ARMY
SCIENCE
BORRE

Biographical Sketch Book

July 1987

OFFICE ASSISTANT SECRETARY OF THE ARMY (RESEARCH, DEVELOPMENT AND ACQUISITION)
THE PENTAGON ROOM 2E653
WASHINGTON, DC 20310-0103

ARMY SCIENCE BOARD

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DR. JOHN W. KNAPP Vice Chair

COL RICHARD E. ENTLICH Executive Secretary

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Ms. Sandra F. Gearhart Administrative Staff Member

Mrs. Bernice C. Broome Administrative Staff Member

TELEPHONE (202) 695-3039/7046



## DEPARTMENT OF THE ARMY

ARMY SCIENCE BOARD
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, D.C. 20310-0103

June 1987

The Army Science Board (ASB) is the Department of the Army (DA) senior scientific advisory body for the Secretary of the Army and Chief of Staff on research and development activities and programs, system acquisition policies and procedures, and other matters that are affected by science and engineering. It functions under the cognizance of the Assistant Secretary of the Army (Research, Development and Acquisition) (ASA(RDA)). The Board was chartered in December 1977 to perform the duties previously accomplished by the Army Scientific Advisory Panel and other U.S. Army panels and committees.

The basic missions of the ASB are: to provide technical review and management support to major Army programs in critical need of DA attention; to use specialists to provide quick reaction in response to technical review and assessment of major program initiatives; to use members as ambassadors to keep the Army alert to new science and technology developments in industry that will meet new operational requirements or increase operational readiness; and to use members as consultants to the DA in science and technology activities.

The Board is comprised of distinguished members from industry, universities, research agencies, private consultants, and former government officials. Members are affiliated with organizations such as the National Academy of Sciences, National Academy of Engineering, the National Research Council, etc. Nominations for members are received from both the government and private sectors.

ASB study topics are suggested by Senior Army officials and Major Army Commanders and approved by the ASA(RDA). In accordance with Army Regulation 15-8, proposed study topics may be submitted to the Executive Secretary, ASB, for consideration by the Executive Review Board as to feasibility and appropriateness.

Richard E. Entlich Colonel, GS

Executive Secretary

NAME: Dr. Duane A. Adams

POSITION:
Principal Research Scientist
Computer Science and Robotics

ORGANIZATION:
Carnegie-Mellon University
Computer Science Department
Pittsburgh, PA 15213

BUSINESS TELEPHONE: 412-268-7677 and 703-522-1913

EDUCATION:
BA, Mathematics, University of Montana, 1960
MA, Mathematics, University of California, 1962
PhD, Computer Science, Stanford University, 1969

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Army Science Board

AREAS OF PROFESSIONAL INTEREST:
Computer Science in general, with particular interest
in computer architecture, autonomous systems and speech
recognition.





NAME: LTG Robert J. Baer (USA Ret.)

POSITION: Senior Vice President

ORGANIZATION: XMCO Inc. XMCO Plaza 11150 Sunrise Valley Drive Reston, Virginia 22091

BUSINESS TELEPHONE: 703-648-9600

EDUCATION:
BS, Engineering, US Military Academy, 1947
The Army War College, 1967

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
AUSA, Chapter Past President
Member, Army Aviation Association
Member, ADPA
Member, Advisory Board, SAE, Military Programs

AREAS OF PROFESSIONAL INTEREST:
Materiel Development and Acquisition
Program Management
Personnel Management
Production Planning
Logistics and Supportability
Training
Force Development

ADDITIONAL DATA:
Former Deputy Commander, US Army Development & Readiness Command
Former Program Manager, Ml Abrams Tank
Former Director of Development, DA (ODCSRDA)

NAME: Dr. Delbert S. Barth

POSITION: Senior Scientist

ORGANIZATION: Environmental Research Center University of Nevada Las Vegas, Nevada 89154

BUSINESS TELEPHONE: 702-739-0839/3382

EDUCATION:
BS, Military Engineering, United States Military Academy, 1946
MS, Nuclear Physics, Ohio State University, 1952
MS, Solid State Physics, Stevens Institute of Technology, 1960
PhD, Biophysics, Ohio State University, 1962

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Past Member: National Academy of Sciences Committees
(Environmental Effects and Hearing, Bioacoustics, and
Biomechanics)

Past Temporary Advisor: World Health Organization
(Environmental Health Monitoring)
Army Science Board: 1984 - Present
Member: American Physical Society
Sigma Xi
American Association for the Advancement of Science

AREAS OF PROFESSIONAL INTEREST:

Executive Management of Research and Development Programs
Environmental Science, Environmental Monitoring, Risk
Assessment, Air Pollution Control, Hazardous Wastes,
Biophysics





NAME:
Mr. Albert W. Bayer

POSITION: President

ORGANIZATION:
A. W. Bayer and Associates
Marina City Club
4333 Admiralty Way
Marina del Rey, CA 90292-5469

BUSINESS TELEPHONE: 213-823-0078

EDUCATION:
Graduate Mount Pleasant Technical School
Attended Union College and Catawba College
(Engineering)
Hon. Doctorate of Engineering - Norwich
University (Vermont)
Graduate, Officer and Pilot, U.S. Army Air Corps

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Member of Employer Support of Veteran Employment
Committee Veterans' Administration
Lifetime Associate Fellow of Society of Experimental Test Pilots
Member of Board of Advisors - Union College,
Schenectady, N.Y.
Lifetime Chairman of Board, Eisenhower Chapter,
Association of U.S. Army
Founder Member of Army Aviation Association of
America
Founder Member of Twirly Birds (Pioneer Helicopter
Pilots - Before V-J Day)

AREAS OF PROFESSIONAL INTEREST:
Management and Technical Advisor to Aerospace Industry

ADDITIONAL DATA:

Experimental Test Pilot for Hughes Aircraft, McCulloch
Motors, Kellett Aircraft and General Electric
Company
In 1968 was presented California's Highest Award: "The

Medal of Valor" with diamond for "An act of Extraordinary Heroism."

NAME: Dr. Nicholas A. Begovich

<u>POSITION:</u>
Private Consultant (Technical/Management)

ORGANIZATION:
136 Miramonte Drive
Fullerton, California 92635

BUSINESS TELEPHONE: 714-526-5724

EDUCATION:
BS, Electrical Engineering, California Institute of Technology, 1943
MS, Electrical Engineering, California Institute of Technology, 1944
PhD, Electrical Engineering-major; Physics-minor,
California Institute of Technology, 1948

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Board of Directors: Nadgeco Limited (1966-1969) Hughes NADGE Corporation (1966-1969) Committees Department of Defense Task Force Minuteman (Fletcher Committee, 1961) Battlefield Sensors (Evans Committee, 1972) Defense Science Board Task Force on Vulnerability of PATRIOT (SAM-D) System to Responsive Enemy Action (1976-1978) Survivable Tactical and Strategic C3I Systems Summer Study (1979) National Academy of Engineering/Air Force Department of the Army, PATRIOT Program Review Panel (1980) Scientific Societies Fellow (1965), Institute of Electrical and Electronic Engineers Member, American Physical Society Member, Operations Research Society of America Member, Sigma Xi

AREAS OF PROFESSIONAL INTEREST:
Command and Control Systems
Air Defense Systems
Radars and data processing subsystems
Antennas and microwave circuitry components





NAME: Dr. John Blair

POSITION: Director of Research

ORGANIZATION:
Raytheon Company
141 Spring Street
Lexington, MA 02173

BUSINESS TELEPHONE: 617-860-2234

EDUCATION:

BS, MS, ScD, Electrical Engineering, Massachusetts
Institute of Technology

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Dean's Advisory Committee, College of Engineering,
University of Massachusetts, Amherst, MA
Advisory Board of the Dean of Engineering,
University of Illinois, Urbana, Illinois
Industrial Research Institute, New York, N.Y.
State/Industry Council, Sea Grant Program, M.I.T,
Cambridge, MA
IEEE, American Physical Society

AREAS OF PROFESSIONAL INTEREST:
Electrical Engineering, Applied Physics, Weapon
Systems, Electronic Systems

NAME: Dr. Seth Bonder

## POSITION:

- 1) President
  2) Adjunct Professor
- ORGANIZATION:

  1) Vector Research, Inc.
  Post Office Box 1506
  Ann Arbor, Michigan 48106
- 2) University of Michigan, Department of Industrial and Operations Engineering, Ann Arbor, Michigan 48109

BUSINESS TELEPHONE:

EDUCATION:

BS, Mechanical Engineering, University of Maryland, 1960
PhD, Industrial Engineering (Operations Research), Ohio
State University, 1965

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Chairman, National Advisory Board, Intelligent Computer Systems
Research Institute, University of Miami
Advisory Board, Industrial Engineering and OR Department,
Virginia Polytechnic Institute and State University
Advisory Board, Department of Mathematical Sciences, Oakland
University
Operations Research Society of America (President, 1978-1979)
Military Operations Research Society (President, 1969-1970)
Vice President, International Federation of Operations
Research
Societies (1985-present)
International Institute for Strategic Studies
American Association for the Advancement of Science

AREAS OF PROFESSIONAL INTEREST:
Defense Systems and Policy Analysis/Operations Research
Research, Development and Acquisition Planning
Force Structure
Doctrine and Tactics
Personnel Planning



NAME: Dr. Earl D. Brill, Jr.

POSITION:
Professor of Civil Engineering and
Environmental Studies

ORGANIZATION: University of Illinois at Urbana-Champaign 208 North Romine Urbana, Illinois 61801

BUSINESS TELEPHONE: 217-333-8693

EDUCATION:
BS, Civil Engineering, Cornell University, 1969
PhD, Environmental Engineering, The Johns Hopkins University, 1972

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Member: American Society of Civil Engineers
Committee on Water Resources Systems
American Geophysical Union
Operations Research Society of America
Central States Water Pollution Control Association

AREAS OF PROFESSIONAL INTEREST:
Mathematical modeling, mathematical programming, engineering economics, environmental systems analysis, water resources systems analysis



NAME: Mr. William M. Brogan

POSITION:

ORGANIZATION:
Illinois State & Local Labor Relations Boards
111 North Canal Street - Suite 940
Chicago, Illinois 60606

BUSINESS TELEPHONE:

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
National Republican Labor Advisory Board
Governor's Task Force on Jobs and Economy
Governor's Task Force on Employment Security
State Board of Industrial Planning
Army Science Board
Director, Brookfield Bank for Savings

AREAS OF PROFESSIONAL INTEREST: Labor and Personnel and Housing



NAME Dr. Robert B. Buchanan

POSITION Senior Vice President

ORGANIZATION:
The BDM Corporation
7915 Jones Branch Drive
McLean, VA 22102-3396

BUSINESS TELEPHONE: 703-848-5168

EDUCATION:

MS, Electrical Engineering, Wichita State University, 1963 MS, Electrical Engineering, Oklahoma State University, 1965 PhD, Electrical Engineering, Oklahoma State University, 1968

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
The Institute of Electrical and Electronic Engineers (Vice Chairman, IEEE Nuclear and Space Radiation Effects Group 1971-74)
Association of the United States Army
American Defense Preparedness Association
Electronic Industries Association

AREAS OF PROFESSIONAL INTEREST:
Nuclear effect, stealth technology, communicationselectronics, and advanced computing.

NAME: Mr. William Wesley Bumpus

Position: President

ORGANIZATION:
WWB Associates, Inc.
6953 Duncraig Court
McLean, Virginia 22101

BUSINESS TELEPHONE: 703-893-6516

EDUCATION:
BS, Science, U.S. Military Academy, 1949
Masters work in International Relations, Cambridge University, 1953-54
Various courses in A.F. (Atomic Weapons, Electronics, etc.)

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Registered Engineer - 1957 Member, IEEE Advisory Board, American Security Council Member of Board, National Bank (5 years)

AREAS OF PROFESSIONAL INTEREST:
Acquisition procedures for technical equipment
Specification Analysis
Technical systems development
Proposal evaluation

ADDITIONAL DATA:
Married: Ann Stamps Bumpus. Six children
St. John's Church, McLean, Virginia
Washington Golf and Country Club, Arlington, Virginia
West Point Society of D.C.





