

History of Database Management Systems

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Database management systems (DBMSs) have played an *outsize* role in the history of software development and in the creation and growth of the software products industry. Recognizing the major role played by these products, the *Annals* is publishing two special issues on the subject. These two issues will be the fourth and fifth sponsored by the Software Industry Special Interest Group of the Computer History Museum (formerly the Software History Center). This issue (the first) is focused on the products, companies, and people who designed, programmed, and sold mainframe DBMS software products beginning in the 1960s and 1970s. The second issue will be devoted to the relational DBMS products, which were developed during the 1970s and came to prominence (and some say dominance) during the 1980s and 1990s.

What was so important about these DBMS products? Why did they have such a major impact on the growth of the software products industry and, more importantly, on the way that almost all major commercial applications were built from the 1970s on? It is a complex story, part of which is told in this issue. Thomas Haigh begins this issue by describing the world prior to DBMSs and some of the early DBMS products. Tim Bergin and Thomas Haigh then examine the database management products that dominated the IBM environment and other major computer platforms in the 1970s and 1980s.

This issue tells the rest of the story through a series of pioneer recollections, principally from people who founded the major DBMS companies or were heavily involved in the growth and development of these products and companies. These eight recollections cover the principal DBMS software products for IBM mainframe computers.¹ IBM itself was a significant player in this marketplace with its IMS product, but all the other

products were produced and marketed by independent software companies. Many historians and industry analysts believe that these products and these companies formed the foundation on which the mainframe software products industry was built.

The significance of DBMSs

In some sense, these DBMSs, with their accompanying data communications (or on-line transaction processing) systems, enabled users in all industries to construct both on-line and batch applications in a far more timely and cost-effective manner. These database and data communications systems became the foundation for building many (some say most) of the core applications in every industry and government agency, and they became the engines that drove the sale of mainframe computers during the 1970s and afterward.

The following list supplies just some of the reasons why industry analysts and historians consider DBMS software products so important from both a technological and business standpoint:

- They provided an efficient way to program complex applications without the cost of rewriting the data access and retrieval functions for each application.
- They provided a relatively simple, standard way to share data among multiple applications and multiple users.
- They created specialized user-oriented languages.
- They provided standard interfaces for the data communications programs so that the on-line transaction processing applications could be efficiently built, tested, and maintained (both in time and cost).
- They managed the databases on various random- and sequential-access devices

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David Baud



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Encyclopedia of Historians and Historical Writing Kelly Boyd,2019-10-09 The Encyclopedia of Historians and Historical Writing contains over 800 entries ranging from Lord Acton and Anna Comnena to Howard Zinn and from Herodotus to Simon Schama Over 300 contributors from around the world have composed critical assessments of historians from the beginning of historical writing to the present day including individuals from related disciplines like Jürgen Habermas and Clifford Geertz whose theoretical contributions have informed historical debate Additionally the Encyclopedia includes some 200 essays treating the development of national regional and topical historiographies from the Ancient Near East to the history of sexuality In addition to the Western tradition it includes substantial assessments of African Asian and Latin American historians and debates on gender and subaltern studies

Library Journal ,2002 **Information Management Report** ,2003 **Library Journal** Melvil Dewey,Richard Rogers Bowker,L. Pylodet,Charles Ammi Cutter,Bertine Emma Weston,Karl Brown,Helen E. Wessells,2007 Includes beginning Sept 15 1954 and on the 15th of each month Sept May a special section School library journal ISSN 0000 0035 called Junior libraries 1954 May 1961 Also issued separately Internet Technologies and Information Services Joseph B. Miller,2014-08-26 The Internet has enabled the convergence of all things information related This book provides essential foundational knowledge of the application of Internet and web technologies in the information and library professions Internet Technologies and Information Services Second Edition is a vital asset to students preparing for careers in library and information science and provides expanded coverage to important new developments while still covering Internet foundations In addition to networking the Internet HTML web design web programming XML and web searching this new edition covers additional topics such as cloud computing content management systems eBook technologies mobile technologies and applications relational database management systems RDMS open source software and virtual private networking It also provides information on virtualization and related systems including desktop virtualization systems With clear and simple explanations the book helps students form a solid basic IT knowledge that prepares them for more advanced studies in technology It supplies an introductory history of the Internet and an examination of current trends with specific emphasis on how online information access affects the LIS fields Author Joseph B Miller MSLS explains Internet protocols and current broadband connectivity options Internet security issues and steps to take to block threats building the web with markup languages programming and content management systems and elements of information access on the web content formats information retrieval and Internet search

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Using the Engineering Literature Bonnie A. Osif, 2006-08-23 The field of engineering is becoming increasingly interdisciplinary and there is an ever growing need for engineers to investigate engineering and scientific resources outside their own area of expertise However studies have shown that quality information finding skills often tend to be lacking in the engineering profession Using the Engineerin

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