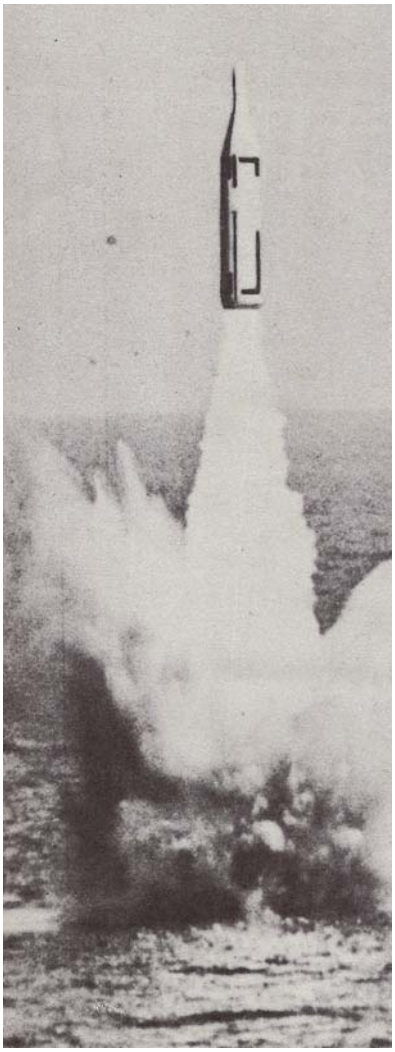
Project Management at General Electric Co.

Bogdan's first job after graduating from City College of New York with a Bachelor of Electrical Engineering was with Sperry Gyroscope on Long Island, New York where he served as a design engineer on a transportable radar system being developed for the marines.



After a year, he discovered that design engineering wasn't his cup of soup. He left to join General Electric Ordinance Department in Pittsfield, Massachusetts as a Program Engineer. The job entailed managing the engineering design and prototype production of fire controls systems for the Polaris Missile System, a submarine based missile system. This is the system that sets up the missile, targets it, tests its guidance system, and fires the missile.

Some of the tasks included:

Assistant Engineering Program Manager for:

- **the Ground Support Fire Control Systems used to test the missiles in the missile production site, in the factory, and at Cape Canaveral (now Cape Kennedy). Included scheduling of design, production, and instituting a change control system;**
- **Coordination of multi-company parts standardization program;**
- **Coordination of multi-company human factors design program;**
- **Serving on a multi-company team in the development of PERT as a planning and scheduling tool;**
- **Managing a General Electric Team to oversee a major subcontractor, Control Data Corporation, at the Minneapolis location in the design and production of the onboard computer system to assure quality control;**
- **Structuring and proposing an advanced design system for converting the fire control system from transistors to integrated circuits at a budget of $50 million.**

Program Engineering Manager for a program to design and produce portable test equipment for the Polaris Guidance System. Included setting up a super clean room facilities in Charleston, North Carolina.

Program Manager – assigned projects with significant technical and customer relations complexity:

- **Double Memory Program – Involved managing the contract development, design, production, and retrofitting all of the submarines to double the memory of the Fire Control computer System**
- **MOTS Program – Management of the design, production, and ongoing software development for an automated tester to test all electronic modules in the fire control system. Recommended removal of all testers from submarines – approved by customer.**
- **Milk Shake Program – Management of the design, production of van mounted guidance (fire control) test system to test the Polaris Guidance System in an underground nuclear test in Nevada. Complex design due to the need to evaluate the impact of ground generated electromagnetic field effects on the guidance system against the electrostatic field effects in the ionosphere. The purpose was to assure that the system can overcome a soviet**

Attended GE's Crotonville Management Center

MK 412 Automatic Module Test Set

FOCUS on business

Ordnance Department recently completed a more than $6,000,000 contract from the Navy's Strategic Systems Project Office with the on-time shipment of a Mk 412 automatic module test set.

The production contract...which has kept a lot of OD'ers busy for more than two years...was won in June 1966 despite firm competition from some of the country's top defense contractors, including Lockheed, General Dynamics, McDonnell, Honeywell, Sperry and the team of Nortronics/Raytheon.

The contract award followed some three years of design and development work on a flexible design/broad application testing equipment to meet the special needs of the Navy's Fleet Ballistic Missile system.

Mk 412 -- more generally known as MOTS -- was designed and produced to check out the modules used in POLARIS submarine electronic subsystems, and its creation, and the need for such an equipment, is a reflection of the enormous complexity of the FBM system.

Built for both shore and shipboard installation, the Mk 412 provides an extremely flexible method for testing all plug-in electronic modules currently used in POLARIS and POSEIDON support and fire control systems, as well as most new designs which may come into use in the future. It solves a number of problems -- system down time and retest time, accuracy, personnel training, chance for human error -- which in the FBM system can be more than normally critical.

MOTS offers automatic testing of electronic modules...with a flexible measurement and control subsystem that can be used on equipment as varied as attitude reference systems, computer systems, fire control systems, guidance, and others. Testable modules range from electronic circuit modules to electromechanical servo modules to microminiature circuit packages.