NAME: Dr. Paul W. Caro

<u>POSITION:</u>
Deputy Managing Director

ORGANIZATION:
Seville Training Systems Division
United Airlines Services Corporation
1333 Corporate Drive, Suite 210
Irving, TX 75038

BUSINESS TELEPHONE: 214-550-8000

EDUCATION:
MA, Psychology, Florida State University
PhD, Industrial Psychology and Psychometrics,
University of Tennessee

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Fellow, Divisions of Military Psychology and Applied
Experimental and Engineering Psychologists of the
American Psychological Association
Fellow, Human Factors Society
Society of Sigma Xi
USAF Scientific Advisory Board (1981-1986)

AREAS OF PROFESSIONAL INTEREST: Training Training Equipment Design Simulation NAME: GEN Leonard F. Chapman, Jr. (USMC Ret.)

POSITION: Private Consultant

ORGANIZATION: 311 Vassar Road Alexandria, Virginia 22314

BUSINESS TELEPHONE: 703-751-2745

EDUCATION:
BA, Mathematics, University of Florida, 1935

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Board of Governors, Mary Washington College; Board of Advisors,
The Citadel; President, Marine Corps Command and Staff
College Foundation; Director, United Services Life Insurance
Co.

AREAS OF PROFESSIONAL INTEREST:
Command, Management, Personnel





NAME:

Dr. John D. Christie

POSITION:

Vice President

**ORGANIZATION:** 

c/o Van Es Associates, Inc.

Suite 1407

5205 Leesburg Pike

Falls Church, Virginia 22041

**BUSINESS TELEPHONE:** 

703-931-7500 (Wash Metro)

EDUCATION:

SB, Mechanical Engineering, MIT, 1959

SM, Mechanical Engineering, MIT, 1960

ME, Mechanical Engineering, MIT, 1963

ScD, Mechanical Engineering, MIT, 1964

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Scientific Societies

Sigma Xi

AREAS OF PROFESSIONAL INTEREST:

Defense Force Planning Force Effectiveness

Systems Acquisition

Nuclear Programs

Chemical Warfare

ADDITIONAL DATA:

Federal Energy Administration: Assistant Administrator

for Energy Information and Analysis, 1976-77

DOD: Principal Deputy Assistant Secretary of Defense

(PA&E and Systems Analysis), 1972-76

Deputy Assistant Secretary for General Purpose

Programs (SA), 1971-72

Division Director, OASD(SA) Nuclear Weapons and

Materiels, Theater Nuclear Forces (including

Chemical Warfare), 1966-71

Bell Telephone Laboratories: Member of Technical

Staff, 1964-66

NAME:

Dr. Theodore Cooper

Vice Chairman of the Board

ORGANIZATION:

The Upjohn Company

7000 Portage Road

Kalamazoo, Michigan 49001

BUSINESS TELEPHONE:

616-323-7094

BS, Biology, Georgetown University, Washington, D.C.,

MD, Medicine, St. Louis University School of Medicine,

PhD, Physiology, St. Louis University Graduate School.

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

American Red Cross Board of Governors, Member-at-Large,

Vice Chairman

Society for Experimental Biology and Medicine

American Society for Pharmacology and Experimental

Therapeutics, Secretary-Treasurer

American Society for Clinical Investigation

American Physiological Society

St. Louis University Board of Trustees

Board of Directors, Borden, Inc.

Board of Directors, Metropolitan Life Insurance Company

Board of Directors, Harris Bankcorp

Board of Directors, Bronson Health Care Group

AREAS OF PROFESSIONAL INTEREST:

Clinical and Experimental Cardiovascular Physiology

Pharmacology and Surgery

Medical Administration

Health Policy

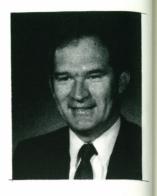
ADDITIONAL DATA:

Authored over 250 scientific articles

Assistant Secretary of Health in 1975 Won Albert Lasker Award for Special Public Services

Director of the National Health and Lung Institute





NAME: Dr. Thomas E. Cooper

POSITION: In transition

ORGANIZATION:

BUSINESS TELEPHONE: 703-979-3600

BS, Mechanical Engineering, University of California, Berkeley MS, Mechanical Engineering, University of California, Berkeley PhD, Mechanical Engineering, University of California, Berkeley

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
American Society of Mechanical Engineers
Tau Beta Pi
Sigma XI

AREAS OF PROFESSIONAL INTEREST:
Aero and mechanical engineering
Weapon Systems

NAME: Mrs. LeGree S. Daniels

POSITION: Consultant

ORGANIZATION: 1715 Glenside Drive Harrisburg, Pennsylvania 17109

BUSINESS TELEPHONE: 717-236-8575

EDUCATION:
Gratz High School, Philadelphia, Pennsylvania
Temple University, Philadelphia, Pennsylvania
Lincoln Business College, Philadelphia, Pennsylvania

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
President's Commission on White House Fellows
National Endowment for Democracy
Former Chairman, State Tax Equalization Board,
Commonwealth of PA
Order of the Eastern Star, Past Worthy Matron
Harrisburg Art Association
YWCA
NAACP
Polyclinic Hospital Advisory Board
Tri-County Mental Health Association

AREAS OF PROFESSIONAL INTEREST:
Politics - These include:
Germantown Council of Republican Women
The Dauphin County Republican Committee
Committeewoman for Susquehanna Township
Third Ward
Deputy Chairman for the PA Republican Committee
Member, Electoral College 1980 and 1984.

ADDITIONAL DATA:
Mother of 15 foster children





NAME: Mr. Gilbert F. Decker

POSITION: President

ORGANIZATION:
Penn Central Federal Systems Company
1800 Diagonal Road, Suite 500
Alexandria, Virginia 22314

BUSINESS TELEPHONE: 703-739-2424

EDUCATION:

BS, Electrical Engineering, The Johns Hopkins University, 1958
MS, Operations Research, Stanford University, 1966

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Tau Beta Pi; Eta Kappa Nu; Pi Tau Sigma; Omicron Delta Kappa;
Phi Kappa Psi Fraternity; Air Force Association; Association
of Old Crows; Association of the United States Army; Board of
Directors of Technology Development Corp.; Reserve
Officers Association; Chair, Army Science Board,
March 1987-Present.

AREAS OF PROFESSIONAL INTEREST:
Program Management/Systems Engineering
Strategic and Tactical Intelligence Systems
Logistics Operations and Support
C3 Systems
Software and Information Processing Systems
Management and Motivation Systems

ADDITIONAL DATA:
Hobbies: Skiing, Skin Diving

NAME: Dr. Lawrence J. Delaney

POSITION:
Senior Vice President and Group Manager
Information Systems Group

ORGANIZATION
Science Applications International Corporation
1710 Goodridge Drive
Post Office Box 1303
McLean, Virginia 22102

BUSINESS TELEPHONE:

EDUCATION:
BChE, Chemical Engineering, Clarkson College, 1957
MChE, Chemical Engineering, Clarkson College, 1958
PhD, Chemical Engineering, University of Pennsylvania, 1961

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Associate Fellow AIAA
Member: AIChE, IEEE, Sigma Xi, Tau Beta Pi; Omega Chi Epsilon
Denver Navy League President (1974-75)
Vice Chairman, Army Scientific Advisory Panel (1976-77)
Member, Scientific and Technical Intelligence Committee Review
Panel (1976-77)
Member, Army Scientific Advisory Panel (1974-76)
Journal of Defense Research Volume Reviewer (1972-73)
Defense Science Board Summer Study (1979), Policy and
Doctrine Panel
Navy Research Advisory Council Summer Study (1980), Nuclear
Weapons Effects Panel Chairman

AREAS OF PROFESSIONAL INTEREST:
Missile Systems
C3I Systems
Heat and Mass Transfer

ADDITIONAL DATA:
Advanced Research Scholar, Fritz Haber Institute, Technical University of Berlin, 1962-63. Kinetics of Crystal Growth.
Thirteen publications in Basic and Applied Research Journals and Symposium Proceedings





NAME: Dr. James C. Dobson

POSITION: President

ORGANIZATION:
Focus on the Family
50 East Foothill Boulevard
Arcadia, California 91006

BUSINESS TELEPHONE: 818-445-0495

EDUCATION:
PhD, Child Development, University of Southern California,
1967

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Delegate-at-large to the White House Conference on the Family, 1980, and served on the Task Force that summarized the funding for the three conferences. Received a special commendation from President Jimmy Carter for this work.

Appointed by President Ronald Reagan to the National Advisory Committee to the Office of Juvenile Justice and Delinquency Prevention, 1982 to 1984.

Appointed by Attorney General Edwin Meese to the Attorney General's Commission on Pornography, 1985-86.

AREAS OF PROFESSIONAL INTEREST:
The institution of the family - its preservation and enhancement. Child psychology; child development; inborn errors of metabolism and other genetic problems related to mental retardation.

ADDITIONAL DATA: Licensed psychologist; marriage, family and child counselor

Primary responsibility involves a radio program, entitled "Focus on the Family," heard daily on 970 stations, six days per week.

Publications: Dare to Discipline; Hide or Seek; What Wives Wish Their Husbands Knew About Women; The Strong-Willed Child; Preparing for Adolescence; Straight Talk to Men and Their Wives; Emotions: Can You Trust Them?; Dr. Dobson Answers Your Questions; Love Must Be Tough.



NAME: Mrs. Nancy Bearg Dyke

POSITION: Private Consultant

ORGANIZATION: c/o Office of CG, U.S. Army Japan/IX Corps APO San Francisco 96343-5000

BUSINESS TELEPHONE: 0181-462-51-1520, extension 233-5000 (Camp Zama, Japan)

EDUCATION:

BA, English, Willamette University, Oregon, 1969
MPA, Public Policy, Harvard University (Kennedy School of Government), 1978

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Member, Executive Board, Far East Council on International
Relations

AREAS OF PROFESSIONAL INTEREST: Foreign Policy History Analysis of Military Effectiveness Manpower and Personnel

ADDITIONAL DATA:
Formerly Assistant to the Vice President of the United States for National Security Affairs (January 1981-August 1982); Also served as Principal Deputy Assistant Secretary of the Air Force (Manpower and Personnel); Director of Policy Analysis for Near East, Africa, and South Asia (DoD, ISA); Congressional Budget Office Analyst (Tactical Air Forces); and Professional Staff Member, Senate Armed Services Committee; Who's Who of American Women.



NAME:

Dr. B. David Edens

POSITION:

Head, Family and Community Studies

ORGANIZATION:

Stephens College

Columbia, Missouri 65215

BUSINESS TELEPHONE:

314-876-7113

EDUCATION:

BA, Psychology, Wake Forest University, 1950

M.DIV and Th.M., Counseling, Southern Baptist Theological

Seminary, 1953 and 1954

M.DIV and Th.M., Psychotherapy, The Merrill-Palmer

Institute, 1954-55

Ed.D., Family Psychology, Columbia University, 1957

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Clinical membership as a Fellow and an Approved Supervisor in the American Association for Marriage and Family Therapy and is a certified Sex Therapist by the American Association of Sex Educators, Counselors and Therapists. Member of Missouri Psychological Association and American Psychological Association. Member, Missouri State Committee of Psychologists.

AREAS OF PROFESSIONAL INTEREST:

The military family, teaching, marriage and family therapy.

ADDITIONAL DATA

Two years psychotherapist at New York City's Riverside Hospital for the rehabilitation of adolescent narcotic users. For ten years Director of Counseling at the Trinity Baptist Church of San Antonio and taught courses in psychology and marriage and the family at San Antonio College. Nineteen years teaching Stephens College and private practice in family therapy. Licensed psychologist, U.S. Navy, WWII.

**PUBLICATIONS:** 

Six books in the marriage and family area and more than 100 articles in profesional journals and magazines.



