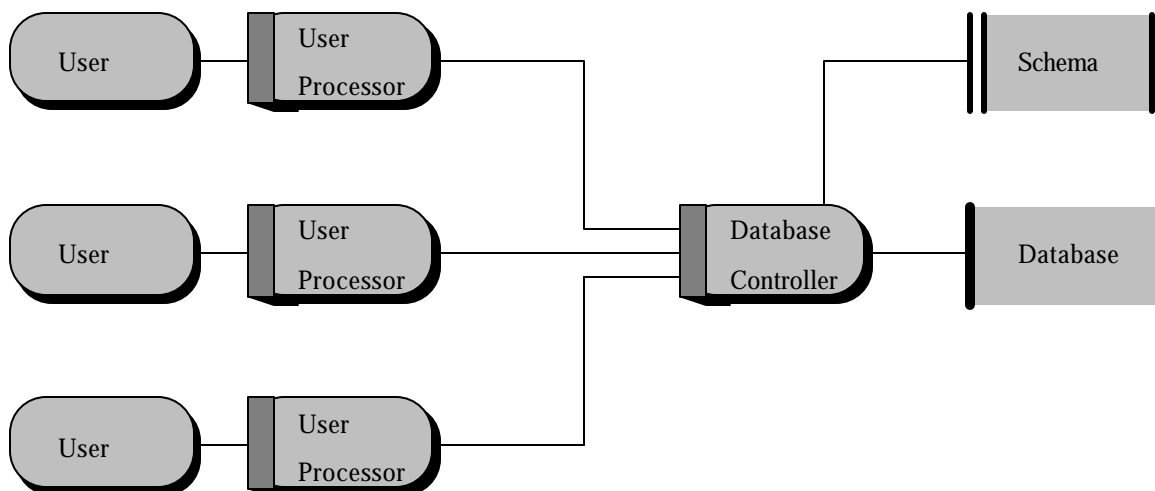
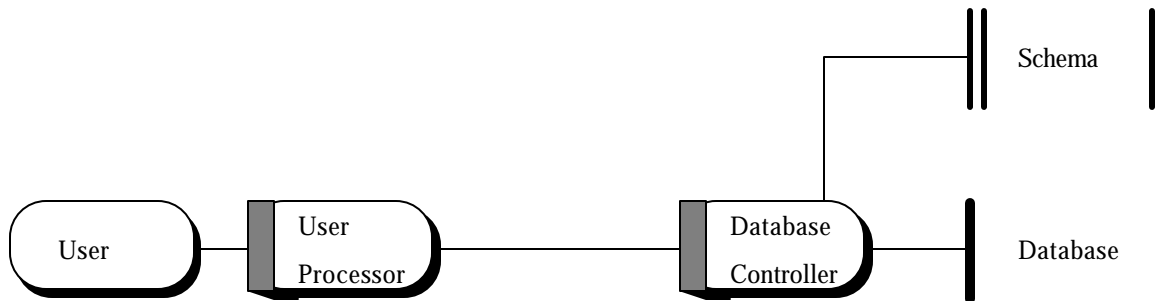
## Concepts for level pairs and related processes



- Generalized interlocking level pair
- An (N) schema defines the data in an (N) database and is used to control the manipulation of data in the (N) database
- A data manipulation process (e.g. a DBMS) is bound to a schema in order to process a database
- (N+1) database contains data definitions representing the source form of one or more (N) schema
- interlocking level pairs are recursive
- each level pair may be based on a different data modelling facility

# Architectural model

- Defined in terms of 'abstract processors' that interact as a client and server via an interface
- Each processor is an instance of some class, which determines the services that are provided
- Diagrams show the interaction of either classes of abstract processors or their instances as in the following generic model of data management:



# Specialization of the model

- The generic model can be applied in various ways to different situations, always maintaining the same principle of a database with an associated schema controlled by some database controller process
- For example, the following diagram shows the architecture for distributed database management as proposed in RMDM

