

MULTI-LEVEL DATA MODEL IN DPLS - DATABASE, DYNAMIC PROGRAM CONTROL & OPEN-
ENDED POL SUPPORT.

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A multi-level or three-level data model is introduced in DPLS - Data-
base, Dynamic Program Control and Open-Ended POL Support. The first level is
logically the highest "Information Structure Model" where "Entity, Attribute
and Value" are the bases for formalizing information. A logical database is
composed of as many logical subfiles as the number of defined entity types.
The second level is the "Data Structure Model" where the logical subfiles
are broken down into physical subfiles in consideration of unused space,
redundancy, variable length data, access efficiency, security, integrity,
maintenance, etc. A physical subfile is a collection of stored records with
the simplest rectangular form. The third level is the "Storage Structure
Model" where physical subfiles are given the required number of pages in
the data sets. These clearly separated three-level data representations
produce a high degree of data independence and storage device independence,
which support system designers with orthogonal system decomposition.

KEY WORDS AND PHRASES: database, multi-level data model, entity, attribute,
self-descriptive, engineering, computer-aided design, data independence.

CR CATEGORIES: 3.20, 3.70, 4.33, 4.34

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