

Happy Birthday DMA — Five Years Old and Still Growing

Orienteer

DEFENSE MAPPING AGENCY AEROSPACE CENTER

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June 24, 1977

Alaskan Unit Closes Door This Month

The Flight Information Office Alaska closed its doors this week as part of the planned deactivation of the unit and movement of its FLIP production to St. Louis.

The deactivation was a result of a study conducted in 1976 which concluded that the FIO-A should be deactivated with its Flight Information Publication production returning to the Aerospace Center and the residual distribution activities assumed by the Alaskan Air Command. The FLIP function has been reassigned to the Aeronautical Information Department Air Facilities Data Reduction Division.

Lt. Col. R.E. Skinner, the FIO-A commander, is being reassigned to

the Military Airlift Command at Scott AFB. Three NCO's, SSgt John Crawford, MSgt John Severson and MSgt Nicholas Ziggas are being reassigned to the Aerospace Center and the Aeronautical Information Department.

SSgt Jerry Fate will retire from the service and SSgt James Jackson has been assigned to the EEO Office at Elmendorf AFB, Alaska.

Miss Joan Parsons, the office secretary, hopes to become a part of the Alaskan base education office working with her former boss and retired FIO-A commander, Colonel Stahl.

CFC Project Officer Named

DMAAC Director, Col. James St. Clair, has announced the 1977 Combined Federal Campaign project officer and other members of the work force who will be serving in various capacities with the Center campaign or the overall East-West Gateway Campaign.

Named as Project Officer was John Flaherty with Gretchen Hawk as assistant.

Ladorn Creighton was selected to be the agency's Loaned Executive to the East-West Gateway Campaign and Robert Karleskint will serve on the publicity committee.

Plans are already being made for the campaign which will be conducted this fall.

July 1 of this year the Defense Mapping Agency will celebrate five years of existence.

Resulting from a Presidential Blue Ribbon Panel recommendation, the agency was created by consolidating the mapping, charting and geodetic resources of the individual services into one organization under the Department of Defense reporting through the Joint Chiefs of Staff.

As you will note from the articles and photographs throughout this edition, many things have happened during the five years from the standpoint of the entire agency and more particularly the Aerospace Center.

Perhaps the biggest effect on St. Louis was the original change from the Air Force Aeronautical Chart and Information Center to the Defense Mapping Agency Aerospace Center. Not only was the name different but so were the regulations, manuals, points of contact and the way we did things. On top of everything some key individuals in the management chain of the Center were asked to become part of the headquarters staff at the onset of the DMA. Among them were Thomas C. Finnie, who became the DMA Deputy Director for Management and Technology; Dr. Charles Martin; Walt Gossage, Joe Steakley and Maurice Evans. They were to be joined in later years by others of the Center work force, including Technical Director Bill Riordan.

As the months went by the organization settled into its new way of life and maintained the excellent record of support to the aerospace forces of the nation's military that it had earned under Air Force.

Major new programs were instituted based on the expanding requirements brought on by new technology. (Both the products and

requirements are discussed in other articles within this issue.)

In recognition of the Center's work under the Air Force the organization received its second Excellence Award from the Air Force for exceptionally meritorious service. Both awards represented the time frame from January 1, 1967 to June 30, 1972, an enviable record.

During the five years the Aerospace Center has undergone some organizational changes, the most recent of which changed the name of some departments and brought their titles and missions in line with changing program requirements.

We lost some units during the years and gained some. The detachments of the Flight Information Office Hawaii were among the first to go and then the Flight Information Office was changed to DMA Depot Hawaii with the Aerospace Center maintaining operational control. The Flight Information Office-Latin America went much the same route. It became a part of the Inter American Geodetic Survey (IAGS) but continued to perform operationally under the Aerospace Center. One of the big losses was

Composite Check Plan Popular at Center

Payday, since time immemorial, has had a special significance for institution for most of today's

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has had a special significance for the day laborer, the hired hand, the factory worker, the federal employee, whether or not he worked "by the sweat of his brow." Luke, the ancient Biblical writer, already in his day reminded his readers that "the laborer is worthy of his hire."

Pay as a reward for satisfactory work performed has come in many different forms over the years, ranging from coins even in early times, foodstuffs for the table or for the laborer's cattle or chickens, to a land-owner offering the hand of his daughter in marriage for so many years of faithful service by a hired hand.