Constructed itself of modules for simplified maintenance, MOTS includes self-contained verification and calibration equipment and can test its own modules.

Though a highly intricate system itself, MOTS has scored production triumphs during its two-year history "in the shop" -- and all systems have been shipped on time. The contract included possible penalties for late delivery...so those on-time deliveries have been important to OD's business, as well as to the customer and the customer's requirements for FBM readiness.

Like all Ordnance programs, its success has been the result of wide-spread efforts throughout the Department, with a lot of people "doing right the first time."

FINAL SHIPMENT CALLS FOR CELEBRATION

Small group of those responsible for the successful completion of the Mk 412 production order --- what Program Manager Al Bogdan calls the second team --- poses to mark the all-OD accomplishment. Literally hundreds of people...machinists, assemblers, engineers, planners, draftsmen, expeditors, stenos, keypunch operators, testmen, appraisers, tool makers and others...backed up the MOTS program throughout but there are too many of them, and they're too scattered, to get a picture of them all. Representing the Mk 412 team, in the usual order: are Ken Loveman, Sol Toscher, Tom Crow, Bill Moseley, John McKinnie, Gary Gaudette, John Dadak, Al Bogdan, George Miner and Earl Zopf.

SCHOOL OPENS TODAY...

DRIVE WITH CARE

Milk Shake

BIG PROJECT RATES A BIG PICTURE... Representing a big effort by a lot of people, some of the OD team involved pose with the big van that created so much interest while it was being worked on in OP#2 recently. From left, we have in the front row: Program Manager Al Bogdan, Vic Burress, Ray Kaleda, Bill Beattie, Mike Tropeano, John Corbett, Al Lavigne, Glen Weimar, Gerry St.Germain, Bert Petcher, Dick Pannone and Tom Tehan. In the rear are Al Caswell, Reed Hand, Jerry Greenler, Howard Redstone, Joe Gosselin, Mike Melchiori, Bill Walker, Ralph Biernik and Walt Ciaschini... They're just part of the crew that worked on fitting up the van as a mobile, self-contained test berth for use at outside facilities on the FBM support program.

Published by Relations
Editor, Ext. 2410

PRAISE FROM THE CUSTOMER

Ordnance's "Milk Shake" effort of two or three months ago -- remember the shiny big vans being fitted up in OP#2 -- has received a warm word of praise from the Director of the Navy's Special Projects Office.

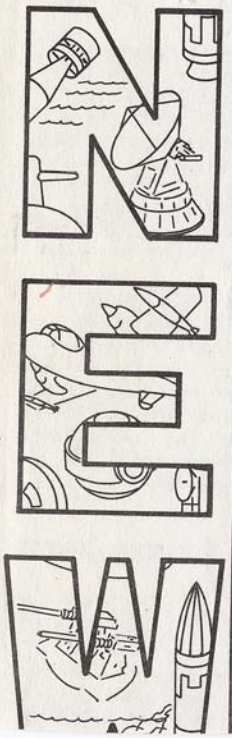
In a personal letter to General Manager Gene Peterson, Admiral Levering Smith wrote:

> "I would like to express the appreciation of the Special Projects Office for the outstanding effort and accomplishment of all those individuals in your organization involved in the fielding of Milk Shake 2.01. The outstanding success of that effort...would have been completely impossible without the skill, hard work and dedication of all those involved."

Milk Shake Program Manager Al Bogdan extends his own thanks and appreciation "to all concerned in the long but successful grind" -- too many to be reached in person.

WEDNESDAY
MAY 28, 1969
FW 22 - 148TH DAY

ORDNANCE SYSTEMS



Bogdan Makes Concern for Fellow Men His Full Time Career

"I felt I couldn't go on urging people to reassign priorities if I wasn't ready to do it with my own life."

That's how Albert A. Bogdan sums up the thinking that led to a new career for him ...a career that follows naturally after a good many years of constantly growing concern over the kind of life, and lack of opportunity, that so many face today.

Just appointed Executive Director for Urban Coalition here, Al hopes to be able to direct all of his energies toward improving the environmental conditions of human living and toward helping underdeveloped people to achieve a fuller and more meaningful life. Urban Coalition, in Al's words, offers a progressive force for social change and reorientation of priorities, with "all portions of our society, business and labor, blacks and whites, churches and social agencies, government and civil rights groups, rich and poor, joining hands to form a coalition of hope and action."

For the past three years, Al has been Program Manager on the Mk 412 (MOTS) Program here at Ordnance, while off-the-job hours have been devoted to involvement... as a Director of Micah, Vice President of the Citizens' Scholarship Foundation, a PTA President, a Democratic Convention delegate supporting Eugene McCarthy, a member of his church's executive committee and chairman of its social action committee, and a member of the Pittsfield Area Council of Churches' Social Action Committee, the Big Brothers' advisory committee, the Berkshire County Ecumenical Association, and the NAACP.