SOME REVIEWS OF CURRENT LITERATURE

E. H. Sibley

We institute, in this issue, reviews of current literature which you may have missed, may not know about (either because of its foreign nature or lack of availability), or may just have ignored.

If you enjoy this (please write to let us know), we plan to extend this to include any material that is submitted (though it must be available through some distribution point, in quantity). If possible we shall also include comments on Ph.D Thesis' and special projects; one of these, in fact, forms part of the offering here. Please send relevant literature (we shall give preference to recent work unless it has been totally missed from normal circulation) to E.H. Sibley, Department of Information Systems Management, University of Maryland, College Park, Maryland 20742.

Also, if you are willing to act as a reviewer, please send in your name; this effort cannot be satisfied by one or two people. I hate working hard (all alone).

Data Base Software: A Skeptical Viewpoint and Some Alternatives
By: Tom Gilb - Management Informatics, Journal of IAG, Vol 2 No. 5 Oct 1973 pp. 227-234.

First, those of you who know my field to be data base management will probably not be surprised to hear that I almost totally disagree with Tom's comments. He happens to be a friend of mine even though he doesn't like generalized data base management systems and says so (with some force, while making some quite good points).

These include comments like: "There seem to be no examples of cost justification, none which can compare GDBMS to tailored DBMS ...GDBMS mania is an act of faith...Ask the supplier if he will undertake all such (plan, evaluate, etc.) costs under a turnkey contract at a fixed price...Sneaking software costs...are usually forced upon the user by the supplier - when he is fool enough to lock himself in...Don't do anything. This alternative is always better than an action which predictably leads to high risk of cost and failures."

He then goes no to discuss five alternatives: Reverse dumping using magnetic tapes; Self-made data base logic; Self made data base management; Self optimizing DBMS, and Don't do anything.

Unfortunately, I feel these alternatives are respectively: old fashioned, old fashioned, expensive, pie-in-the-sky, and head-in-the sand.

Some Reviews of Current Literature

Finally, he comments: "There are alternatives to GDBMS. Some of these are simpler, cheaper and less risky. Some of the most 'advanced' users select these simple alternatives. It is in fact unclear why we should be interested in generalized data base management systems at all...." Controversial - yes, but worth reading, even though I think it is mostly incorrect.

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Data Structures and Accessing in Data-base Systems

By: M. E. Senko, E. B. Altman, M. M. Astraham, and P. L. Fehder, IBM Systems Journal, Vol 12, No. 1, 1973. pp. 30-93.

This is not really one article, but three. The first titled, "Evolution of Information Systems" (pp. 30-44) is an overview of the concepts of the use of data bases in the implementation of information systems. In one sense, it says nothing new, but in another it lays the foundation for the other two articles - it introduces the terminology and concepts needed later; it has 11 cited references.

The second article, titled "Information Organization", (pp. 45-63) introduces the idea of the entity: an object, concept, or event; this leads to the idea of associations among names for entities, and an Entity Set Model for information structuring. This second paper therefore deals with the structuring of data as it appears to the user, and a methodology for specifying (and thinking) about the structure; it also has 11 cited references. Though this part of the series is more meaty than the first, its principal function is to introduce the model for its use in the third section.

The last article, titled "Data representations and the data independent accessing model," (pp. 64-93) contains very interesting and relatively new ideas in the definition of storage structures, and the mapping of instances of data structures onto physical storage devices. The main intent is to introduce the DIAM (Data Independent Accessing Model) and show its use in the design and analysis of information systems. There are 30 cited references to this part.

As a discussion of modern design methodology for data structuring in information systems, this article is pre-eminent. It includes ideas from all relevant research and development efforts in this area, and suggests ways of achieving a truly effective design methodology. But don't believe the reviewer - read it and judge for yourself.

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