

21 October 2008

'The evolution of Database Technology'

A joint DAMA UK/BCS DMSG event held at
BCS, Southampton Street, London

Event Schedule

09.30-10.00	Registration and coffee
10.00-10.10	Welcome and Introduction - Arthur Haynes, BCS DMSG
10.10-11.00	The History of data base management Bill Olle
11.00-11.20	Refreshments
11.20-12.10	Oracle (TBC)
12.10-13.30	Lunch
13.30-14.20	The Future of Data Warehousing - Stephen Brobst, Teradata Corporation This talk examines key trends in data warehouse deployment and developments in advanced technology. Specific areas of focus include: (1) data acquisition and delivery, (2) operational intelligence in the real-time enterprise, and (3) analytic applications architecture. The implications of these technology developments for data warehouse implementations will be discussed with examples from across a number of different industries.
14.20-14.40	Refreshments
14.40-15.40	Themes and Directions Charles Bachman
15.40-16.00	Discussion and wash-up - Chair - Arthur Haynes, BCS DMSG
16.00	Close - Follow on social session

Supported by



**DAMA UK, 6a Pinkers Court,
Briarlands Office Park, Gloucester
Road, Rudgeway, Bristol,
BS35 3QH**
F - 01454 411 177 T - 01454 631 068
E - sue.russell@damauk.org
w - www.damauk.org

Speaker Profiles (continued on Page 2)



Stephen Brobst

**Chief Technology Officer
Teradata Corporation**

Stephen Brobst is the Chief Technology Officer for Teradata Corporation. His specialization is in the design and construction of data warehouse solutions for Fortune 500 companies in the United States and internationally. Stephen performed his graduate work in Computer Science at the Massachusetts Institute of Technology where his Masters and PhD research focused on high-performance parallel processing. He also completed an MBA with joint course and thesis work at the Harvard Business School and the MIT Sloan School of Management. Stephen has authored numerous books and articles related to advanced data management techniques. Stephen has been on the faculty of The Data Warehousing Institute since 1996 and teaches courses related to Real-Time Data Warehousing and High Performance Data Warehouse Design.

SPEAKER INFORMATION



Charlie Bachman received his first computer training, in 1943, on an US Army, M1 anti-aircraft fire control computer. That was a manually operated, electro-mechanical, analog, transportable computer (about 400 pounds). It used to track enemy aircraft and aim 90 MM anti-aircraft guns. Returning to Michigan State College in 1946, after WW II, he completed his formal training in Mechanical Engineering and Business Administration, there and at the University of Pennsylvania in 1950. He spent ten years (1950-1960) in various engineering, finance, manufacturing and data processing assignments at the Dow Chemical Company. In these assignments, he created a number of business information systems.

He spent ten years (1961-1970) with GE's Manufacturing Services, in New York City and GE's Computer Department, in Phoenix, Arizona. The Integrated Data Store (DBMS) was conceived, designed and implemented during the first four years, working out of New York City and Philadelphia, PA. The next six years were focused on the education and training required to support IDS, as it became a main stream product of the GE Computer Department. During this time, Charlie served as the technical leader of the ANSI/SPARC Database Task Group, which was developing a general specification of an IDS-like product, to serve as an industry standard. During 1970 to 1981, Charlie, along with the entire GE Computer Department were bought and transferred, from GE to Honeywell Information Systems, in Boston, MA. The merger was designed to revitalize and to expand their market share. Charlie held various positions with Honeywell, included software management, research and standardization. Early, during this period, Charlie provided the technical leadership for the ANSI/SPARC Study Group that developed the "Three Schema Architecture" for data systems. Later, during this period, Charlie became heavily involved in computer communications, chairing both the ANSI Study Group and the ISO TC97 subcommittees on Open Systems Interconnection.

In 1973, Charlie was selected as the winner of the A. M. Turing Award by the Association of Computing Machinery (ACM). In 1977, he was elected a Distinguished Fellow of the British Computer Society (BCS).