Some of our older federal employees remember "the boss" making the rounds of each desk on payday and paying off in cash—spanking new \$20 bills directly from the bank. Modern accounting systems and the machine age brought with them

institution for most of today's federal workers.

But even the pay check is disappearing from the modern scene. Six of every ten DMAAC employees (1,800+) never see their pay check any more. Composite, bulk checks, drawn and sent by the Finance and Accounting Office to banks, credit unions, or savings institutions cover the pay of hundreds of employees in a single check. It is quick and easy—and safe. With no fuss or bother from the employee, his or her pay is regularly, promptly, and automatically deposited each payday at the financial institution designated by the employee. It removes the risk of lost, stolen, or forged checks, and eliminates standing in line to get checks cashed or deposited.

It's worth checking into the Composite Check Plan with the secretary in your office, or the Finance & Accounting Office.

Sports 4

technology. (Both the products and Center. One of the big losses was

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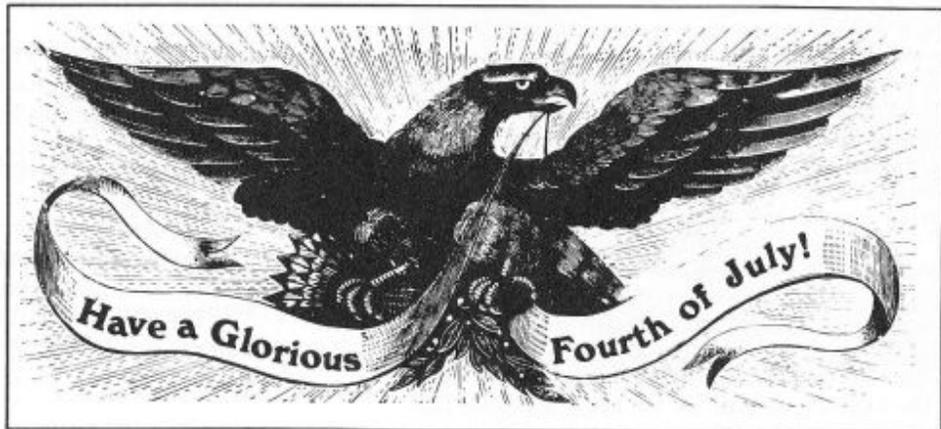
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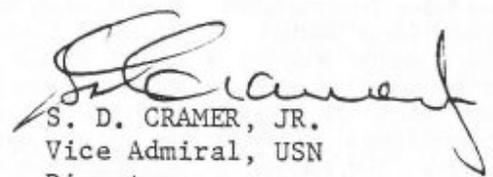
Five years ago the Department of Defense formed the Defense Mapping Agency out of the mapping, charting, and geodesy functions of the Armed Services, giving that Agency the responsibility and privilege of becoming a new organization to provide a vital function for our military forces and the Merchant Marine.

Today, DMA is recognized worldwide as a leader in the MC&G community. Every strategic weapon unit, every military aircraft, every ship that goes to sea, every ground force unit must have our products and services. We are indeed a vital part of every weapon system. Increasingly, our products and services have had to become more useful and more sophisticated to meet the growing needs of the military. We have been able to do that thanks to the dedication and ingenuity of DMA PEOPLE.

I am proud to serve as the second Director of DMA, building on the excellent foundation laid by Lieutenant General Howard W. Penney, USA (Ret.), and to be able to share with you the challenge and excitement of accomplishment.

As we "turn the corner" into our second five years we see new challenges that will demand the best of us. I am confident that the DMA people who have so ably acquitted themselves over the first five years will continue to be the loyal, industrious, innovative producers that I have come to know and admire.




S. D. CRAMER, JR.
Vice Admiral, USN
Director

Supporting Advanced Systems Development

When the Defense Mapping Agency was established in July 1972, a staff office was created within DMAAC responsible for determining MC&G requirements to support advanced aerospace systems. The successful accomplishment of this mission requires extremely close coordination between DMAAC and the various developmental organizations both in the DoD and industry. While coordinating with these various agencies over the past few years, one significant trend has evolved.

