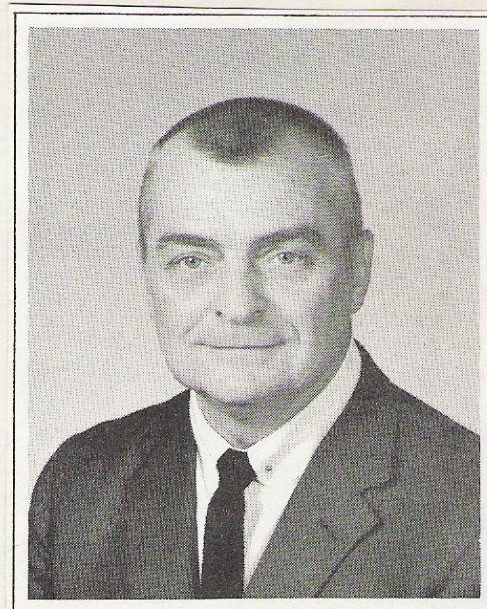RESUME

of

DONALD B. NELSON

June 1978

ADDRESS: % V. Novanto, Apt. G,
          1609 Ala Wai Blvd.,
          Honolulu, Hawaii 96815

SOCIAL SECURITY NO.:

AGE: 60

SEX: Male

BIRTHDATE: 19 December 1917

BIRTHPLACE: Sutherland, Iowa, U.S.A.

CITIZENSHIP: U.S.A.

MARITAL STATUS: Divorced in 1957

DEPENDENTS: None

SECURITY CLEARANCES: Secret - U.S. Air Force in 1951, 63 and 64.
                      Secret - U.S. Navy in 1953, 56, 58 and 60.
                      Secret - DISCO in 1974.
                      Secret - Indonesian Navy in 1977.

MILITARY SERVICE: 1942 - 1943 U.S. Army Air Corps
                   1944 - 1945 U.S. Navy Flight Transport Service
                   No Reserve Status

PROFESSIONAL SOCIETIES: Aerospace Industrial Life Sciences Association
                         Aerospace Medical Association
                         American Management Association
                         American Society for Information Science
                         Association for Computing Machinery
                         Institute for Management Sciences
                         Los Angeles College on Planning

FRATERNITIES: Social: Phi Delta Theta
               Scholastic: Phi Eta Sigma

RESUME of Donald B. Nelson   June 1978

   I have had 27 years of experience in systems design and analysis,
beginning in 1951 as Mathematician to the Chief of Industrial Engineering
at Convair in San Diego, and including experience in management systems,
information systems, automatic control systems, digital computer design,
and electronic research and development. I also have been a consultant,
advisor and teacher of systems analysis and design.

   My educational qualifications include a B.A. degree in Mathematics
from the University of Wisconsin in 1939; and independent graduate studies
in 1940 at the University of Wisconsin, in 1948 at Stanford University in
California, in 1949 at the Alliance Francaise in Paris, and in 1950 at the
University of London in England. Also, from 1952 to 1961 in La Jolla,
California, I served as a research and design assistant to Floyd George
Steele, inventor of the first Digital Differential Analyzer (DDA).
Additionally, I have lived or travelled in Canada, Mexico, Europe and the
United Kingdom, many countries in the Orient, Australia, New Zealand and
the South Pacific Islands.

   Prior to September 1962, my experience and training included the
design and development of automatic control systems; and the logical
design and development of a serial computer for complex control problems,
with application studies in process control and a ballistic missile ground
support system. I also assisted in the study analysis and logical design
of ballistic missile inertial guidance computers, various differential
analyzers, and a mortar trajectory computer system. Additonally, I
participated in many preliminary design studies of scientific, business,
industrial and military problems in data handling and control; and my
experience prior to September 1962 also included extensive laboratory
research and development in digital control system hardware.

   In September 1962, based on my earlier experience and training,
I began the conceptual definition and development of a methodology for
interdisciplinary management systems (IMS). At General Dynamics
Astronautics in 1963, I authored a set of reports on the principles and
techniques for designing simple and complex automatic control systems, and
conducted related training sessions for GD/A personnel. Also, in 1963 and
1964, I performed a system analysis of GD/A Atlas and Centaur missile
Configuration Data Control, and originated software design techniques for

the synthesis of automatic data management systems which were machine
independent and based directly on detailed system flow charts. These data
control techniques, including design and development of the first software
computer, were published in June 1964, and were applicable to a general
class of management and decision systems.

From November 1964 to 1973, my various assignments included the
creation of GIM-1 and GMIA, two different machine independent information
systems with natural language inputs and outputs, together with definition
and documentation of the detailed operating specifications, instruction of
personnel in the design theory and techniques relevant to each system,
and completion of particular parts of the detailed program design.
GIM-1, a generalized information management system, was designed and
developed between November 1964 and February 1967 at TRW Systems, and
was the basis for ITDS, the Integrated Technical Data System developed at
TRW Systems for the Army Materiel Command. GMIA, a generalized management
information decision capability, was designed in 1970 for ANCOM Systems,
and was developed to permit the rapid assembly of customer information
systems in many different application areas. My various assignments also
included the completion and publication of my work in interdisciplinary
management systems (IMS); technical assistance to management, marketing
and proposal personnel; and software documentation and evaluation studies.

From August 1973 to 1975, I was a senior systems analyst with
Southeast Asia Computer Associates (SEACA) working for the USAID Information
Systems Center as staff development advisor to the Office of the Prime
Minister/Computer Center (OPM/CC) in Saigon, Republic of Vietnam.
I advised system analysts of the OPM/CC and other Ministries and Agencies
during the problem definition, feasibility studies and system design of
many different systems; and I also conducted training seminars,
co-authored a 4 month (600 hours) course in the principles of systems
analysis, and acted as instructor of the course. Additionally, I also
developed the standards and criteria for the certification of systems
analyst professionals in Vietnam. I enjoyed an excellent rapport with my
Vietnamese students and counterparts in the OPM/CC, and shortly before
leaving Saigon, I was awarded a special merit citation by Buu Vien, the
Executive Secretary of State of the Republic of Vietnam.