NAME: Dr. David D. Elliott

POSITION: Senior Vice President

ORGANIZATION:

Science Applications International Corporation 10260 Campus Point Dr. San Diego, California 92121

BUSINESS TELEPHONE:

619-546-6141

EDUCATION:

BS, Physics, Stanford University, 1951
MS, Physics, California Institute of Technology, 1953
PhD, Physics, California Institute of Technology, 1959
Thesis: Photoproduction of Pion Pairs from
Hydrogen
Postdoctoral Research at the University of Paris

MEMBERSHIP BOARDS. COMMITTEES. AND SOCIETIES:

American Physical Society
American Geophysical Union
American Association for the Advancement of Science
American Institute of Aeronautics and Astronautics
Armed Forces Communications and Electronics Association
Editorial Board, Journal of Defense Research
SDI Advisory Committee

AREAS OF PROFESSIONAL INTEREST:

Ballistic Missile Defense

Research Management

Analysis of technical, programmatic, and doctrinal issues in national security at the tactical and strategic levels.

Development of new technical approaches to survivable, enduring command, control and communications.



NAME: COL Richard E. Entlich

POSITION: Executive Secretary Army Science Board

ORGANIZATION:
Office of the Assistant Secretary of the Army (Research, Development and Acquisition)
Washington, D. C. 20310-0103

BUSINESS TELEPHONE: 202-695-7046/3039

BS, Military Engineering, USMA, West Point, New York (1963) MS, Applied Math, University of Missouri, (1971)

MILITARY SCHOOLING: Armed Forces Staff College (1974) Army War College (1983)

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Association of United States Army
Field Artillery Association
Military Operation Research Society
Association of Graduates, West Point

ADDITIONAL DATA:
Former Chief of Research, Studies, Market Analysis and Long Range Planning, ODCSPER, HQDA
Former Chief of MANPRINT Policy, Research and Planning, ODCSPER, HQDA



NAME: Dr. Andrew G. Favret

POSITION:
Dean
School of Engineering & Architecture

ORGANIZATION: Catholic University of America Washington, D. C. 20064

BUSINESS TELEPHONE:

EDUCATION:

BS, Military Science & Engineering, U.S. Military Academy, 1945
MSEE, Electrical Engineering, University of Pennsylvania, 1950
D.Eng, Electrical Engineering, Catholic University, 1964

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Senior Member, I.E.E.E. Member, A.C.M. Member, Cosmos Club

AREAS OF PROFESSIONAL INTEREST:
Pattern recognition, Signal & Image Processing
Digital Computer Applications, Communications



NAME: Dr. Philip H. Francis

POSITION: Director, Advanced Manufacturing Technology

ORGANIZATION:
Motorola, Inc.
1301 E. Algonquin Road
Schaumburg, IL 60196

BUSINESS TELEPHONE: 312-576-4573

EDUCATION:
BS, Mechanical Engineering, Calif. Poly. State Univ., 1959
MS, Mechanical Engineering, University of Iowa, 1960
PhD, Engineering Mechanics, University of Iowa, 1965
MBA, Management, St. Mary's University, 1972

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

American Society of Mechanical Engineers (Fellow; Direct the Manufacturing Science & Technology Program)

Society of Manufacturing Engineers

American Academy of Mechanics

Registered Professional Engineer, State of Texas

Sigma XI, Pi Tau Sigma, Tau Beta Pi

Serve on National Academy of Sciences Panel to Oversee the Automated Manufacturing Research Facility of the National Bureau of Standards

AREAS OF PROFESSIONAL INTEREST:
Manufacturing Science and Technology, Management

ADDITIONAL DATA:
Married, 4 grown children

NAME: Mr. Donald C. Fraser

POSITION: Vice President - Technical Operations

ORGANIZATION:
C.S. Draper Laboratory, Inc.
MS #02
555 Technology Square
Cambridge, MA 02139

BUSINESS TELEPHONE: 617-258-1589

EDUCATION:

BS, Massachusetts Institute of Technology
MS, Massachusetts Institute of Technology
SC.D Massachusetts Institute of Technology

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

DAG/ASD
NASA SSTAC Committee
AIAA Fellow
NAE Member



NAME: Dr. Renee Marie Fredrickson

POSITION:
Proprietor and Director

ORGANIZATION:
Fredrickson and Associates
821 Raymond Avenue
St. Paul, Minnesota 55114

BUSINESS TELEPHONE: 612-646-8373

EDUCATION:
BA, Psychology, MacAlester College, 1970
PhD, Psychology, University of Minnesota, 1980

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: American Psychological Association Minnesota Psychological Association Minnesota Women Psychologists

AREAS OF PROFESSIONAL INTEREST:
Family Systems
Physical abuse counselling
Sexual abuse counselling
Identification and treatment of pre-school sexual abuse



NAME: Mr. Richard E. Friedman

POSITION: Managing Partner

ORGANIZATION: Epton, Mullin, & Druth, Ltd. 140 South Dearborn Street Chicago, Illinois 60603

BUSINESS TELEPHONE: 312-984-1000

EDUCATION:
AB, Economics, Grinnell College, 1951
JD, Law, Northwestern University Law School, 1955

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
American Bar Association Standing Committee on Law and National Security
Chairman, Committee to Commemorate United States Constitution In Illinois, Inc.

AREAS OF PROFESSIONAL INTEREST:
Management, Budgeting, Administration, Critical Analysis,
Law Practice



NAME: Dr. Glenn Gaustad

POSITION:
Vice President, Defense Systems & Electronics Group
Manager, Military Components

ORGANIZATION: Texas Instruments Incorporated Post Office Box 660246, M/S 925 Dallas, Texas 75266

BUSINESS TELEPHONE: 214-995-3078

EDUCATION:
BS, Electrical Engineering, Arlington State University, 1961
MS, Electrical Engineering, Texas A&M University, 1963
PhD, Electrical Engineering, Texas A&M University, 1965

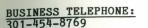
MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Army Science Board
IEEE
Eta Kappa Nu
Tau Beta Pi
Phi Kappa Phi
Epsilon Nu Gamma

AREAS OF PROFESSIONAL INTEREST:
Advanced technology and insertion
Surveillance systems
Electronic warfare systems
Command, Control, Communication & Intelligence

NAME: Professor Alfred Gessow

Professor and Chairman
Department of Aerospace Engineering

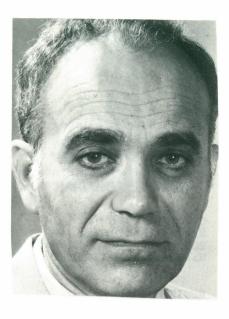
ORGANIZATION:
University of Maryland
College Park, Maryland 20742



EDUCATION:
BCE, City College of New York, 1943
MAE, New York University, 1944

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Honorary Fellow, American Helicopter Society
Education Committee, American Helicopter Society
Fellow, AIAA
Career Enhancement Committee, AIAA
Commission on Scientific and Technical Manpower
American Society of Engineering Education

AREAS OF PROFESSIONAL INTEREST:
Helicopter Technology; Fluid and Flight Dynamics;
Applied Aerodynamics





NAME: Dr. Barbara P. Glacel

Program Director, Executive Development Seminars

ORGANIZATION:
HAY Systems, Inc.
2000 M Street, NW, Suite 650
Washington, DC 20036

BUSINESS TELEPHONE: 202-223-3703

EDUCATION:
AB, Government, College of William & Mary
MA, Human Relations, University of Oklahoma
PhD, Political Science, University of Oklahoma

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
American Society for Training and Development
American Political Science Association
American Society for Public Administration
National Military Families Association - Board of
Governors

AREAS OF PROFESSIONAL INTEREST:
Human Resource Development
Army Family Factors
Management Practices
Organization Design

ADDITIONAL DATA: Editorial Review Board on Military Families "Family Life Today" Magazine NAME: Dr. Meredith C. Gourdine

POSITION: President

ORGANIZATION: Energy Innovations, Inc. 8709 Knight Road Houston, TX 77054

BUSINESS TELEPHONE: 713-790-9892

Engineering Physics, Cornell University PhD, California Institute of Technology

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
President Nixon's Task Force on Small Business
President Johnson's Advisory Panel on Energy
Mayor Lindsay's Task Force on Air Pollution
Trustee of New Jersey College of Medicine and Denistry
University and Engineering Councils, Cornell University
Graduate School of Business Advisory Council, Stanford
University

AREAS OF PROFESSIONAL INTEREST: Electrogasdynamics

ADDITIONAL DATA:
1952 U. S. Olympic Track Team, Silver Medal, Broad Jump



NAME:
Most Reverend Philip M. Hannan

POSITION:
Archbishop of New Orleans

ORGANIZATION:
Roman Catholic Church
Archdiocese of New Orleans
7887 Walmsley Avenue
New Orleans, Louisiana 70125

BUSINESS TELEPHONE: 504-861-2238

EDUCATION:
BA, MA, Philosophy, The Catholic University, Washington, DC, 1936
JCD, Canon Law, The Catholic University, Washington, DC, 1949
STL, Theology, Gregorian University, Rome, Italy, 1940

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
President, Roman Catholic Church, Archdiocese of New Orleans
Board Member, Metropolitan Area Committee
Board Member, Boys Scouts of America
President of the Board, Christopher Homes, Inc.
President of the Board, Associated Catholic Charities
President, Social Apostolate Program
Board Member, United Way, Inc.
Former Chairman of the Board, The Catholic University of

AREAS OF PROFESSIONAL INTEREST:

Development of 50,000 watts Educational Television Station - WLAE-TV, Channel 32 in New Orleans

Founder of Catholic newspaper, Archdiocese of Washington (D.C.)

Programs for development of improved married life
Write weekly column for "Clarion Herald," newspaper of the Archdiocese of New Orleans



NAME: Dr. Thomas H. Henriksen

POSITION:
Associate Director and Senior Fellow

ORGANIZATION:
Hoover Institution
Stanford University
Stanford, California 94305-6084

BUSINESS TELEPHONE: 415-723-4255

EDUCATION:
BA, History, Virginia Military Institute, 1962
MA, History/Political Science, Michigan State University, 1966
PhD, History, Michigan State University, 1969

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Associate Editor, Yearbook on Communist Affairs

AREAS OF PROFESSIONAL INTEREST:

Contemporary history and international relations, military history, guerilla warfare and comparative studies of Marxists revolutions. More recently, strategic defense initiative and ballistic missile defense.

ADDITIONAL DATA:
Director of the National Fellows Program at Hoover Institution.



NAME: Mr. Marvin R. Holter

POSITION: Senior Vice President

ORGANIZATION:
Environment Research Institute of Michigan (ERIM)
P. O. Box 8618
Ann Arbor, MI 48107

BUSINESS TELEPHONE: 313-994-1200, Ext 3220

EDUCATION:
BS, Physics, University of Michigan, 1949
MS, Mathematics, University of Michigan, 1951
MS, Physics, University of Michigan, 1958

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Member many committees 1960 - present.

Project MICHIGAN Technical Advisory Team in South Viet Nam;

National Academy of Sciences; Working Group on Electro Optical

Technology of NAS Committee on Undersea Warfare; Joint US-USSR

Working Group on Sensing of the Environment; Applications

Committee of the NASA Space Program Advisory Council; City of

Detroit Task Force on Cooperative Generic Technology 1981
1982; University of Michigan, Institute of Science &

Technology Executive Committee; Water Resources and Marine

Science Program Committee - University of Michigan; US Dept of

Agriculture Research Mgt Committee to formulate a Remote

Sensing Program; AIAA Thermophysics Committee;

AREAS OF PROFESSIONAL INTEREST:
Multi-disciplinary Research; Earth Observations Programs;
Remote Sensing Courses; Orbital Multispectral Reconnaissance;
Infrared Technology and Remote Sensing; Laser Communications
and Tracking in Space; Limited Warfare Studies; Infrared
Airborne Target Detection and Discrimination; Optical Communications Systems; Design of Defense Systems Against Ballistic
Missiles; Radar Cross-section Measurements.