In the past, most weapon systems support took the form of traditional paper maps that, though important, were not always a limiting factor affecting mission accomplishment. With the advent of weapon systems employing sophisticated guidance techniques, the products and services being provided by DMAAC are becoming more and more critical to system deployment and employment. To illustrate this trend the following program summary represents significant accomplishments of DMAAC over the past five years in the support of new requirements for advanced weapon systems.

Cruise Missiles

One significant weapon system development currently being supported by DMAAC is the family of cruise missiles being designed in air launch, sea launch, and ground launch modes. All formats of the missile will use inertial navigation as the primary guidance system, updated with Terrain Contour Matching (TERCOM). DMAAC, as the agency responsible for producing the digital terrain matrix, has been active for several years in supporting various flight tests being conducted by both the Navy and Air Force. When the missiles become operational, DMAAC will continue to play a significant role in assisting the using commands—SAC, TAC and the Navy—in mission planning as well as producing all required TERCOM matrices worldwide.

Aircraft Simulators

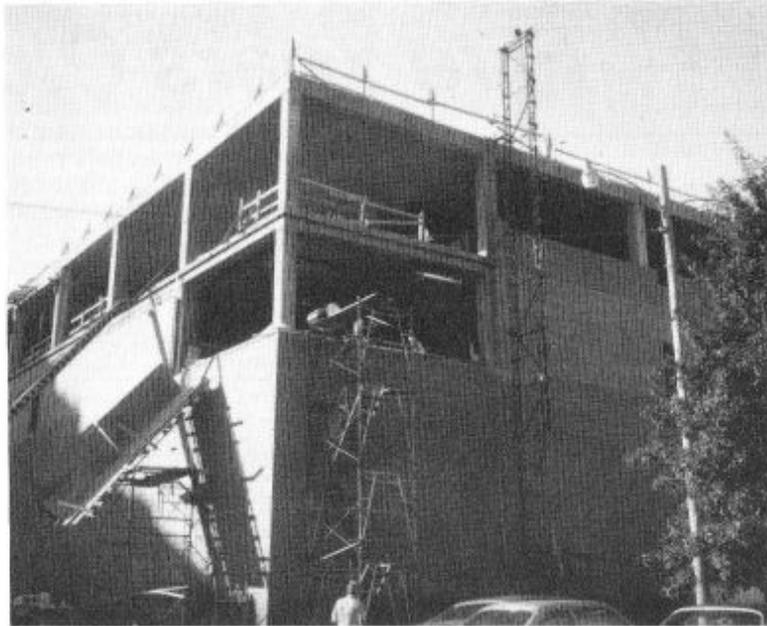
With the increased emphasis being placed on aircraft simulators by the DoD, the Air Force and Navy have budgeted nearly two

The space shuttle program is being jointly developed and managed by NASA and the USAF. Many NASA requirements will be satisfied using modifications of DMAAC products previously produced for the Mercury, Gemini, Apollo and Skylab programs. New product requirements involve development of a new polar orientation base chart that can overprint with ground track and other information used by flight crews and mission control centers. In addition, airfield models for Shuttle mission simulation and FLIP-type products covering contingency landing sites are required.

Advanced ICBM (M-X)

The Advanced ICBM technology is being developed to maintain a strategic weapon system deterrent which embodies the concepts of:

- (1) improved survivability through silo hardening and mobility and,
- (2) include advanced technology to provide for effective target coverage maximum damage



One of the major physical changes to the installation is the construction of two floors to the wing of Building 36. The project has been going on over the last two years and will be completed shortly after the agency's 5th Anniversary on July 1, 1977.



Nine Celebrate Anniversary Along with DMA

Looking

Weather—that unknown quantity that can make life enjoyable or miserable at a wave of the wand. The Aerospace Center has seen its share of the good and bad weather, but perhaps the year that will be remembered by most is 1973 when April and May brought record flood levels on the Mississippi River and December changed the water into snow but still let it abound in record levels. In the Spring volunteers from the employee ranks filled sandbags and built dykes and in the winter they flexed their muscles by pushing cars from snow covered parking lots.



Navy have budgeted nearly two billion dollars for devices that will use digital data to simulate radar. Specifically, the aircraft to be simulated are the A6-E, B-52/KC-135, C-130, B-1, F-16, and the F/FB-111. To support these various devices DMA has undertaken a program to produce 18 million square nautical miles of the earth's surface in digital form. The information to be digitized, which includes both terrain and cultural data, is scheduled to be completed in 1985.