From 1976 to May 1978, I worked in Indonesia as a senior system
scientist for Thor Data Management, Ltd., a Hong Kong company associated
in Indonesia with P. T. Nizwar. Early in 1977, I was the principal speaker
at the first Workshop on Systems Analysis in Indonesia, which was sponsored
by the Ministry of Agriculture. Also in 1977, I performed the problem
definition and feasibility study for a Management Information System (MIS)
for the Indonesian Navy; and developed a 4 month course in the principles
of systems analysis for the Indonesian Navy Staff College, and acted as
instructor of the first class. Similar to my earlier experience in Vietnam,
I enjoyed an excellent rapport with my Indonesian students, and with my
counterparts at Indonesian Navy Headquarters.

Since September 1962, I have authored numerous papers and reports,
have been a speaker at several national and international conferences,
and have lectured at the University of California at Los Angeles, the
University of Southern California, and the University of California at
Santa Barbara. I also have conducted briefings and discussions on
management information systems at the National Academy of Sciences, the
National Science Foundation, NASA Headquarters, the Office of Naval Research,
the staff offices of the Secretary of the Navy, and at several other offices
and agencies in Washington, D.C.

RELEVANT PAPERS AND REPORTS SINCE 1962

1963   Techniques in Designing Automatic Control Equipment, GD/Astronautics, ERR-AN-270

1964   Drawing Release Investigation, GD/Astronautics, DBA-64-007

1965   Generalized Information Retrieval Language and System Definition, TRW Systems, 9893.33-64

Methodology for Comparison of Generalized Data Management Systems, TRW Systems

Detailed Operating Specifications for the GIM-1 Language and Computer System, TRW Systems, 9990-7213

1966   Short Summary of GIM-1, TRW Systems, 9990-7215

GIM-1 Software Computer - Definition and Detailed Specifications, TRW Systems, 9877-6001

Generalized Information Management in Aerospace Medicine, presented to the Aerospace Medical Association, 37th Annual Convention, Las Vegas, Nevada. Published by Aerospace Medical Association, 1966

Computer Applications to Long Range Planning, TRW Systems, 66-3111.9.3

Information Management for a Biomedical Research Laboratory in Space, presented to the IXth International Congress on Diseases of the Chest, Copenhagen, Denmark. Published by the American College of Chest Physicians in "Diseases of the Chest", Vol. 51, No. 4, April 1967

Detailed Flowcharts for the GIM-1 Preprocessor, TRW Systems, 9990-7251

Generalized Information Management for Multiple Language Data Banks, presented to the Federation Internationale de Documentation, The Hague, The Netherlands, May 1966

GIM-1 Software Computer - Some Significant Results, TRW Systems, 66-3111.9.6

Company Information and Management Standards, TRW Systems, 66-3111.9.7

1967   Generalized Information Management, a Colloquium Lecture at TRW Systems

Generalized Information Management, a Seminar Lecture at the University of Southern California

Software Computers, TRW Systems, 67-3111.9.1

GIM-1, a Generalized Information Management Language and Computer System, presented to the 1967 Spring Joint Computer Conference, Atlantic City, N.J. Published in "AFIPS Conference Proceedings", Vol. 30, 1967

Conceptual Definition of Generalized Management Functions, a Seminar Lecture at the University of California at Los Angeles.

1968   A Commentary on the Definition of GIM and GEM, and the Design and Development of GIM-1, TRW Systems

An Interdisciplinary Management Methodology, and the Conceptual Development of Generalized Information Management (GIM) and Generalized Evaluation Management (GEM), a Seminar Lecture at the University of California at Santa Barbara

RESUME of Donald B. Nelson   June 1978

1969   Interdisciplinary Management Systems (IMS), a report by D.B.N.,
       Private Consultant, DBN-PC001

1970   A Methodology and Techniques for the Evaulation and Comparison of
       Information Systems, a report by D.B.N., Private Consultant,
       DBN-PC002

       GMIA System Detailed Operating Specifications: Framework Program
       for Updating Repeating Groups, ANCOM Systems

       GMIA System Detailed Operating Specifications: Communication Network
       & GMIA System and Language Definition, ANCOM Systems

1974   The GVN Systems Analyst, a paper published by the Office of the
       Prime Minister Computer Center, Republic of Vietnam, January 1974

       The OPM/CC Systems Analysis Course, a 4 month course of instruction
       in the principles and techniques of systems analysis developed for the
       Office of the Prime Minister Computer Center, Republic of Vietnam.
       Published by SEACA under contract to USAID/ADM/ISC in 1974

       The GVN Junior Systems Analyst, a paper published in the technical
       journal of the OPM/CC, Republic of Vietnam, September 1974

       The GVN Systems Analyst, presented in the Technical Discussion Series
       of the OPM/CC to representatives of Vietnamese Ministries and Agencies,
       November 1974

1977   The System Development Process, a lecture at the first Workshop on
       Systems Analysis in Indonesia, at Gadok, Indonesia, 28 Feb to 2 Mch 77.
       Published by P. T. Nizwar in May 1977

       MIS Functional Analysis Report, a feasibility study completed for the
       Indonesian Navy in October 1977

1978   The TNI-AL Systems Analysis Course, a 4 month course of instruction in
       the principles and techniques of systems analysis developed for the
       Navy Staff College in Jakarta, Indonesia. Published by P. T. Nizwar
       in March 1978.