ADDITIONAL DATA:
Numerous publications to include two books, "Fundamentals of Infrared Technology" and "Remote Sensing -With Special Reference to Agriculture and Forestry"

NAME: Dr. Dennis R. Horn

POSITION:
Assistant Professor
Department of Civil Engineering

ORGANIZATION: University of Idaho Moscow, Idaho 83843

BUSINESS TELEPHONE:

EDUCATION:
BS, Geological Engineering, Princeton University, 1964
PhD, Environmental Engineering, The Johns Hopkins University,
1974

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Member, American Society of Civil Engineers
Member, Yellowstone-Bighorn Research Association

AREAS OF PROFESSIONAL INTEREST:
Hydrology
Computer Modeling (hydrologic, hydraulic, chemical fate)
Environmental Assessments
Floodplain Management

ADDITIONAL DATA: National Merit Scholar (1960-1964)





NAME: Mr. William M. Hubbard

POSITION: Consultant

ADDRESS: 613 Eastlake Drive Columbia, Missouri 65203

TELEPHONE: 314-445-1237

EDUCATION:

BS, Chemistry, University of Missouri, 1949

MA, Physical Chemistry, University of Missouri, 1951

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
National Research Council Panel on Tactical Explosives

AREAS OF PROFESSIONAL INTEREST: Mines and Sensors Software and Computers Materials

PUBLICATIONS:
Seventeen papers and 7 patents on Magnetic Materials to include:
Nickel-Iron Magnetic Strip by Metal Poweder Rolling, NavOrd 6257, Jan 59; A Simple Gonicstat for the Norelco Diffractometer, Plenum Press, NY; Magnetic Moments of Alloys of Gadolinium with Some of the Transition Elements, Jour App Phys (1960); Intermetallic Compounds of Iron and Cobalt with Gadolinium, Jour Phys Soc (1961); Low Temperature Thermometers from Silicon-Carbide Heating Elements, Rev Scient Inst (1962); Ferromagnetism in the System Dysprosium-Hydrogen, Intn'l Conf Sep 64; Magnetic Field Reduction in an Expandalbe Superconducting Enclosure, Rev Scint Inst, 65

PATENTS:
Permanent Magnets & Process for Making Same; Magnetic Flake
Core & Method of Preparation; Magnetic Power Core; Sintered
High Permeability Alloy; Magnetic Recording Head (2); and
Magnetic Tape Recording Heads.

NAME: Dr. David A. Johnson

POSITION: Senior Vice President, Engineering Research Group

ORGANIZATION:
SRI International
333 Ravenswood Avenue
Menlo Park, California 94025

BUSINESS TELEPHONE: 415-859-2419

EDUCATION:

BS, Business Administration, UCLA, 1949

MS, Electrical Engineering, Stanford University, 1958

PhD, Electrical Engineering, Stanford University, 1961

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
American Association for Advancement of Science
Sigma XI
Bendix Fellow

AREAS OF PROFESSIONAL INTEREST:
Management of Research and Development
NBC Defense
Over-the-Horizon Radar





NAME: Dr. Edward R. Jones

POSITION:
Private Consultant

ORGANIZATION:
9881 Wild Deer Road
St. Louis, Missouri 63124

BUSINESS TELEPHONE: 314-822-8298

EDUCATION:
AB, Biology and Psychology, Washington University,
St. Louis, MO, 1947
AM, Psychology, Washington University, St. Louis, MO, 1948
PhD, Psychology, Washington University, St. Louis, MO, 1954

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Advisory Council, Institute of Nuclear Power Operations,
1981-Present
National Nuclear Accrediting Board (U.S. Nuclear Utility
Training), Institute of Nuclear Power Operations, 1985Present
Chair, National Academy of Science/National Research Council
Working Group on Simulation, 1981-Present
Fellow, American Psychological Association
Fellow, Human Factors Society
Associate Fellow, American Institute of Aeronautics &
Astronautics
Member, Sigma Xi

AREAS OF PROFESSIONAL INTEREST: Human Factors Engineering Training and Simulation Safety and Design Operation of Military Systems. NAME: Dr. John W. Knapp

POSITION: Dean of the Faculty

ORGANIZATION: Virginia Military Institute Lexington, Virginia 24450

BUSINESS TELEPHONE:

EDUCATION:

BS, Civil Engineering, Virginia Military Institute, 1954

MS, Environmental Engineering, The Johns Hopkins University, 1962

PhD, Environmental Engineering, The Johns Hopkins University, 1965

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
American Academy of Environmental Engineers
American Society of Civil Engineers
American Society for Engineering Education
National Society of Professional Engineers
Society of American Military Engineers

AREAS OF PROFESSIONAL INTEREST:
Hydrology, hydraulics, and river development
Water supply and waste disposal, including military applications
Research and development administration

ADDITIONAL DATA:
Brigadier General, United States Army Reserve





Dr. Paul W. Kruse, Jr.

POSITION:

Chief Research Fellow

ORGANIZATION:

Honeywell, Inc.

Honeywell Physical Sciences Center

10701 Lyndale Avenue South

Bloomington, MN 55420

## **BUSINESS TELEPHONE:**

612-887-4441

EDUCATION:

BS, Physics, University of Notre Dame, 1951

MS, Physics, University of Notre Dame, 1952

PhD, Physics, University of Notre Dame, 1954

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Army Scientific Advisory Panel, 1965-1977

Army Science Board, 1978-1982; 1985 to present

Ground Warfare Panel, President's Science Advisory, Committee,

1968-1972

US/USSR Technology Balance Assessment Study, Naval Research

Advisory Committee, 1979-1980

Committee on Chemical and Biological Sensor Technology,

National Research Council, 1983-1984

Fellow, American Physical Society

Fellow, Optical Society of America

Senior Member, Institute of Electrical and Electronics

Engineers

AREAS OF PROFESSIONAL INTEREST:

Solid State Physics, Nonlinear Optics, Electro-Optics

Infrared Technology, Millimeter Wave Technology, Technology Assessment

ADDITIONAL DATA: Recipient, The Outstanding Civilian Service Award and Medal,

Department of the Army, 1983 Recipient, Alan Gordon Memorial Award, SPIE - The Optical

Engineering Society, 1981

Recipient, H.W. Sweatt Award for Outstanding Scientific

Accomplishment, Honeywell, 1966

Mr. Robert B. Kurtz

POSITION:

Private Consultant

ORGANIZATION:

542 Merwins Lane

Fairfield, Connecticut 06430-1920

BUSINESS TELEPHONE:

203-259-2676

EDUCATION:

BS, Business Administration, Lehigh University, 1940 BS, Electrical Engineering, Lehigh University, 1940

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Chairman, Manufacturing Studies Board



NAME: Dr. Walter B. LaBerge

POSITION: Vice President Corporate Development

ORGANIZATION: Lockheed Corporation 4500 Park Granada Boulevard Calabasas, California 91399

BUSINESS TELEPHONE: 818-712-2505

EDUCATION:

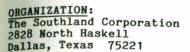
BS, Naval Science, University of Notre Dame, 1944
BS, Physics, University of Notre Dame, 1947
PhD, Physics, University of Notre Dame, 1951

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Board on Army Science and Technology Participation on or led various Defense Science Boards Numerous Ad Hoc Navy Boards

AREAS OF PROFESSIONAL INTEREST:
Air Defense Systems
Space and Aircraft Systems
Educational Technology
Interservice Cooperation

NAME: Ms. Frances J. Laidlaw

<u>POSITION:</u> Senior Financial Analyst Acquisition & Business Analysis



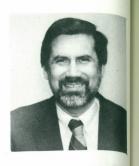
BUSINESS TELEPHONE:

EDUCATION:
BA, Sociology, University of Illinois, 1978
MBA, Marketing, Finance, Accounting, Columbia, 1980

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Center for Non-Profit Management, Volunteer Consultant; The Dallas-Fort Worth Chapter of the Planning Forum, Vice-President of Communications; The North Texas Chapter of Columbia Business School Alumni, Founder and President; Intercollegiate Club, Member; March of Dimes, Fund Raiser; International Opera Studio of Dallas, Board Member; Dallas Symphony Orchestra, Fund Raiser; Dallas Museum of Art Night Group, Charter Member; 500, Inc., Provisional Member; Daughters of the American Revolution, Member; Kappa Kappa Gamma Alum Group, Member; St. Michael's and All Angels Church Group, Member.

AREAS OF PROFESSIONAL INTEREST: Strategic/Market Planning Financial Analysis

ADDITIONAL DATA:
Southern Methodist University instructor in strategic planning for Not for Profits.
The Laidlaw Company, owner/consultant in strategic/market planning



NAME: Mr. Richard B. Lewis, II

POSITION: Technical Director

ORGANIZATION: ITT Defense Technology Corporation 1600 M Street, N.W. Washington, D.C. 20036

BUSINESS TELEPHONE: 202-775-7394

EDUCATION:
BSAE (Honors) Princeton University
MSE Rensselaer Polytechnic Institute

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Member AIA Technical Management Committee
Director Vertical Flight Foundation
Fellow American Helicopter Society
Associate Fellow AIAA
Senior Member IEEE

AREAS OF PROFESSIONAL INTEREST:

Defense Electronic Systems and Subsystems: Communications,
Avionics, Radars, Command & Control, Gallium Arsenide

NAME: Mr. Andrew Anthony Lieber

POSITION:
Department Manager
Survivability Systems Department, 5220

ORGANIZATION:
Sandia National Laboratories
Post Office Box 5800
Albuquerque, New Mexico 87185

BUSINESS TELEPHONE: 505-844-3458

BS, Electrical Engineering, Speed Scientific School, University of Louisville, 1952

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Theater Nuclear Weapons
R&D Panel, Defense Science Board
IEEE
Number joint committees (AEC/DOE and military service) in
relation to new weapon systems
Advisor, U.S. Delegation to NATO Senior Level Group

AREAS OF PROFESSIONAL INTEREST:
All areas of National Security and Defense
Tactical Warfare Studies
Terrorism; Optics: Firearms

ADDITIONAL DATA:
Publications (classified)
Professional Experience: Test Engineer, Aircraft Jet Engines,
General Electric Company
Surveyor (Gas Fields), Louisville Gas and Electric Company
Staff Member (Technical) to Department Manager, Sandia National
Laboratories: Nuclear weapons fuzing/electrical systems design and
test, advanced studies and planning, intelligence analysis, weapons
safety, security and survivability.
Director, DARPA-Europe: Represented Director DARPA to CINCEUR in
all matters of interest in USEUCOM area.
Consultant Position: Assistant to Secretary of Defense (Atomic
Energy)
TNF S3 Advisory Team



NAME: Mr. Milton L. Lohr

POSITION:
Senior Vice President

ORGANIZATION: TITAN Systems, Inc. 9191 Towne Centre Drive, Suite 500 San Diego, California 92122-1229

BUSINESS TELEPHONE: 619-453-9500

EDUCATION:
BE, Electronics, University of Southern California, 1949
MSEE, Electronics, University of California at Los Angeles, 1964

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Member, Military Aircraft Panel, President's Science Advisory
Committee; Army Scientific Advisory Panel; Member, Defense Science
Board Task Force: Technology for JTRDF Lessons Learned - 1973 Mid
East War; Executive Agent - NATO Guided Missile Group; Director,
Air Armament Division, American Defense Preparedness Association;
served on various OSD, Air Force panels on non-nuclear warfare,
countermeasures, tactical weapons; served as Executive Member and
National Leader concerned with international cooperation in
tactical missiles; Board of Visitors, University of CaliforniaDavis Engineering School; Member, Board of Directors, high
technology corporations.

AREAS OF PROFESSIONAL INTEREST:
Aircraft; Electronic Warfare; Tactical Weapons; Air Defense; Air Combat; Strike Warfare; Operations Evaluation; R&D Management

ADDITIONAL DATA:

Awarded Secretary of Defense Meritorious Civilian Service Medal for outstanding contributions in improving the tactical missile capability of the Armed Forces. Former Deputy Assistant Director, Office of Director, Defense Research and Engineering, OSD (missions such as Air Defense, Air and Strike Warfare, and Land Combat). Program Chairman, Session Chairman and Speaker - various meetings on Tactical Warfare.

NAME: LTG Robert J. Lunn (USA Ret.)