Global Positioning System (GPS)

Another advanced system being supported by the Center is the GPS being developed by the Space and Missile Systems Organization of the Air Force Systems Command. The Global Position System is a universal positioning system providing very accurate 3-dimensional position accuracies. When the system becomes fully operational in the mid 1980's, it will consist of 24 satellites that complete two revolutions of the earth per day. The user equipment (receiver) installed on ships, airplanes, ground vehicles, or manpack will provide a user accurate positioning information continuously anywhere and in real time.

National Space Transportation System (Space Shuttle)

The space shuttle program is designed to reduce cost of space operations during the 1980-1990 decade by providing a capability to deliver, service and recover orbital payloads for multiple users.

coverage, maximum damage effectiveness and maximum reliability. Accordingly, DMAAC's involvement with the program will include reduced point positioning criteria for targeting, refinement of gravity models, and support of terminal guidance systems being investigated by the Program Office.

Pershing II Missile

The Pershing II missile is being developed by the Army to replace the Pershing I currently deployed in Europe. The most important improvement being applied to the Pershing II is the addition of a terminal guidance capability which is designed to correct the trajectory of the reentry vehicle. The terminal guidance system, known as the Sensor Correlation System, operates on the principles of radar area correlation techniques. DMAAC has been actively supporting this program by producing radar reference scenes using both hand drawn radar prediction techniques and more recently scenes prepared from digital data.

Short Range Attack Missile (SRAM)

One program that has progressed from the developmental stage to become operational in the past 5 years is the SRAM. The SRAM is an air-to-surface missile designed to be launched from a B-52, FB-111 or B-1 aircraft. Because the position of the carrier aircraft at launch determines the missile accuracy, DMAAC is responsible for

According to Civilian Personnel Office, there were nine individuals whose entries on duty date were effective the second of July 1972 allowing them to celebrate their fifth anniversary along with the agency. The nine were John

providing SAC very precise coordinates that are used to update the aircraft during flight and immediately prior to missile launch. These points are referred to as Radar Fix Points or RFP's.

Advanced Cockpit Displays

DMAAC requirements personnel are following very closely the development of several Navy and Air Force Programs to upgrade aircraft cockpit displays. Among the various systems being investigated are displays that portray cartographic information using holographic storage techniques, computer generated electronic symbology, and displays using digital data. It is anticipated that DMAAC will play a major role in the future of aircraft cockpit displays by providing cartographic and flight information data in a variety of formats.

Tactical LORAN

The LORAN C/D navigation system provides a common grid for positioning aircraft to satisfy the night/all weather navigation for strike/attack, reconnaissance, airlift, command and control, search and rescue, helicopter and waterborne operation applications. Because of propagation anomalies incurred when the LORAN signal travels over ground, it is

Callahan, ADDND; James Graves, ADPF; Robert Krask, GDCBB; Lawrence Kleinkemper, LOMC; Donald Domak, ACMBD; George Keil, GDGS; Emmett Burton, GDGM; William Gleibe, GDGS; and James Waters, GDDAC.

necessary to calibrate new LORAN values when the system is used for tactical strike applications. During the Vietnam crisis, DMAAC became involved in readjusting these values in conjunction with the point positioning data base program. DMAAC has continued to work closely with the Electronic Systems Division of AFSC in developing improved techniques to predict LORAN values for potential contingency areas.

Remotely Piloted Vehicles (RPB's)

One interesting, but possibly little known, area that DMAAC has been supporting for the past several years is the various Air Force RPV programs. Air launched reconnaissance drones were successfully used in Southeast Asia to perform various intelligence missions. Since Vietnam, DMAAC has been providing support to RPV developmental Test Flight programs that employ TERCOM, LORAN, and Distance Measuring Equipment (DME) guidance systems. This support includes digitized terrain for TERCOM matrices, LORAN calibrations, and point positioning data base utilization for scoring Flight Test navigation accuracies.



May 1977 the Aerospace Center agreement with a labor organization witnessed by members of the main negotiating teams.

First DMA Director

Lt. Gen. Howard Penney, t Mapping Agency, recently sent Vice Admiral Shannon Cramer, anniversary.

"I would like to send best wishes there on the birthday of DMA.

