### Summary of Experience

- Data processing professional since 1976. Consultant since 1988.
- Expert in IBM's Workload License Charges, PR/SM, Performance and Capacity Planning
- Designer and Developer of "LCS: LPAR Capacity and Software Usage Analysis" licensed to sites in the US, Australia, Canada, UK, the Netherlands, Sweden, Switzerland, and Turkey. LCS assists sites in:
  - auditing IBM's Sub-Capacity Reporting Tool
  - auditing IBM's Mainframe Software Invoices for Monthly License Charge and International Program License Agreement products
  - optimizing data centers for minimized charges with IBM's Workload License Charge
- Expert in capacity planning for IBM compatible mainframe, specifically,
  - Configuration needs assessments
  - Development of justifications
  - Executive presentations for acquisitions
- Performance analysis, evaluation, and systems tuning.
- I/O configuration design.
- Expert witness directly for the United States District Court's pursuant to Federal Rule of Evidence 706 in "Electronic Data Systems Corporation vs. Computer Associates International, Inc." Civil Action Number 3:92-CV-0055-X.
- Expert witness for Europe Investor Direct on data processing matters. Stockholm District Court Case no T13541-01 Unit 51.
- Expert witness for Federal Computer Corporation. Federal Computer Corporation was protesting a decision by the IRS to award a mainframe acquisition to ViON. (GSBCA no. 12754-P)
- Expert witness for the State of Louisiana. Mainframe award protested by Hitachi Data Systems. File Number A20011ED, Data Processing Equipment/OIS; HDS Protest of Intent to Award.

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#### Experience

- Capacity planning and acquisition, performance management, technical consulting and technical programming.
- Executive consulting for public and private sector clients in the following areas.
  - Design and implementation of effective programs for capacity planning
  - Performance analysis
  - Accounting and chargeback
  - Recovery planning
  - I/O configuration
  - Hardware installation planning
- Authored and presented Al Sherkow's IBM License Manager and Workload License Charges Seminar in August 2001. A portion of this seminar was presented as a CMG Sunday Workshop titled IBM License Manager and Intelligent Resource Director in December 2001. The current version of this seminar is titled "IBM's Workload License Charges and Intelligent Resource Director" and has been presented in the US, Australia, UK, Sweden and Switzerland.
- Authored and presented Logical Partitioning Seminar over 15 times since August 1991, including in-house presentations for IBM, Amdahl, Hitachi Data Systems, and Hitachi Data Systems — Singapore.

#### Strategic Affiliations

- IBM zSeries Parallel Sysplex Gold Consultant
- IBM's Partners in Development, System z Solution Developers
- IBM's Analyst Relations
- Share, an IT-user group

#### **Employment History**

- I/S Management Strategies, Ltd: President, 1988 to present.
- First Wisconsin National Bank: Lead Capacity and Performance Analyst, Cost Allocation Analyst, 1983-1988.
- Milwaukee County: Technical Programmer/Analyst, 1981-1983.

- Johnson Controls: Lead Technical Programmer, 1978-1981.
- University of Wisconsin Milwaukee: Lecturer, 1976-1980.
- Independent Software Consulting: 1976-1979.

#### Education

- Master of Science in Engineering. May 20, 1984. University of Wisconsin—Milwaukee. Specialty in Computer Science.
- Bachelor of Science in Computer Science. August, 1978. University of Wisconsin—Milwaukee.
- Areas of interest: Languages, compilers, systems programming, database, simulations, optimization, and operational research.
- Related training:
  - Variety of MVS and OS/390 related courses
  - MXG/SAS Computer Performance Evaluation
  - IT Service Vision: Basic Performance Data Administration
  - IT Service Vision: Interactive Reporting
  - Variety of IBM seminars and briefings
- Attendance at technical conferences
  - Computer Measurement Group conference since 1983.
  - IBM Share User Group Meetings August, 1992, March 1993, March 1994, March 1996, August 1999, March 2000, and twice per year since 2001.
  - Invited Speaker at the OS/390 & z/OS Expo and Performance Conference, each Fall since 1999.
- MICS Capacity and Performance courses.
- BGS Systems: Crystal and Advanced Modeling.
- Technology Transfer Institute: DFSMS, I/O Configuration, MVS Capacity Planning, and Analytic Performance Modeling.
- IEEE seminars:
  - Distributed Processing, Software Design Techniques, Software Management, Computer Security, Software Testing and Validation, Concurrent Pascal, Software Configuration Management, Interactive Development Environments, Human Factors in Software Development