POSITION: Deputy Program Manager

ORGANIZATION:
Science Applications International Corporation
1710 Goodridge Drive
McLean, Virginia 22102 - 3799

BUSINESS TELEPHONE:

EDUCATION:
BS, Military Science, United States Military Academy, 1950
BS, Aerospace, University of Arizona, 1960
MS, Aerospace, University of Arizona, 1961

AREAS OF PROFESSIONAL INTEREST:





NAME: Dr. Michael Martin Mann

POSITION:

ORGANIZATION:
Mann, Kavanaugh, Chernove and Associates
4248 Via Alondra
Palos Verdes Estates, CA 90274

BUSINESS TELEPHONE: 213-375-7149

EDUCATION:

BS, EE, California Institute of Technology, 1960
MS, EE, California Institute of Technology, 1961
MS, EE, California Institute of Southern California, 1969
PhD, EE and Phys., University of Southern California, 1969
Executive Program, University of California at Los Angeles,
Graduate School of Management, 1982
MBA, University of California at Los Angeles, Graduate
School of Management, 1984

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Board of Directors, Center for Innovation and Entrepreneurship;
Engineering Advisory Board, California State University at Long
Beach; School of Engineering; Dean's Council, U.C.L.A Graduate
School of Management; Scientific Advisory Committee,
International Conference on Gas Flow and Chemical Lasers;
Southern California Technology Executives Network; Senior
Member, IEEE; ADPA.

AREAS OF PROFESSIONAL INTEREST:
Lasers and electro-optical systems; directed energy weapons;
smart weapons; battle management and fire control; program
management; manufacturing technology.

NAME: Ms. Naomi J. McAfee

POSITION: Manager, Engineering Operations

ORGANIZATION:
Westinghouse Electric Corporation
Defense & Electronics Center
Box 1693, M.S. 246
Baltimore, Maryland 21203-1693

BUSINESS TELEPHONE:

<u>EDUCATION</u>:
BS, Physics, Western Kentucky State College, 1956

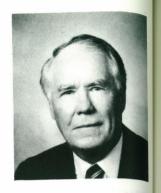
MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Senior Member, American Society for Quality Control; Fellow and
Past President, Society of Women Engineers; Past President,
Reliability Society and Senior Member of IEEE; Board of
Visitors, University of California, Davis; Board of
Directors, United Way of Central Maryland;

AREAS OF PROFESSIONAL INTEREST:
Reliability and maintainability engineering, Integrated
Diagnostics, Quality Control, Logistics

ADDITIONAL DATA:
Publications: Coeditor, "IRE-ASQC Reliability Training"
Text/Coauthor, "Systems Reliability Improvement with
Microelectronics" Mikroelectronic; Author, "Report on the
Status of Engineers and Scientists," First International
Conference of Women Engineers and Scientists; Coauthor,
"Microelectronics Reliability From a System Manufacturer's
Point of View," Microelectronic; Eighteen additional articles
on Reliability and Quality Control.

Honors Received: ASQC, Electronics Division Annual Award;
Society of Women Engineers, Elected Fellow; ASQC, Edwards
Medal; Appointed to Maryland Advisory Commission on Civil
Rights; Appointed to the President's Committee on the
National Medal of Science.





NAME: Mr. Robert L. McDaniel

POSITION: Vice President/Chief Scientist

ORGANIZATION:
Science and Technology Associates
Suite 1920
1700 North Moore Street
Arlington, Virginia 22209-1945

BUSINESS TELEPHONE: 703-522-5123

EDUCATION:
BS, Military Science, United States Military Academy, 1945
MS, Aeronautical Engineering, Georgia Institute of Technology,
1961
MS, International Affairs, George Washington University, 1967

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Army Science Board, 1981-85
American Helicopter Society
Research Society of America
Sigma Xi, The Scientific Research Society
American Institute of Aeronautics and Astronautics
American Association for Advancement of Science

AREAS OF PROFESSIONAL INTEREST: Helicopter Technology and Employment V/STOL and STOL Technology Tactical Missile Engineering NAME: Dr. Daniel F. McDonald

POSITION: Corporate Vice President Member, Board of Directors

ORGANIZATION:
BDM International, Inc.
7915 Jones Branch Drive
McLean, Virginia 22102-3396

BUSINESS TELEPHONE: 703-848-5106

EDUCATION:

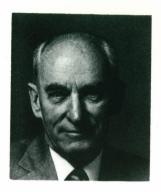
BS, Physics, Fordham University, 1950

MA, Physics, Harvard University, 1952

PhD, Physics, Fordham University, 1959

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Army Science Board, Chairman, Summer Study on Chemical Warfare and Biological Defense; Associate Member, Defense Science Board (1966-1977); Member, Defense Advanced Research Projects Agency Long Range Planning Panel; Defense Science Board Summer Studies on Target Engagement (1973) and Strategic Bomber Penetration (1971); Member, American Institute of Physics; Operations Research Society of America; American Institute of Aeronautics and Astronautics; and Institute of Electrical and Electronic Engineers

AREAS OF PROFESSIONAL INTEREST:
R&D Management; Military Operations Research; Modeling and Simulation; Systems Analysis; Field Testing and Field Experimentation; Energy



NAME: Mr. James S. McLeod

POSITION:
Vice President - Engineering
International Division

ORGANIZATION:
Contel Federal Systems
International Division
8603 Westwood Center Drive
Suite 300
Vienna, VA 22180

BUSINESS TELEPHONE: 703-749-0049

EDUCATION:
BS (EE), Washington State University
PE (EE), District of Columbia

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Director, Electronic Industries Association, Information &
Telecommunication Technologies Group; Fellow, Radio Club of
America; Senior Member, Institute of Electrical & Electronic
Engineers; Member, Armed Forces, Communications & Electronics
Association, Quarter Century Wireless Association, Independent
Telephone Pioneer Association

AREAS OF PROFESSIONAL INTEREST:
Information & Telecommunications Systems Planning, Design and Implementation.

ADDITIONAL DATA:
Broad experience in design and implementation of military and commercial telecommunications and command control systems in USA, Asia, Europe, South America and Africa.

NAME: Honorable Edward A. Miller

POSITION: Consultant

ORGANIZATION:
P. O. Box 786
Pinehurst, NC 28374

BUSINESS TELEPHONE:

EDUCATION:
BS, Engineering, University of Maryland, 1950
LLB, Salmon P. Chase College of Law, 1958
JD, Salmon P. Chase College of Law, 1964

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
AUSA Advisory Board of Directors, Landpower Committee
ADPA Board of Directors
Army Science Board
Chairman Emeritus, ADPA Concepts & Requirements
Tau Beta Pi, National Engineering Honor Society
Past President, Yankee Chapter, ADPA
Lifetime Member, Navy League of the United States
Associate Fellow, AIAA

AREAS OF PROFESSIONAL INTEREST:
Technical Management

ADDITIONAL DATA:
Former Assistant Secretary of the Army (Research, Development and Acquisition)
Registered Professional Engineer (Ohio)
Engineer Eminent, Tau Beta Pi
Army Distinguished Civilian Service Decoration



NAME: Mr. John R. Moore

POSITION: Vice President and General Manager Electro-Mechanical Division Electronics Systems Group

ORGANIZATION: Northrop Corporation 500 East Orangethorpe Avenue Anaheim, California 92801

BUSINESS TELEPHONE: 714-441-4700

EDUCATION: BSME, Washington University, St. Louis, MO, 1937 General Electric Company, Advanced Courses in Engineering (equivalent to PhD except for languages and thesis), 1940 Certificate from the Graduate School of Business Administration (Executive Program), UCLA, 1957

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: IEEE (Fellow) AIAA (Fellow) NAE Air Force Association Navy League

AREAS OF PROFESSIONAL INTEREST:

Complicated multi-technology systems, information systems, weapon systems, military operational considerations, automatic controls, energy conversion systems, guidance systems, navigation systems, sensors and sensor systems, weapons fire control, medical imaging systems, computer applications, vibration isolation stabilized platforms, large scale integrated circuits, remotely operated vehicles, venture analysis, management systems, fiscal management, macroeconomics, applied mathematics, fluid mechanics, structural mechanics, thermodynamics, cost estimating program management.

NAME: Dr. L. Warren Morrison

POSITION: Assistant Vice President, Commercial Systems

ORGANIZATION: The BDM Corporation ATTN: WB 4C23 7915 Jones Branch Drive McLean, Virginia 22102-3396

BUSINESS TELEPHONE: 703-848-7113

EDUCATION: BEE, Electronic Engineering, City College of New York, 1951 Medical Instrumentation, Brooklyn Polytechnic Institute, 1952 PhD, Electrical Engineering, University of Southern California, 1968

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Eta Kappa Nu Sigma Xi New York Academy of Sciences

AREAS OF PROFESSIONAL INTEREST: Manufacturing Automation Application of Micro-computers to Automation Computer Simulation Information Retrieval Data Base Management Systems Artificial Intelligence Expert Systems





Dr. Jerre D. Noe

POSITION:

Professor, Computer Science Department

ORGANIZATION:

University of Washington Seattle, Washington 98155

BUSINESS TELEPHONE:

206-543-9263

EDUCATION:

BS, EE, Stanford University, 1948 PhD, EE, University of California, Berkeley, 1943

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

ACM IEEE Sigma Xi Eta Kappa Nu Tau Beta Pi

AREAS OF PROFESSIONAL INTEREST:

Computers, Computer Networks, Operating Systems, Simulation

ADDITIONAL DATA:

WWII experience in Electronic Countermeasures, with Radio Research Lab, Harvard, and American British Lab, Malvern, England.

NAME: Mr. Lawrence H. O'Neill

Chairman of the Board and President

ORGANIZATION:

Riverside Research Institute 330 West Forty Second Street New York, New York 10036

BUSINESS TELEPHONE:

212-502-1600

EDUCATION:

BS, Electrical Engineering, Columbia University, 1943 MS, Electrical Engineering, Columbia University, 1946

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

1978-1981: Department of the Navy, Office of the Secretary, Naval

Research Advisory Committee (Chairman)

1967-1977: United States Army Scientific Advisory Panel

(Chairman, 1970-1976)

Ballistic Missile Defense Technology Advisory Panel 1977:

(Chairman)

West Point Study Group

1970-1976: Defense Science Board, ODDR&E, Department of Defense

1978-1981: Defense Science Board (exofficio)

1973-1974: Army Materiel Acquisition Review Committee (Associate

Chairman, Science and Technology Team)

1965-1974: Advisory Group to TECOM, US Army Test & Evaluation Command,

Aberdeen Proving Ground, Maryland

1970-1972: Science Advisory Committee, Defense Special Projects

Group, ODDR&E

1965-1973: Science and Technology Advisory Council to the Mayor of the

City of New York

1965-1967: Ballistic Missile Defense Advisory Committee, Advanced

Research Projects Agency, ODDR&E

AREAS OF PROFESSIONAL INTEREST:

Radar; Electro-Optics; Ballistic Missile Defense Systems; Medical Engineering

ADDITIONAL DATA:

Publications:

"Thoughts on the Active Defense of Fixed Missile Bases under ICBM Attack", Linvill, W.K. & O'Neill. L.H.

"Missile Defense and the American Dollar"

"The Relationship of the Armed Forces and American Universities" "Remarks Presented in Dialogue on the Vietnam War"

"Defense in Depth"

"Unconventional Defense Concepts"

"Impressions of AMARC"

"Historical Analysis of Ballistic Missile Defense"



NAME: Mr. James A. Parker

POSITION: President

ORGANIZATION:
The Lincoln Institute for
Research & Education, Inc.
1001 Connecticut Ave., NW 1135
Washington, DC 20036-4403

BUSINESS TELEPHONE: 202-223-5112

EDUCATION:
Attended Philadelphia Public Schools
Graduate, Franklin School of Science and Arts (Med. Tech.)