"I share your pride in a Fed demonstrated that it meets in full of service with competence and

"Fair winds and following bark on the second five years," w

Back At Five Years...



May 1976 saw the dedication of the St. Louis Arsenal as a National Historic Place with the largest open house ever held at the Aerospace Center. It was a festive day for all employees and their families. Congresswoman Leonor Sullivan delivered the dedicatory address. She is shown here (right) with DMA Director, Vice Admiral Shannon Cramer, Jr., DMAAC Director Col. James St. Clair and Ms. Charlene Gill, who represented the technical and professional societies that



Programs and Production Accomplishments

During the last five years the Aerospace Center has produced many types of products which support key programs of the Department of Defense. In the article on Advanced Systems Development we have learned about the general weapon system concept and how the Center support was required. This article looks deeper into those systems to encompass the actual type of product or service that the Center produces to support the MC&G programs required by the systems. As in the systems article, we will address only those key new innovations of the past five year period. To discuss all the product and program changes in complete detail would require many editions of the Orientor.

Integrated Photogrammetric Instrument Network IPIN

In FY75 the development of an extensive photogrammetric data collection/processing/editing network was initiated. This network or system was named, "The Integrated Photogrammetric Instrument Network" or IPIN. The IPIN was designed by DMAAC to improve/increase by an order of magnitude, DMA's capability to produce digital terrain data in support of DoD Advanced Weapon System and Digital Land Mass simulation requirements as well as ongoing mapping and charting programs. The IPIN is composed of a highly sophisticated collection system of AS-11A, AS-11B-1, and Advanced Compilation Equipment

(ACE) analytical stereo mapping devices, a post-processing system to handle all data processing, and an edit system.

Cartographic Data Base

As a result of a technical study initiated in 1973, DMA established the need for a centralized automated repository of digital data to provide responsive support in a cost effective environment for all programs requiring the use of digital data. DMAAC was tasked to develop and maintain this system for DMA. By expanding and enhancing the cartographic data base system, DMAAC developed a fully automated digital data management system (DDMS) which was implemented in January 1977.

The DDMS is comprised of a collection of digital data files to support various digital requirements for DoD users and within DMA and participating NATO countries. Digital data management, storage and retrieval are the three elements of the system.

Direct Positioning Photogrammetric Compilation Technique (DPPCT)

In June 1974 a management action was initiated to implement the Direct Positioning Photogrammetric Compilation Technique in the mapping and charting programs at DMAAC. With implementation of this several production steps were

example, the straight-in approach will start at an altitude of 25,000 feet, 18 statute miles north of the runway. The aircrew will visually monitor their descent and runway alignment using preselected graphic features. During use, they will also annotate any visual areas or feature characteristics which need special emphasis and return the graphics with comments to us.

A final edition STAG for the landing strip will be furnished to NASA later in 1977. Final approved specifications will then be used to furnish similar shuttle graphics for landing sites at Kennedy Space Center, Vandenberg Air Force Base and selected contingency fields.

Tomahawk Cruise Missile Flight Test Project

The TOMAHAWK Inertial Navigation System Proof Flight was conducted by McDonnell Douglas Astronautics Company-East in May 1976. The proof flight was designed to demonstrate that the Defense Mapping Agency Aerospace Center (DMAAC) could independently select terrain correlation maps to be used by Terrain Contour Matching (TERCOM) to update the inertial navigation system.

World Geodetic System

An improved World Geodetic System was developed and implemented in 1974 to satisfy the mapping, charting, and geodetic needs of the Department of

professional societies that provided the funds for the plaque.



ered into its first negotiated n. The signing ceremony is ement and NFFE Local 1827

ends Best Wishes

first director of the Defense tter to the current director, regarding the agency's 5th