# Clients, a diverse list that includes:

- A major soft drink bottler
- A major Computer Equipment Lessor
- A Wall Street Brokerage Firm
- A major Bank headquartered in the European Union with Offices Throughout the World
- A major Bank headquartered in Australia
- Abbott Labs
- Aetna
- Amdahl
- American Stock Exchange
- Aurora Health Care
- Barclay's Bank
- Barnett Banks
- British Columbia Systems Corporation
- British Gas
- Carteret Savings Bank
- Central Bank Republic of Turkey
- · Charles Schwab & Co.
- Cincinnati Bell Information Systems
- CA (formerly Computer Associates, Inc.)
- Commerce Bank
- Congoleum Corporation
- Deluxe Data Systems
- Dime Bancorp
- DOW Chemical Company
- E.D.S.
- F.B.I.
- GEICO
- Hitachi Data Systems U.S.
- Hitachi Data Systems Singapore
- Humana
- IBM
- Interpay

- J.I. Case
- John Hancock Long Term Care
- Kohl's Corporation
- Lockheed Martin
- Lowe's Companies, Inc.
- Metavante (formerly, M&I Data Systems, Inc.)
- Miller Brewing Company
- Milwaukee County
- Morino Associates, Legent (Now part of CA)
- NASDAQ
- NEON Enterprise Software
- Northeast Utilities
- The Northern Trust
- Northwestern National Insurance Co.
- · Roundy's Foods
- Royal Canadian Mounted Police
- Sante Fe Railroad
- S.C. Johnson Wax
- SCANA Corporation
- Serena Software
- · Southern California Edison
- State of Washington
- State of Wisconsin
- Suntrust
- Swisscom
- Telephone and Data Systems, Inc.
- United Healthcare
- U.S. Department of Justice
- U.S. Office of Personnel Management (OPM)
- U.S. Social Security Administration

## Technical Papers and Seminars:

Please note that many of these papers are available on the Internet. A partial list of papers and seminars includes:

- "A Batch-Stream Management System Under DX10", TI-MIX 1980 National Symposium (a conference for Users of Texas Instruments Computer Equipment), Dallas, TX, March 1980.
- "A Case Study of Integrating a DASD Technology Change Into an Existing Plan", *Proceedings—CMG '88 International Conference on Management and Performance Evaluation of Computer Systems*, Conference, Dallas, TX, Pg. 864 (December 12- 16, 1988).
- "Boosting Performance With Capacity Planning", *Business Software Review* **7**, No. 5, Pg. 67 (May 1988). With H. Pat Artis.
- "Capacity Planning Update for LPARs". Proceedings—SHARE March 2000.
- "Crossing the Batch Rubicon: Understanding the Performance Implications of Job Dependencies". *CMG Transactions*, Issue 91, August 1996, Share Conference August 1999, OS/390 Expo and Performance Conference October 1999.
- "Does Your Installation Have Half-Second I/O Response Time". *Proceedings—CMG '98*, OS/390 Expo and Performance Conference October 1999.
- "Engines, Weights, Shares, & Defined Capacities", *z/Journal*, (April/May 2003).
- "ESCON: Design, Performance and IOCP Consideration". Seminar Presenter. September 1992 through December, 1993. With H. Pat Artis.
- "Exploring the Value Elements of zIIPs and zAAPs", z/Journal, (Dec 2008)
- "Focus: LPAR Update". Cheryl Watson's Tuning Letter. July, August 1993.
- "IBM License Manager and Workload License Charges Seminar", CMG August 2001.
- "IBM License Manager and Intelligent Resource Director", CMG December 2001.
- "IBM's Workload License Charges and IRD", Unpublished, a session at Share in Long Beach. February 2001.
- "IBM's New Workload License Charges and Its Effects On Capacity Planning". Share in Minneapolis. July 2001 and Share in Nashville March 2002.