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: 1986 - Mbr, Bd of Trustees, Gallaudet College 1986 - Ch, Mid-Winter Dinner Comm, Gr Wash Bd of Trade 1986 - Mbr, Bd of Dir, Police Boys' & Girls' Clubs Wash, DC 1986 - Mbr, Bd of Dir, Easter Seals Society, Wash 1986 - "Man of the Year" Davis Mem Goodwill Industries 1986 - Panel Mbr, Junior League of Wash, DC Women in Ldrshp Prog 1984- Mbr, Bd of Dir, USO, Wash, D.C. 1984-85 Mbr Bd of Dir, Christmas in April 1984- Mbr, Assoc of the U. S. Army 1983-84 Pres, Kiwanis Club of Wash, DC 1983-85 Ch, Comm of Mgt/Anthony Bowen Br, YMCA, Wash DC 1983- Mbr, Corp Bd, Children's Hosp, Wash, DC Program 1982-85 Mbr, White House/Priv Sector Drug Abuse Awareness Prog 1982-85 Mbr, U.S. Nat Commission for UNESCO 1982- Mbr, Bd of Gov, Council for Nat Policy 1982- Mbr, White House Fellowships Regional Selection Panel 1981- Mbr, The University Club, Wash, DC 1980-1981- Team Ldr, E.E.O.C. Reagan Transition Comm 1985- Pres, Columbia Lighthouse for Blind, Wash, DC 1980- Mbr, Pres Reagan's Crime Victims Task Force 1979- Advisor/Cons on African Affairs 1978- Pres, The Lincoln Institute for Research and Edu Editor and Publisher, Lincoln Review 1978-85- Dir, Capital City Fed Savings & Loan Assoc, Wash, DC 1977- Mbr, Salvation Army Advisory Board (Chairman, 1982-85) 1972-74: Two books published by Arlington House Publishers: Angela Davis: The Making of a Revolutionary and What the Negro Can Do About Crime.

AREAS OF PROFESSIONAL INTEREST:
Public Policy
Geopolitics
National Security





NAME: Dr. Irene C. Peden

professor of Electrical Engineering
Associate Chair, Department of Electrical Engineering

ORGANIZATION: University of Washington 407 Electrical Engineering Building, FT-10 Seattle, Washington, 98195-0001

BUSINESS TELEPHONE:

EDUCATION:
BS, Electrical Engineering, University of Colorado, 1947
MS, Electrical Engineering, Stanford University, 1958
phD, Electrical Engineering, Stanford University, 1962

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Fellow, Institute of Electrical and Electronics Engineers
Board of Directors, Accreditation Board for Engineering and
Technology
Board of Visitors, College of Engineering, University of
California at Davis
Engineering Development Council, University of Colorado, Boulder
Board of Directors, BDM International Corporation
Editorial Advisory Board Science '85
Commission B on Field and Waves of the International Union of
Radio Science
American Geophysical Union
Tau Beta Pi
Sigma Xi
Vice Chair, Army Science Board, October 1983-March 1986
Chair, Army Science Board, March 1986-March 1987

AREAS OF PROFESSIONAL INTEREST:
Subsurface Remote Sensing
Applications of Electromagnetics to Geophysical and Atmospheric Problems
Antennas and Wave Propagation



NAME:

Dr. Ernest N. Petrick

POSITION: Chief Scientist

ORGANIZATION:
General Dynamics
Land Systems Division
38500 Mound Road
Sterling Heights, MI 48310-3268

BUSINESS TELEPHONE: 313-825-5544

EDUCATION:

MS, Mechanical Engineering, Carnegie-Mellon University, 1943 MS, Mechanical Engineering, Purdue University, 1946 PhD, Mechanical Engineering, Purdue Univerity, 1955

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Society of Automotive Engineers; former member National Board of Directors; member Research Committee.

Member Sigma Xi Research Society; Pi Ta Sigma National Mechanical Engineering Society; ADPA (American Defense Preparedness Association); AUSA (Association of the United States Army). Engineering Advisory Board, Oakland University. Engineering Advisory Council, University of Detroit.

Adjunct Professor of Engineering at Wayne State University and the University of Michigan.

AREAS OF PROFESSIONAL INTEREST:
Armored Combat Vehicles
Trucks and Tactical Vehicles
Ground Mobility
Engines and Transmissions
Vehicle System Design Optimization
Automotive and Combat Vehicle Research and Development.

ADDITIONAL DATA:
Former Technical Director, U.S. Army Tank-Automotive
Command

NAME: Dr. Percy A. Pierre

POSITION: President

ORGANIZATION:
Prairie View A&M University
P.O. Box 188
Prairie View, Texas 77446-2152

BUSINESS TELEPHONE:

EDUCATION:
BS, Electrical Engineering, University of Notre Dame, 1961
MS, Electrical Engineering, University of Notre Dame, 1963
PhD, Electrical Engineering, Johns Hopkins University, 1967
Post-doctoral studies, Electrical Communications Theory

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Board of Trustees, University of Notre Dame
ETS Visitors Committee
DOD University Forum Committee
PIMIB Executive Committee
Tau Beta Pi Engineering Honor Society
Army Science Board
Strategic Defense Initiative Advisory Committee
MIT Lincoln Laboratory Advisory Board
Board of Visitors, UCD College of Engineering
DOD Advisory Board
Board of Visitors, University of California at Davis
Hitachi Foundation

AREAS OF PROFESSIONAL INTEREST: Engineering Education; Research





NAME: Mr. Keith R. Rathjen

POSITION:
Vice President
Software Technologies & Processes

ORGANIZATION:
Rockwell International Corporation
3370 Miraloma Avenue (AF05)
Post Office Box 3105
Anaheim, California 92803-3105

BUSINESS TELEPHONE: 714-762-1186

EDUCATION:
BSEE, Electrical Engineering, University of Iowa, 1956
MS, Electrical Engineering, University of Iowa, 1957

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Army Science Board
National Security Telecommunications Advisory Committee—
Member of the Industry Executive Subcommittee
American Defense Preparedness Association
Electronics Industry Association Technical Council (Government Division)
The University of Texas at Austin College of Engineering
Visiting Committee (Chairman - 1985)
Institute of Electrical and Electronic Engineers
Tau Beta Phi
Eta Kappa Nu
Sigma Xi

AREAS OF PROFESSIONAL INTEREST:
Communications
Networks and Switching
C3I



NAME: Mr. William E. Regan, Jr.

POSITION: President

ORGANIZATION:
DATA Networks, Inc.
288 Greenspring Station
Brooklandville, Maryland 21022

BUSINESS TELEPHONE: 301-823-3000

EDUCATION:
BS, Electronic Engineering, University of Delaware, 1964
Graduate Study, Computer Design, University of Maryland, 1966
MBA, Loyola College, 1972
Graduate Study, Policy Sciences-Information Management,
University of Maryland, Baltimore County, Present

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Army Science Board Greater Baltimore Committee

AREAS OF PROFESSIONAL INTEREST:
Information Management, Computer Network Design and
Implementation, Computerized Training and Occupational
Information, Application of Computers to Human Resources
Planning



NAME: Dr. Harry L. Reynolds

POSITION:
Director, Advanced Concepts,
Strategic Defense Center

ORGANIZATION:
Rockwell International Corporation
2230 East Imperial Highway
El Segundo, California 90245-3584

BUSINESS TELEPHONE: 213-647-5433

EDUCATION:
BS, Physics, Rensselaer Polytechnic Institute, 1947
PhD, Physics, University of Rochester, New York, 1951

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Fellow, American Physical Society

AREAS OF PROFESSIONAL INTEREST:
Strategic Defense Systems; Space Systems; Military Systems;
Nonnuclear Weapons; Nuclear Physics

NAME: Dr. Leon Riebman

<u>POSITION:</u>
<u>President</u> and Chief Executive Officer

ORGANIZATION:
AEL Industries, Inc.
305 Richardson Road
Lansdale, Pennsylvania 19446-1429

BUSINESS TELEPHONE: 215-822-2929

EDUCATION:
BS, Electronics Engineering, University of Pennsylvania, 1943
PhD, Electronics Engineering, University of Pennsylvania, 1951

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Chairman of Board of Directors, AEL Industries, Inc.
Member and Board of Directors of:
AEL Industries, Inc.
Bank of Old York Road
AMPAL
Tadiran, Ltd.
American Technion Society
Member of the National Board of Directors of American-Israel Chamber of Commerce and Industry, Inc.
Director of Committee for Economic Growth of Israel
Fellow of IEEE (Institute for Electrical and Electronics Engineers)

AREAS OF PROFESSIONAL INTEREST: Electronic Warfare Antennas Microwaves





Dr. Elizabeth J. Rock

POSITION:

Professor of Chemistry and Director of Science Center

ORGANIZATION:

Department of Chemistry Wellesley College Wellesley, Massachusetts 02181-8284

**BUSINESS TELEPHONE:** 617-235-0320 x3045

EDUCATION:

BS, Chemistry, College Mt. St. Vincent, 1946 MA, Chemistry, Smith College, 1948 PhD, Physical Chemistry, Pennsylvania State University, 1951

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

American Chemical Society, 1984-

Councillor, Northeastern Section

American Chemical Society, 1981-1984:

Section Committee for

Norris Teaching Award, Chairman 1975-1979:

Wellesley College Representative

to the Center for Materials

Research in Archaeology and

Ethnology (consortium of nine

institutions)

1975-1979: Wellesley College/Massachusetts

Institute of Technology

Liaison Committee

Faculty Representative Committee on 1970-1973:

Planning and Resources

Board of Trustees (Wellesley

College)

American Chemical Society Section 1964-1967:

Committee on Chemical Education

AREAS OF PROFESSIONAL INTEREST:

Physical Chemistry, in particular thermodynamics, electrochemistry and most recently laser spectroscopy Science Laboratory planning



NAME: LTG Marion C. Ross (USA Ret.)

POSITION: Executive Vice-President

ORGANIZATION: Sidwell-Ross and Associates, Inc. P. O. Box 88531 Atlanta, Georgia 30338

**BUSINESS TELEPHONE:** 404-391-9861

EDUCATION: BS, Engineering, United States Military Academy, 1949 MS, Political Science, George Washington University, 1970

AREAS OF PROFESSIONAL INTEREST: Leadership Management Personnel R and D



NAME: Dr. Joseph E. Rowe

POSITION:
Vice President,
Chief Scientist

ORGANIZATION:
PPG Industries, Inc.
#1 PPG Plaza
Pittsburgh, PA 15272

BUSINESS TELEPHONE: 412-434-2921

EDUCATION:

BSE, Mathematics, University of Michigan, 1951
BSE, Electrical Engineering, University of Michigan, 1951
MSE, Electrical Engineering, University of Michigan, 1952
PhD, Electrical Engineering, University of Michigan, 1955

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Member, National Science Foundation Advisory Council - 1977Member, IEEE
Illinois Institute of Technology Board of Trustees
University of Illinois Board of Overseers and Industrial Advisory
Board
National Academy of Engineering

AREAS OF PROFESSIONAL INTEREST: Integrated Circuits; Computers; Communications and Instrumentation

NAME: Dr. Stanley J. Sarnoff

President and Chairman of the Board and Chief Executive Officer

ORGANIZATION:
Survival Technology, Inc.
8101 Glenbrook Road
Bethesda, Maryland 20814-2799

BUSINESS TELEPHONE:

EDUCATION:

AB, Princeton University, 1938

MD, The Johns Hopkins University Medical School, 1942

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
American Society of Cardiology
American Federation of Clinical Research
American Society of Clinical Investigation
American Heart Association
American Physiological Society
American Medical Association
Association of Military Surgeons of the USA
Swiss Physiological Society
Sigma Xi, The Scientific Research Society
Fellow, New York Academy of Sciences
Royal Society of Medicine (London)
Defense Policy Advisory Committee on Trade (DPACT)
National Scientific Industrial Association

AREAS OF PROFESSIONAL INTEREST:
Respiratory and Cardiovascular Physiology
Chemical Warfare Defense

ADDITIONAL DATA:
Over two hundred publications
Numerous honors and special scientific recognitions



Mr. William F. Scanlin, Jr.