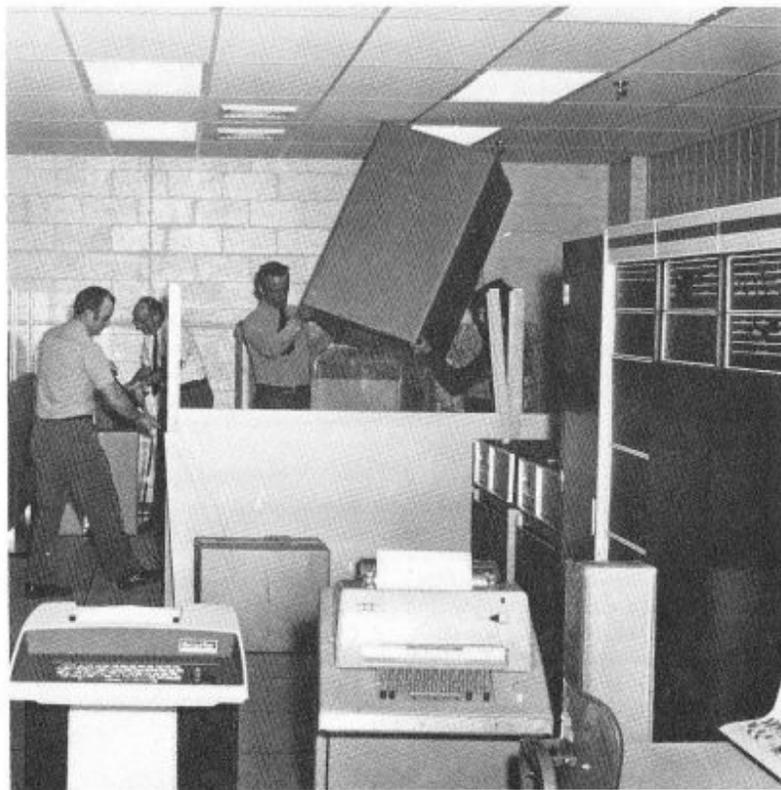
es to you and all the people

Agency which has, I think, measure the President's goal mpassion.

s' for the future as you em- e the general.



Some of the major equipment additions during the five year period was the installation of the Linear Input System which brings new technology to the Center in terms of automated cartography.



of the current production steps were eliminated from the current production process which significantly reduced manhour costs and reduced the calendar time. Implementation of the DPPCT resulted in an estimated savings of 12.6 million dollars relative to the FY 75-79.

Shuttle Training Aircraft Graphic (STAG)

The Space Shuttle Orbiter was rolled out at Palmdale, CA on September 17, 1976. Its schedule calls for its first Approach and Landing in July 1977 with the first manned orbital test flight scheduled for March 1979.

During training the existing topographic maps of the training area did not provide enough data for training purposes. Therefore, NASA aircraft flew a special mission in August 1976 to provide DMAAC with color photographs. We used these photographs to compile an uncontrolled mosaic which the pilots used until we could furnish another graphic, the Shuttle Training Aircraft Graphic (STAG).

The STAG is used to support Astronaut/Test Pilot training for the Space Shuttle Orbiter. The interim edition graphic was compiled and printed on a priority basis in November 1976. The NASA Trajectory Analysis Group will prepare overlays to the graphic keyed to planimetry data on the graphic for position location. Overlays will be prepared for 11 or 12 descent and landing approaches.

The training crews will use this graphic at the start of the various simulated landing approaches. For

needs of the Department of Defense. The system, designated as WGS-72, represents the culmination of approximately five years of data collection within the Department of Defense and the scientific community. Principal agencies involved in the developmental cycle were the Defense Mapping Agency and the US Naval Weapons Laboratory. The method of solution for an adjustment of this magnitude is characterized by the formation of a large-scale matrix by combining normal matrices from each of the major data input sets.

PPDB/APPS System

Development of Point Positioning Data Bases (PPDB) and related hardware (Automated Photogrammetric Positioning System—APPS) provided a major impetus to precise point determination by enabling using elements to identify and derive features of interest on line, in the field, and with significant reduction in processing time.

MINIBLOC

The MINIBLOC program was validated and accomplished by DMA to provide Maximum Terrain Elevation (MTE) data over selected areas in order to meet certain Air Force low level flight requirements.

Continental Control Network

The Continental Control Network (CCN) was developed to meet the technical MC&G accuracy objectives of future improved weapons systems. It is a homogeneous system of ground control features covering large areas from which point positions are derived.

KCO Employees Visit



Members of the Kansas City Office are greeted by Frank Roth, Chief, Aerospace Cartography Department, as they enter building 37 to begin a long day of touring the Aerospace Center facilities. The day started with a short welcome by Center Deputy Director, Col. Robert Burns and a quick overview of the Aerospace Center mission as it affects the Kansas City Office presented by Frank Roth.