- "IRD, LPAR Clusters and Changes in PR/SM", The CMG 2000 Presentation CD. December 2000.
- "IRD: What LPAR Clusters Can Do for You!" Share in Minneapolis. July 2001 and Share in Nashville March 2002.
- "IRD: What LPAR Clusters Can Do for You!" published in Cheryl Watson's Tuning Letter August 2001.
- "Logical Partitioning Capabilities". *Proceedings—CMG '91., Proceedings—CMG '92.*
- "LPAR and Parallel Sysplex Capacity Planning Update", OS/390 Expo and Performance Conference (October 2000), *Proceedings—CMG 2000*.
- "LPAR Initial Processing Weights, Defined Capacity and the Softcap", Share in Nashville, March 2002.
- "Mainframe Computing Facilities Usage Evaluation and Future Requirements Recommendation", *Proceedings—CMG XV International Conference on Management and Performance Evaluation of Computer Systems*, Conference, San Francisco, CA, Pg. 64 (December 1984).
- "MVS I/O Configuration Management", speaker for three-day technical seminar targeted for technical staff involved in optimizing the performance of DASD and tape I/O subsystems.
- "MVS/ESA Performance and Service Level Management", speaker for three day technical seminar designed to teach the skills needed to control the performance of MVS systems.
- "Other Implementations of Logical Partitioning", *Enterprise Systems Journal* **Volume 6**, No. 4, (April 1991).
- "PR/SM, MDF and MLPF: Capabilities, Management and Capacity Planning". Seminar Presenter. September 1992 through December, 1993.
- "PR/SM Capabilities", *Enterprise Systems Journal* **Volume 6**, No. 3, Pg. 16 (March 1991).
- "PR/SM Capabilities", Birds or a Feather Presentation *CMG* '90

  International Conference on Management and Performance
  Evaluation of Computer Systems, Conference, Orlando, FL,
  (December 10-13, 1990).
- "PR/SM Capabilities and Uses", speaker at Midwest Computer Measurement Group, March 1990.
- "PR/SM Overhead". Share 79: O346 August, 1992, Share 79: O346 March, 1993.

- "Real Life Analysis of Workload License Charges." from the Software Asset Management Track at Share in Nashville March 2002.
- "Reporting on Workload License Charges". The z/OS Expo Conference CD. October, 2001.
- "Save Money with Workload License Charges" z/OS Expo Conference (2005, 2006, 2007)
- "The Small Mainframe Dilemma", speaker at Midwest Computer Measurement Group, November 1990.
- "Using Service Level Agreements", *Proceedings—Info '87 International Management Exposition & Conference*, Conference, New York, NY, (September 1987). (This is an update of the CMG 86 Paper.)
- "Understanding the Performance Characteristics of EMIF Channel Subsystems". *CMG Transactions*, Issue 91, August 1996. (with Dr. H. Pat Artis)
- "Understanding the Performance Characteristics of EMIF Channel Subsystems". Share. March 1996. (with Dr. H. Pat Artis)
- "Usage Pricing on OS/390 and z/OS". Share. February 2004.
- "Using Service Level Agreements", *Proceedings—CMG '86 International Conference on Management and Performance Evaluation of Computer Systems*, Conference, Las Vegas, NV, Pg. 623 (December 1986).
- "Workload License Charges", The CMG 2000 Presentation CD. December 2000.
- "Workload License Charges Impact on Performance and Capacity Planning.Optimization", z/OS Expo November 2003, Share February 2004.
- "Workload License Charges Optimization", The z/OS Expo November 2003, Share February 2004.
- "Workload License Charges: A Consultant's View", The z/OS Expo Conference CD. October 2001.
- "Workload License Charges: A Consultant's View", Periodic Updates: 2002 through 2007.
- "3090 PR/SM Feature Provides Configuration Flexibility", *Mainframe Journal* **III**, No. 4, Pg. 34 (September/October 1988). With H. Pat Artis.
- Capacity Planning—The Movie: In 1987, Science Research Associates visited First Wisconsin National Bank, Merrill Lynch, Nabisco, and Dow Jones and interviewed a number of leading capacity planning

consultants to produce a fifty five minute executive briefing video on effective capacity planning programs and the impact that they have on the organizations bottom line. This video reviews the technical aspects of capacity planning, looks at management communication techniques that work, and provides guidance for creating and staffing a capacity planning function for an organization. The video tape is an extremely effective vehicle for selling the capacity planning concept to senior management and getting capacity planning programs started on the right foot. "Capacity Planning: A Management Briefing" is available from SRA. The reference number for the video is SR21-2015.