Principal Deputy Associate Director Defense Systems

**ORGANIZATION:** 

Lawrence Livermore National Laboratory Post Office Box 808 Livermore, California 94550-0622

BUSINESS TELEPHONE: 415-423-6810

EDUCATION:

BS, Mechanical Engineering, Pennsylvania State University, 1954 BS, Mechanical Engineering, Stevens Institute of Technology, 1955

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Army Science Board

Professional Nuclear Engineer (State of California) Chairman, Technical Evaluation Panel (Classification Committee for Department of Energy) Safety, Security and Control Committee (Department of Energy

Committee which reviews safety and security of nuclear weapons)

AREAS OF PROFESSIONAL INTEREST:

Weapon design with emphasis on advanced concepts and the physics of nuclear weapons

Senator Harrison Hagan Schmitt

POSITION: Consultant in science, technology and public policy

ORGANIZATION: P.O. Box 14338 Albuquerque, New Mexico 87191-4338

BUSINESS TELEPHONE: 505-823-2616

EDUCATION: BS, Science, Caltech, 1957 PhD, Geology, Harvard, 1964 Pilot's wings, USAF, 1965 Pilot's wings (helicopter), USN, 1967

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Sunwest Financial Services, Albuquerque, New Mexico Board of Lasertechnics, Inc. of Albuquerque, NM Lovelace Medical Sciences and Technologies of ABQ, NM Murphy Energy Corporation of Roswell, NM Lovelace Medical Foundation of ABQ, NM Nord Resources of Dayton, OH Board of Orbital Research Partners, Fairfax, VA

AREAS OF PROFESSIONAL INTEREST: Consultant, speaker and writer in science, technology, space, defense, technology transfer, industrial development, earth sciences and related political matters.

ADDITIONAL DATA:

Former Astronaut, U.S. Senator from New Mexico and member of the President's Foreign Intelligence Advisory Board.





NAME: Dr. Daniel P. Schrage

Professor

ORGANIZATION:
School of Aerospace Engineering
Georgia Institute of Technology
Atlanta, Georgia 30332

BUSINESS TELEPHONE: 404-894-6257/3000

EDUCATION:

DSc, Mechanical Engineering, Washington University (St. Louis,MO)
MS, Aerospace Engineering, Georgia Tech
MA, Business Administration, Webster University (St. Louis, MO)
BS, General Engineering, USMA (West Point, NY)

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

American Helicopter Society - Atlanta Chapter President

- National Technical Council Member

- Vertiflite Magazine Editorial
Advisory Board

- Vertical Flight Foundation Fellowship Board

American Institute of Aeronautics and Astronautics

- Member

- Aircraft Design Technical Committee

AREAS OF PROFESSIONAL INTEREST: Strategic and Long Range Planning Rotorcraft and Aircraft Design Flight Mechanics and Controls Aeroelasticity and Dynamics

ADDITIONAL DATA:

Former Government Senior Executive Servant as Director of Advanced Systems, U.S. Army Aviation Systems Command and Scientific Advisor U.S. Army Combined Arms Center. Served 11 years active duty as U.S. Army Field Artillery Officer and Aviator with combat experience.



NAME: Mr. David Shore

POSITION:
Private Consultant

ORGANIZATION: 7215 Vistas Lane McLean, Virginia 22101

BUSINESS TELEPHONE: 703-356-1824

BS, Aeronautical Engineering, University of Michigan, 1941 MS, Physics, Ohio State University, 1950

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Technical Director, Armed Forces Communications-Electronics Association
Associate Fellow, American Institute of Aeronautics & Astronautics
National Security Industrial Association, Honorary Member
Institute of Electrical and Electronics Engineers (Senior Member)
American Defense Preparedness Association, Member

AREAS OF PROFESSIONAL INTEREST:
Command and Control and Counter C3
Strategic Defense
Air Defense

ADDITIONAL DATA:

Narded Outstanding Civilian Service Medal by U. S. Army



LTG Charles J. Simmons (USA Ret.)

POSITION:

Private Consultant

ORGANIZATION:

6727 Bellamy Avenue Springfield, Virginia 22152-3027

**BUSINESS TELEPHONE:** 

703-569-7941

EDUCATION:

BS, Engineering, United States Military Academy, 1946 MA, International Relations, Columbia University, 1953 Air War College, 1966

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Association of the U.S. Army U.S. Army Armor Association American Defense Preparedness Association

AREAS OF PROFESSIONAL INTEREST:

Planning; operational concepts; training





POSITION:

President Infrastructure Group

ORGANIZATION:

CRS Sirrine, Inc. 1177 West Loop South Houston, Texas 77227

**BUSINESS TELEPHONE:** 713-552-2511

EDUCATION:

BES, Civil Engineering, Johns Hopkins University, 1961 MS, Civil Engineering, Texas A&M University, 1970 PhD, Civil Engineering, Texas A&M University, 1976

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: NSPE, TSPE, SAME, ACGC-DPC

AREAS OF PROFESSIONAL INTEREST:

Construction Engineering Logistics



Mr. Alan Smolen

POSITION: President

ORGANIZATION:

Alan Smolen & Associates, Inc. One Cynthia Court Palm Coast, Florida 32037-8172

**BUSINESS TELEPHONE:** 904-445-2345

EDUCATION:

BS, Electrical Engineering, NY Institute of Technology, 1947 MS, Electrical Engineering, NJ Institute of Technology, 1955

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Army Science Board

AREAS OF PROFESSIONAL INTEREST:

Provide business overview in technical program management, organization, problem identification, analysis and correction.



NAME: Dr. Alfred Z. Spector

POSITION:

Associate Professor of Computer Science

ORGANIZATION:

Carnegie-Mellon University Department of Computer Science Schenley Park Pittsburgh, Pennsylvania 15213-3875

BUSINESS TELEPHONE: 412-268-2583

AB, Applied Mathematics, Harvard University, 1976 PhD, Computer Science, Stanford University, 1981

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

ACM IEEE

AAAS

ASB, C3I Summer Study 1986 ASB Information Management Panel ACM Special Interest Group on Operation Systems

AREAS OF PROFESSIONAL INTEREST: Distributed Computer Systems Reliability, Networking



Mr. Laurence Storch

POSITION: Attorney

ORGANIZATION:
Storch & Brenner
1001 Connecticut Avenue, NW
Washington, DC 20036-5504

BUSINESS TELEPHONE: 202-232-7080/452-0900

EDUCATION:
SB, Engineering, Massachusetts Institute of Technology, 1971
SM, Civil Engineering, Massachusetts Institute of Technology, 1971
JD, Law, Harvard, 1974

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Association of the Bar of the City of New York, Committee on International Law
Massachusetts Institute of Technology, Visiting Committee,
Department of Nuclear Engineering
American Nuclear Society
American Society of Civil Engineers
Tau Beta Pi, Chi Epsilon

AREAS OF PROFESSIONAL INTEREST:
Politico-Military Affairs
Technology Transfer
Procurement Policy
Nuclear Devices

ADDITIONAL DATA:
1978-1981 Department of State
1977-1978 Department of Energy

NAME:
Dr. Dora Jean Dougherty Strother

POSITION: Consultant

ORGANIZATION: 3616 Landy Lane Fort Worth, Texas 76118

BUSINESS TELEPHONE: 817-589-2685

EDUCATION:
PhB, Liberal Arts & Sciences, Northwestern University, 1949
MS, Education-Psychology, University of Illinois, 1953
PhD, Aviation Education, New York University, 1955

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Human Factors Society of America, Fellow and on the Fellows
Selection Committee
American Psychological Association, Fellow
American Institute of Aeronautics & Astronautics, Associate
Fellow
National Aerospace Education Advisory Committee
FAA's Women's Advisory Committee on Aviation, Member and Chairman
University of Texas, Women in Science Program Advisory Committee

AREAS OF PROFESSIONAL INTEREST:
Human Engineering and Behavioral Science
Pilot Training and Flight Simulators
Crew Station Design
Artificial Intelligence

ADDITIONAL DATA:
Holds Airline Transport Pilot License
Has set 2 World flight records for rotorcraft
Certified & Licensed as a Psychologist in the State of Texas





NAME: Dr. Derald A. Stuart

POSITION: Vice President

ORGANIZATION: Lockheed Missiles and Space Company, Inc. Dept.0/10-01, Building 101 Post Office Box 3504 Sunnyvale, California 94088-3504

BUSINESS TELEPHONE:

EDUCATION:

BS, Physics, University of Utah, 1947

MS, Physics, University of Utah, 1948

PhD, Physics, University of Utah, 1950

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

AIAA Fellow, ASQC (Member), Navy League (Life Member), ADPA
(Member), Reliability and Maintainability Symposium (RAM) Advisory
Board, National Contract Management Association (NCMA) (Member),
National Academy of Engineering Member, Sigma Xi, Sigma Pi Sigma

AREAS OF PROFESSIONAL INTEREST:
Management, including General Management, Program Management and
Acquisition Management
Strategic Nuclear Weapon issues at all levels

ADDITIONAL DATA:
Awards and Honors: U. S. Navy Meritorious Public Service Award, 1961; John J. Montgomery Award from National Society of Aerospace Professionals, 1964; Extraordinary Service Award from American Society of Quality Control, 1983; Navy League Distinguished Service Award, 1985; IEEE Reliability Society Annual Award, 1986.
Author or co-author of over a dozen publications and one book.

NAME: Dr. Judith P. Swazey

POSITION: President

ORGANIZATION:
The Acadia Institute
118 West Street
Bar Harbor, Maine 04609

BUSINESS TELEPHONE: 207-288-4082

EDUCATION:
AB, Wellesley College, 1961
PhD, Harvard University, 1966

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Fellow, Institute of Medicine, National Academy of Sciences Board of Directors, Sigma Xi and Chair, Committee on Science and Society Committee on Scientific Freedom and Responsibility, AAAS Advisory Board, Center for the Study of Drug Development Board of Directors, Medicine in the Public Interest

AREAS OF PROFESSIONAL INTEREST:
Social, Ethical, Legal, and Policy Aspect of Medical Research,
Health Care; History of Biomedical Research and Medical Care;
Professional Ethics and Social Controls





Dr. Mary L. Tenopyr

POSITION:

Division Manager Employment and Staffing Systems

ORGANIZATION:

The American Telephone and Telegraph Company Room 3D123 150 JFK Parkway Short Hill, New Jersey 07078

BUSINESS TELEPHONE:

EDUCATION:

AB, Psychology, Ohio University, 1951 MA, Psychology, Ohio University, 1951 PhD, Psychology, University of Southern California, 1966

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Member, Editorial Board of Journal of Applied Psychology Fellow, American Psychological Association Member, Board of Directors of American Society for Personnel Administration Past Member, National Academy of Sciences Past President, American Psychological Association, Division of Industrial and Organizational Psychology

AREAS OF PROFESSIONAL INTEREST:
Personnel Selections, Personnel Systems and Training,
Organizational Issues

ADDITIONAL DATA:

Winner of 1984 Professional Practice Award, Society for Industrial and Organizational Psychology Licensed as Psychologist in California, District of Columbia, and New Jersey
Author of Numerous Professional Publications
Listed in Who's Who of American Women and Who's Who in the East



NAME: Dr. Louis W. Tordella

POSITION: Private Consultant

ORGANIZATION: 9518 East Stanhope Road Kensington, Maryland 20895

BUSINESS TELEPHONE: 301-946-1554

EDUCATION:
BS, Mathematics, Chemistry, Physics, Loyola University, Chicago, 1933
AM, Mathematics, Philosophy, Loyola University, 1935
PhD, Mathematics, University of Illinois, 1939
National War College, Washington, DC, 1954

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Board of Trustees and Directors, IDA
Focus Advisory Board, CRD, Princeton
Board of Directors, INTERTEL
Board of Directors, AFIO
Racial Communications Board of Directors
Los Alamos National Laboratory Advisory Group

AREAS OF PROFESSIONAL INTEREST: Intelligence Operations National Security Military Communications NAME: Dr. Frank E. Vandiver

POSITION: President

ORGANIZATION:
Texas A&M University
College Station, Texas 77843-1246

BUSINESS TELEPHONE: 409-845-2217

EDUCATION:
MA, History, University of Texas, 1949
MA by Decree, Oxford University, 1963
PhD, History, Tulane University, 1951
PhD Honorary, Humanities, Austin College, 1977