Retirements

MABEL J. O'BRIEN, PDDI, retired on May 20 with over 34 years total Federal service.

Her Federal career began at the Army Ordnance Dept. in October 1942 as a clerk-typist. She transferred to the Naval Separation Center, then the War Assets Administration and the Navajo Ordnance Depot in Arizona prior to coming to DMAAC in November 1949, as a clerk-typist. In December 1952 she entered the property and supply clerk field and was a supply clerk/technician at time of retirement.

"I will work in my garden, do some volunteer work, work around the house (I'm a do-it-yourselfer), and travel," said Ms O'Brien.

"I like photography and like to collect information on things to do and places to see all over the U.S. In fact, I have a scrap book for each state."

Retirements effected in May for which no information was furnished the **Orienter** include:

GEORGE W. DUGGER, PDLA, retired effective May 6th with 30 years, 5 months total Federal service. He was an offset photographer and had been at the Center since February 1951.

HELEN A. KERSEY'S, PO, disability retirement was effected on May 11th. She had almost nine years Federal service, all at DMAAC, as a clerk-typist.

In Sympathy

John Duroso, a Security Policeman with the Aerospace Center, passed away June 16, according to information received here.

Duroso was on sick leave pen-



Five Years Old And Still Growing

Continued From Pg 1

the Center's Geodetic Survey Squadron in Wyoming. This was transferred to the DMA Topographic Center during a realignment of programs within the Centers. Most recently the closure of the Flight Information Office-Alaska, and transfer of its work to the Aeronautical Information Department here in St. Louis was recorded.

On the credit side of the ledger, the Aerospace Center will gain the Topographic Center Kansas City Office effective the first of July. This, as in all of the changes, has been a result of changing mission and program requirements of the Defense Mapping Agency as a whole.

One other deactivation of a Center unit is underway and will be accomplished during the latter part of summer. The Cartographic Technical Squadron at March AFB, California will end its illustrative career shortly, bringing to a close the era of the glass plate used in the simulator training program.

A number of Center employees have been honored by the Headquarters as part of the DMA Awards Day. The awards have ranged from suggestions to outstanding employees. Two awards were the highest DMA has to offer. The DMA Distinguished Civilian Service Award went to Frank Hines and David Young for individual acts of heroism performed when an explosion occurred in the Building 36 boiler room.

Joe Platte was the recipient of a Presidential Management Improvement certificate for a new and more efficient method of base manuscript preparation that he

and exterior of buildings, complete new exterior siding for the South Annex buildings, new heat and air-conditioning systems in some areas, and of course the addition of floors to the wing of Building 36.

In the area of effectiveness/productivity the Aerospace Center has been one of the DMA leaders with such actions as change to FLIP contract pricing structure, reorganization, direct positioning technique, standard revision of the Series 200 chart at CTS, tactical and strategic target data changes, photographic production of FT-3 tone scale and transfer of the CTS functions to the Aerospace Center. All these and others have added to more than 29 million dollars in improvement actions since the program inception in 1974.

From the employee view, perhaps the most notable change was the move to Flexitime in 1976, and its continuation in 1977.

There was also the central consolidation of all DMA payroll functions to the Aerospace Center Finance and Accounting office; the great flood and the deep snows of '73; the addition of NFFE local 1827 to the installation and the conversion to the metered mail system.

In terms of size of events, the Aerospace Center open house and Arsenal dedication ceremonies in May of 1976 had to be the number one accomplishment. Over 9000 persons attended, many seeing for the first time the inner workings of the Chart Center.

There are other events which took place over the last five year span, some will be brought back to mind as you read the articles and

Center June 10 as part of an orientation becoming part of the Aerospace work force on July 1st when the Kansas City Office function is transferred to the control of DMAAC.

DMAAC Softball Action

June 8th proved to be the date for the annual grudge game between the Gorillas and the Twins. Always a tough and important game of the season, the Twins, after losing last year, were up for this one.

The Twins jumped out in front with 5 runs in their half of the first inning on hits by Tom Bisel, Jim Haynes, Jim Brannon, Dennis Terhaar and George Manders. Not to be outdone the Gorillas came back in the bottom of the first with 3 runs of their own on a home run by Jim McCluer after Jim Sieve and Dennis Franklin had gotten on base. That proved to be the only runs the Gorillas could muster, as Twins pitcher George Manders became tough and shut them out the rest of the game. The only threat came on a triple in the second inning by Andrew Jackson.