During 1981 to 1982, Charlie worked for Cullinane Database Systems as VP of Product Management and continued his work on Open Systems Interconnection. At the same time, he continued his research on the Network Model and developed the version now known as the of the "Partnership Data Model." This was part of his effort to build a computer-based system to create, maintain and display data structure diagrams (Bachman diagrams).

In the 1983 to 1998 period, Charlie founded and managed Bachman Information Systems, Inc., to develop and market a computer aided graphic design system for data modeling and database design, supported by data structure diagrams. That company developed the Database Re-Engineering Cycle concept and supporting systems. It marketed Computer Aided Software Engineering (CASE) products to work in all phases of the re-engineering cycle and to translate data descriptions between the physical record level (Internal Schema Level), the logical record level, (Conceptual Schema Level). In 1996, Bachman Information Systems acquired Cadre Technology to create a new company, known as Cayenne Software. In 1996, he was awarded the Software Industry Achievement Award, by the Massachusetts Software Council. In 1998, he retired from Cayenne Software, as Chairman of the Board. From 2002 to 2006, he maintained a consulting relationship with Cbr Systems in San Bruno, CA, working on "new database system" concepts, to support their cord blood repository business. Charlie lives with his wife, of 59 years, in Lexington, Massachusetts, USA, and receives email addressed to "Charlie@Bachman.com".

Charlie Bachman's career, working for many companies over more than fifty years, has featured a small set of recurring "themes." These themes include: levels of abstraction, network data models, and generalized applications. The "direction" taken by each of these themes can not always be represented as a single line that shows steady, point by point progress. Rather, they are represented as an interesting set of points that reveal themselves only in retrospect. There may be engineering principles which controlled these themes, but they have revealed themselves to me, without prior announcement. But then, I have never been shy about "reinventing" things. I have only recognized the importance of these theme-oriented stories in trying to organize a meaningful talk covering fifty years of work on information systems.



Dr. T. William Olle, FBCS, CITP

Bill Olle entered the computing field in 1953 when he was working for an M.Sc in Astrophysics at the University of Manchester. He obtained this degree and subsequently in 1957 a Ph.D. in Astrophysics both of which involved extensive programming work on the Manchester Mark I.

He was employed from 1957 to 1964 at what was then SHAPE Technical Centre at the The Hague in the Netherlands. He used various computers such as the Ferranti Mercury in Oslo and London and the IBM 704 in Paris, Dusseldorf, and Risley during this period until SHAPE Technical Centre acquired an IBM 704 in 1961.

From 1964 to 1966, he was employed by Control Data Corporation in Palo Alto California during which period he became interested in data base applications. From 1967 to 1971, he was employed by the RCA Corporation in Cherry Hill, New Jersey and it was during this period that he became active in the CODASYL organization as Chairman of its Systems Committee and spearheaded the preparation of two early analytical reports on "Generalized Database Management Systems".

He returned to the UK in 1971 and established his own independent consultancy practice specializing in database management applications and information systems methodologies. He assisted clients in UK, Netherlands, Norway, Sweden, Australia and Canada. He also presented seminars and lectures on database topics in these countries and many others around the world.

He has represented the British Computer Society on IFIP TC8 since its inception in 1977. He was also active in database standards work in ISO and was chairman of the BSI standards committee for many years. He was awarded an honorary doctorate by Middlesex University in 2001.

Since his retirement from active consulting in 1993, his interests have focussed on the history of computing and more recently on professionalism in the computer field.

The History of data base management

Data base management evolved during the sixties and seventies. The evolution period was protracted. Many driving forces impacted the evolution and it is the aim of this paper to analyze these driving forces (some technical and some political) and to discuss the impact of each. The driving forces are identified as follows: higher level languages, generalization of software, non-procedural approach, program maintenance, recognition of different levels of data definition, direct access storage, and relational theory.