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Advisory Council, DA, Ch of Mil History, 69-74; Ft Leavenworth Hall of Fame AUSA, 71-72 & 74-80; Am Comm on History of Second WW; US Army Mil Research Coll Advisory Comm 72-77; Dept of AF, USAF Academy Harmon Mem Lecture Series Sel Comm 73-76; National Counceil on Humanities; White House Hist Society 74; US Council for World Communication Yr 83; Educational Adv Comm, US Comd & Gen Stf College, Ft Leavenworth, Ks 83-; Secy of Navy's Adv Bd on Edu and Tech 83-; Army Adv Bd on ROTC Affairs 84; Bd of Visitors USAF Air University 85-; Outside expert for Def Reorganization Project, Comm on Army Services, US Senate, 85; Southern Historical Assoc, VP 74-75; Pres 75-76; American Historical Assoc; Society of Am Historians 69-; The Philosophical Society of Texas, Pres 77-78; Life Member Houston & Kansas City Civ War Round Tables; Jeff Davis Assoc, Pres 63; Papers of Jefferson Davis 63; Papers of U.S. Grant 77; National Council on the Humanities; State Historical Records 76-79; Pershing Mem Museum 77-; Comm on International Edu, America Council on Education 1982; Society of Am Histories 77; Rockefeller fellow 46-48; Guggenheim Fellow 55; Carr P. Collins Prize of Texas Institute of Letters for Might Stonewall; Fellow, Texas State Hist Assoc 70-;

## AREAS OF PROFESSIONAL INTEREST Military History

ADDITIONAL DATA:

Numerous publications among which are the following books: Ploughshares into Swords: Josiah Gorgas & Confederate Ordnance; Rebel Brass: The Confederate Command System; Mighty Stonewall; Jubal's Raid: Gen Early's Famous Attack on Wash in 1864; Fields of Glory: A Pictorial Narrative of American Wars; Basic History of the Confederacy; John J. Pershing, Illustrious Americans Series; Their Tattered Flags: The Epic of the Confederacy; Black Jack: The Life & Times of John J. Pershing





NAME: Dr. Michael A. Wartell

Provost and Vice President for Academic Affairs

ORGANIZATION:
Humboldt State University
Arcata, California 95521

BUSINESS TELEPHONE: 707-826-3722

EDUCATION:

BS, Chemistry, University of New Mexico, 1967

MS, Physical Chemistry, Yale University, 1968

PhD, Physical Chemistry, Yale University, 1971

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Fellow, American Academy of Forensic Sciences
American Association of University Administrators
American Chemical Society
American Physical Society
Danforth Association
Kappa Mu Epsilon
Phi Kappa Phi
Sigma Xi
Board of Visitors, Defense Systems Management College

AREAS OF PROFESSIONAL INTEREST: Physical Chemistry Forensic Chemistry Higher Education NAME: Mr. Peter D. Weddle

POSITION: President

ORGANIZATION:
HAY Systems, Inc.
2000 "M" Street, NW
Suite 650
Washington, D. C. 20036

**BUSINESS TELEPHONE:** 202-223-3703

EDUCATION:
BS, National Security and Public Affairs, US Military Academy, 1971
MA, English Literature, Oxford University, Middlebury College, 1978
MPA, Public Administration, Harvard University, 1979

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Member, DoD Study entitled Steps Toward Improving the Materiel
Readiness Posture of DoD
Subpanel Vice Chairman, 1982 Defense Science Board Summer Study on
Training and Training Technology
Vice Chairman, Manpower & Training Committee, National Security
Industrial Association
Vice Chairman, 1984 Army Science Board Summer Study on Leading and
Manning Army 21
Chairman, 1985 Army Science Board Summer Study on the Manpower
Implications of Logistics Support for the AirLand Battle
Chairman, Army Science Board Functional Subgroup on Human
Capabilities and Resources

AREAS OF PROFESSIONAL INTEREST:
Human-Machine Interface
Defense Systems Development and Acquisition
Operational Readiness Assessment
Human-Computer Interaction
Mission Area Analysis

ADDITIONAL DATA: Free Lance Author





NAME: Ambassador Seymour Weiss

POSITION: President

ORGANIZATION: SY Associates, Inc. 8905 Transue Drive Bethesda, Maryland 20817

BUSINESS TELEPHONE:

EDUCATION:
MA, International Affairs, University of Chicago, 1949
Liberal Arts, University of Pennsylvania

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Cosmos Club, Washington, D. C. Council on Foreign Relations

ADDITIONAL DATA:

Publications: Beyond the Salt II Failure - Book with John Lehman Various Professional Journals
Frequent guest editorials in Wall Street Journal

Department of State - Foreign Service Officer
Director Bureau Politico-Military Affairs
Former Ambassador to the Bahamas



Mr. John James Welch, Jr.

POSITION:

Senior Vice President

ORGANIZATION:

LTV Aerospace & Defense Company 1725 Jefferson Davis Highway Suite 900 Arlington, Virginia 22202-4102

BUSINESS TELEPHONE: 703-521-6560, x201

EDUCATION:

BSME, Engineering, MIT, June 1951

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Air Force Institute of Technology, 1980-Present Air Force Scientific Advisory Board, 1970-1975 Army Science Board, 1983-Present DoD Defense Science Board, 1970-1980 MIT Educational Council, 1963-Present



NAME: Dr. Robert C. Williges

POSITION:
Professor, Industrial Engineering and Operations Research Professor, Psychology

ORGANIZATION:
Virginia Polytechnic Institute and State University
130 Whittemore Hall
Blacksburg, Virginia 24061

BUSINESS TELEPHONE: 703-961-6270

EDUCATION:
PhD, Engineering Psychology, Ohio State University, 1968
MA, Engineering Psychology, Ohio State University, 1966
AB, Psychology, Wittenberg University, 1964

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
President (1982-83) and Fellow of Human Factors Society
President (1983-84) and Fellow, Society of Engineering Psychologists,
American Psychological Association
Editor, Human Factors (1976-79)
Executive Council of Human Factors Society and Society of Engineering
Psychology
Member, American Institute of Industrial Engineers
Member of National Research Council Committee on Human Factors

AREAS OF PROFESSIONAL INTEREST:
Human-computer dialogue design; human factors research methodology;
computer-based training procedures; human factors engineering;
human/computer interface design.

ADDITIONAL DATA:
Authored or coauthored over 100 technical reports, scientific papers, book chapters and journal articles.
Won the Jerome H. Ely award for best paper published in Volume 15 of Human Factors in 1974

Mr. Samuel T. Yanagisawa

POSITION:

Chairman of the Board

ORGANIZATION:

Varo, Inc.

2203 W. Walnut Street

Garland, Texas 75042-6620

BUSINESS TELEPHONE: 214-487-4250

EDUCATION:

BSEE, Electrical Engineering, University of California at

Berkeley, 1942

Graduate Studies, Electrical Engineering, Columbia University,

1947-1948

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

Chairman and Director, Varo, Inc.; Director, Republic Bank Garland; Dallas Council on World Affairs; Chairman of Board of Visitors, McDonald Observatory, University of Texas at Austin; Advisory Council, Southern Methodist University Foundation for Science & Engineering; Membership in - Institute of Electrical and Electronic Engineers; Association of Old Crows; American Vacuum Society; and Optical Society of America.

AREAS OF PROFESSIONAL INTEREST:

Electrical Engineering; electronics, particularly electron devices; night vision systems and components; fiber optics; communications sciences; semiconductor components; thermal imaging systems; weapons and weapon delivery systems; military tactics and doctrine; research and development; manufacturing technologies; military sciences; foreign technologies.





NAME:

Mr. A. Thomas Young

POSITION: President

ORGANIZATION:

Martin Marietta Aerospace Orlando Division P. O. Box 5837, MP-100 Orlando, Florida 32855-5837

BUSINESS TELEPHONE:

305-356-6645

BAE, Aeronautical Engineering, University of Virginia, 1961 BME, Mechanical Engineering, University of Virginia, 1961

MBA, Management, MIT (Sloan Fellow), 1972

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:

AIAA Fellow AAS Fellow

SPECIAL "CONSULTANTS ONLY"



NAME: Dr. Martin Alexander

Professor

ORGANIZATION: Cornell University 708 Bradfield Hall Ithaca, NY 14853

BUSINESS TELEPHONE: 607-255-1717

EDUCATION:
BS, Agriculture, Rutgers University, 1951
MS, Bacteriology, University of Wisconsin, 1953
PhD, Bacteriology, University of Wisconsin, 1955

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
EPA Science Advisory Board
American Society of Microbiology
Society for Environmental Toxicology
American Chemical Society
American Society of Agronomy

AREAS OF PROFESSIONAL INTEREST:
Microbiology
Environmental Toxicology
Soil Science

ADDITIONAL DATA:
Winner of ASM Fisher Award, ASA Soil Science Award,
Industrial Research - 100 Award. Elected fellow at
several scientific societies.



NAME: Dr. R. Michael Dowe, Jr.

POSITION: Senior Vice President

ORGANIZATION:
TITAN Systems, Inc.
9191 Towne Centre Drive, Suite 500
San Diego, California 92122-1231

BUSINESS TELEPHONE:

EDUCATION:

BS, Military Engineering, U.S. Military Academy, 1950

MS, Physics, University of Alabama, 1961

PhD, Physics (awarded 1965), University of Alabama, 1964

Graduate, U.S. Army Command & General Staff College, 1964

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
American Physical Society (including Plasma Physics Division, Nuclear Physics Division, and Atomic and Molecular Physics Division); American Association of Physics Teachers; Retired Officers Association; Disabled American Veterans; POW Camp 2 Korea Association (Officers' Camp); Boy Scouts of America; Consultant, Army Science Board; Member of the Ballistic Missile Defense Subgroup; Deputy Chairman, Joint Services Charged Particle Beam Weapons Net Technical Assessment

AREAS OF PROFESSIONAL INTEREST:
BMD, Strategic and Tactical Technology (including ATM), Directed Energy Weapons, C<sup>3</sup>I, Technical Threat Analysis

NAME: Mr. Jerome Freedman

POSITION: Consultant

ORGANIZATION: 82 Shady Hill Road Weston, MA 02193

BUSINESS TELEPHONE: 617-235-7919

EDUCATION:

BS, Electrical Engineering, College of City of New York, 1938

MS, Electrical Engineering, Polytechnic Institute of Brooklyn, 1951

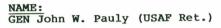
Completed course requirements for doctorate, Polytechnic Institute
of Brooklyn, 1949-1951.

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES:
Army Science Board
Defense Science Board (Consultant only-- serves on Task Force)
Fellow, Institute of Electrical and Electronics Engineers
Associate Fellow, American Institute of Aeronautics & Astronautics
Member, American Association for Advancement of Science
Associate Editor, Journal of Defense Research

AREAS OF PROFESSIONAL INTEREST:
Radar; Ballistic Missile Defense and Offense; High Power Lasers;
Tactical Systems involving Radar and IR Sensors

ADDITIONAL	DATA:
1963-1968	ARPA Advisory Committee on BMD (Chairman, 1967-68)
1964-1970	DDR&E Reentry Programs Review Group
1966	Chairman, ARPA/IDA Summer Study on Area Defense
1968	Deputy Chairman, Department of the Army Summer Study
	on Area Defense
1968-1972	Scientific Advisory Group to the Joint Strategic
	Target Planning Staff Joint Chiefs of Staff
1968-1972	DSB Task Force on Tactical Early Warning
1968-1970	Consultant to the Army Control and Disarmament Agency
	NATO AGARD Avionics Panel
1972-1974	DSB Task Force on Anti-Ballistic Missile Defense
1975-1976	DSB Task Force on Accuracy
1978-1979	DSB Task Force on BMD
1979-1983	Steering Committee, Navy SEA LITE Program
1980-1983	DSB Task Force on Anti-Tactical Missiles
1981	DSB Summer Study on Strategic Defense
1984	Chairman, Steering Group, DARPA Optical Discrimination Study
1984	DSB Summer Study on Space-Based Radar
1984-1985	Chairman, Steering Group, SDIO Radar Discrimination Study
1985	DARPA Certificate of Merit for Technical Achievement





POSITION: Chief Executive Officer and Chairman

ORGANIZATION:
Systems Control Technology, Inc.
1801 Page Mill Road
Palo Alto, CA 94304-1216

BUSINESS TELEPHONE: 415-494-2233

EDUCATION:
BS, United States Military Academy, 1945
MS, George Washington University, 1967

MEMBERSHIP BOARDS, COMMITTEES, AND SOCIETIES: Army Science Board Hawk Advisory Board

AREAS OF PROFESSIONAL INTEREST: National Defense