The Twins didn't stop at 5 runs, in the third inning 4 more runners

crossed the plate on hits by Jack Wallace, George Huelsmann, Larry Holmgren and Tom Bisel. In the fourth inning Twins shortstop Jim "Killer" Brannon got a bases empty home run to make the score 10-3.

The fifth inning proved too much for the Gorillas as they gave up the final 6 runs on 4 walks and hits by Wallace, Bisel, Brannon and Pat Reed.

Tom Bisel and Jim Brannon led the way for the Twins with 3 hits each with Brannon driving in 5 of the 16 runs. Jim McClure was 3 for 3 for the Gorillas.

The entire Twins team played a strong defensive game with George Huelsmann shining in the outfield. The Twins raised their record to 2-3 while the Gorillas dropped to 1-3-1.

Duroso had been employed by the Center since 1961.

Mustangs 14, Twins 4—May 25

The Mustangs started off scoring runs in every inning with a 6 run outburst in the 4th inning. The Mustang defense kept the Twins scoreless until the 4th inning when they scored their first run on a home run. The Mustangs were led in hitting by Butch Thurman, 3 out of 4, with 1 home run; Bill Judge, 2 out of 4, both home runs; Paul Hudson, 2 out of 4; Gene Sylvester, 4 out of 4 including a home run and a double. The Twins leading hitters were Pat Reed, 3 out of 4; Buster Haynes, a home run and a single; Larry Henning, 2 out of 3. Carl Draper pitches in with a home run.

Mustangs 8, Gorillas 4—June 1

The Mustangs scored 5 runs in the first inning on 4 straight hits after 2 were out to provide a cushion for the rest of the game. The Mustangs added 2 runs in the fourth and 1 more run in the fifth. Fred Widitz started a good double play to kill a Gorilla rally as defense was the main feature the rest of the game. Mustang leading hitters were Rich Hulsey, 3 out of 4; Ed Barr, 1 out of 2 and a walk; Jim Swize, 2 out of 3; and Gene Sylvester, 2 out of 3.

agency when he suggested "For the good of the country" in the DMA motto contest.

In the area of community charity involvement, the Aerospace Center has continued to shine not only with Old Newsboys Day, Christmas charity donations, but with the Combined Federal Campaign since its inception in 1973. From the \$51,000 employees contributed in that year to the more than \$102,000 contributed last year the Aerospace Center people have really gotten involved in their community needs.

Physical changes to the Center during the five years have included new styles of paint on the interior

Leading hitter for the Gorillas was Jim McClure who went 2 for 3 in spite of a Willie Stargell type shift. Simpson blasted a 2 run home run for the Gorillas in the first inning.

Standings

Nads	5—0
Chargers	4—1
Mustangs	3—2
Twins	2—3
Panthers	2—3
Zymurgies	2—3
Gorillas	1—3
Cougars	0—4

mind as you reminisce through the first five years of DMA.

Promotions

The following people received promotions during the month of May: Clara J. Alexander, GS-5; Kathleen M. Carroll, GS-4; Ladorn Creighton, GS-13; David L. Gladden, WG-5; Lorraine B. Grither, GS-7; Elmer J. Hofmann, Jr., WS-10; Mary Ann Lombardo, GS-11; Joseph F. Mataske, GS-11; Margie L. Muench, GS-7; Norbert C. Pink, GS-11; Robert J. Wehrle, WG-13; Stanley F. Winkler, GS-11; Gertrude A. Gerszewski, GS-11; Virginia E. Green, GS-5; Jackson W. Harmon, GS-11; Juanita M. Hopper, GS-6; Gerald T. Hull, GS-9; Alfred H. Nagy, WP-27; Kenneth E. Reed, WS-10; Edward C. Roberts, WS-10; Donald W. Smith, GS-9; Jesse B. Snulligan, WL-10; Kenneth W. Thaller, WG-10; Dale A. Winters, GS-9.

The ORIENTOR is an official newspaper, published bi-weekly on Friday by and for the personnel of the Defense Mapping Agency Aerospace Center, at St. Louis, Missouri. Opinions expressed herein do not necessarily represent those of the DOD.

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Chief, Public Affairs Office
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