Publications
Dr. Richard G. Zech (1965-2005)

1. Papers and Presentations

(76; public domain)

“Advantages and Limitations of van Heerden Wavefront Reconstruction Optical Memories,” Institute of Science and Technology Lecture, University of Michigan, Ann Arbor, MI, November 1965.


"A New Holographic Technique for Medical and Biomedical Applications" (coauthor), Biomedical Sciences Instrumentation 6, pp. 66-71, May 1969.


“Incoherent Superposition in Volume Phase Holograms,” Annual Meeting of the Optical Society of America, Houston, TX, October 1974.


“Optical Storage and Retrieval of Cartographic Information” (coauthor), Annual Meeting of the Optical Society of America, Tucson, AZ, October 1976.


“Overview of Magnetic and Optical Storage Technologies” (Invited Presentation), IBM Almaden Research Laboratories, San Jose, CA, November 1978.
“Optical Data Display, Processing, and Storage I” (Conference Chair and Editor), SPSE Technical Symposium, Orlando, FL, January 1979.

“High-Density Optical Data Storage for Military Applications” (Invited Lecture), U.S. Army Missile Research and Development Center, Huntsville, AL, March 1979.


“Optical Data Display, Processing, and Storage II” (Conference Chair and Editor), SPSE Technical Symposium, Las Vegas, Nevada, March 1981.


“Optical Data Storage - An Historical Perspective” (Invited Lecture), the University of Texas (Dallas), January 30, 1985.


2. U.S. Government Contract Research Reports

(19 unclassified; 5 classified reports - all written between 1968 and 1979)


3. Confidential Business and Technology Reports

(38; titles only and in alphabetical order to protect client identity; not in public domain)

- 2-D Diode Laser Array for Ultra High-performance Optical Card Memory System
- 3.5" and 5.25" Optical Storage Product Distribution in Europe
- Applications and Markets for 12" MO Multifunctional Optical Storage Products
- Application/Market Development for High-performance Multimedia Optical Storage
- Applications and Market Potential for High-density SSD 3.5" MO Optical Storage System
- Computer Storage for Video-on-Demand/Consumer Interactive Services Applications
- Computer Security: Technology, Products, and Markets for PCs and Workstations
- Design/Business Plan for 50 GB WORM Removable-media Optical Drum Memory System
- Design/Preliminary Business Plan for Rotating Optical Memory Card Based on CD-R
- Design/Preliminary Business Plan for 2" and 3.5" Fixed-media MIL-SPEC Optical Drives
- Design/Preliminary Business Plan for 3.5" 1-GB Rewritable Fixed-media Optical Drive
- Design/Business Plan for a 2 x 512MB 3.5" Phase Change Optical Disk Drive
- Design/Preliminary Business Plan for 19" Rack-mounted 25-GB 12" Fixed-disk Optical Drive
- Design/Preliminary Business Plan for Dual CD-ROM/Multifunction 5.25" Optical Disk Drive
- Design/Preliminary Business Plan for Parallel Architecture Wafer Scale (PAWS) Semiconductor Super High-performance Storage System
- Design/Preliminary Business Plan for 1 PB 3-D Holographic Memory Server
- Engineering and Applications Overview of Optical Disk Products
- Market/Application Assessment: 3-D Hologram Memories for Enterprise Servers
- Markets and Applications for 5.25" Optical Disk Libraries
- Marketing Channels for Optical Drives and Media
- Market Channel Survey of Optical Drive and Disk Resellers
- Marketing and Sales Strategies for 3.5" and 5.25" MO Optical Disk Products
- Market and Technology Evaluation of High-end Document Image Servers and Systems
- Markets and Technologies for High-end Document Image Processing Systems
Markets and Technologies for Optical Disk and Magnetic Tape Automated Libraries
Militarized Optical Disk Drives: Technology, Markets, and Applications
Optical Memory Cards: An Analysis of Markets, Applications, Technologies, and New Business Opportunities
Optical Storage Applications for Small Computer Systems
Optical Storage Technology and Devices for MIL-SPEC and Rugged Applications
Phase Change Media for 5.25" and 12" Multifunction Optical Storage
Product Integrator Business Development for the 1990s: A Strategic Advisory
Ruggedized Optical Disk Drives: Technology, Markets, and Applications
Serial Impact Dot Matrix & Inkjet Printer Markets and Technologies: A General Survey and Analysis
Technology, Markets, and Distribution for CCD-based Electronic Imaging Products
Technology Assessment/Conceptual Design: 3-D Hologram Memories for Enterprise Server Applications
Technology Assessment: 3-D Hologram Memories for Wideband Correlators
Technology Assessment: 3-D Hologram Memory for Wideband Video-on-Demand Services
Time-to-Market and Manufacturing Considerations for Low-cost Optical Storage
4. Conference and Trade Show Reports

(General and limited distribution documents. Many of the reports in Section 4.2 were done exclusively for private client groups.)

4.1 Public Domain Reports (26)

“CeBIT Executive Report PLUS,” CeBIT 1988-2001, Hanover, Germany (a total of 14 detailed reports and appendices covering the world’s largest IT trade show; focused on CD and DVD since 1995)

“COMDEX Executive Report PLUS,” COMDEX Fall 1988-1995, Las Vegas, NV (a total of 8 detailed reports and appendices covering the US’s largest IT trade show and conference)

Optical Data Storage (ODS) Conferences:


4.2 Private Reports (not in public domain)

All-Optical Networking 2001

CABLE (1994 and 1997)


CLEO 2002

MediaTech 2003

NAB 1995

OFC 2002

REPLITech North America (1996-2001)