

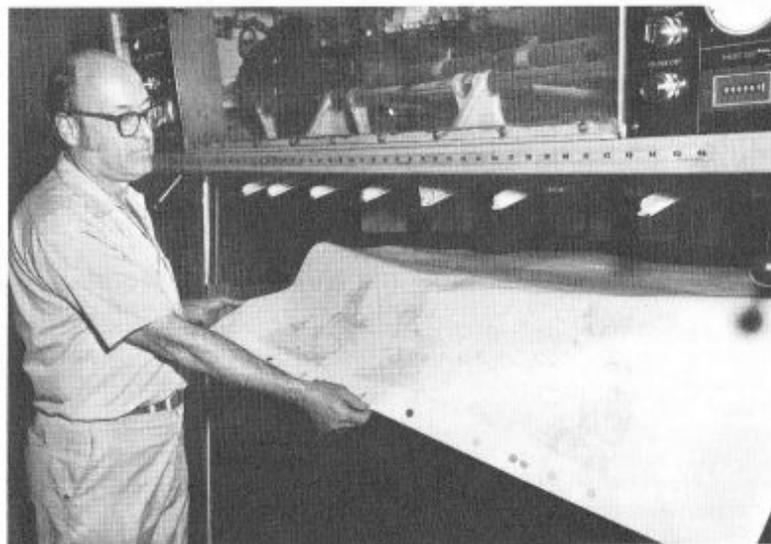
Orienteor

DEFENSE MAPPING AGENCY AEROSPACE CENTER

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March 27, 1981

MISSION CHARTS for the historic flight of the Space Shuttle Columbia roll off the presses at the Defense Mapping Agency Aerospace Center. Alfred Nagy, a lithographic pressman, removes a chart for inspection. The Aerospace Center produced a wide variety of charting products for the Shuttle Mission.



Charting Columbia's Course

Next month the nation's manned space flights are scheduled to resume with the launching of the space shuttle orbiter Columbia from Kennedy Space Center in Florida. Here in St. Louis Aerospace Center employees have been busy for the past several months developing and producing the cartographic products that will be used for the historic flight—the first since the 1975 Apollo/Soyuz mission.

From star charts for navigation to a series of unique maps for the landing phase of the operation, the

visually monitoring the ground to evaluate the guidance system performance. In the final Phase, **Phase IV**, very large scale maps were produced to assist in identifying and visually acquiring the final glide slope and touchdown points.

A flight format book has been prepared that contains data on primary, secondary and four contingency landing sites. The book contains the six airfield data sheets and 72 special format maps.

Besides landing charts the Aerospace Center produced a

positions of solar terminations.

There are two different Orbit Maps. The first is the Mecator Orbit Map. This 1:52,000,000 scale map was produced to support missions launched from the Kennedy Space Center. The base map is overprinted with Spaceflight Tracking and Data Network, (STDN), configuration (station and antenna selection) and landing site data. The other is the Polar Orbit Map. This map shows the northern and southern hemispheres and will be produced for Polar Orbit Missions. These

Federal Employees Help Sought In Area Food Drive

"We need the help of Federal employees," said a spokesman for Food Crisis Network (FCN) of St. Louis, in announcing a special "Spring Harvest" food drive set for April 13-17. Nonperishable food stuffs are needed by FCN to provide emergency food assistance to hundreds of individuals and families that daily have a hunger or nutritional crisis in St. Louis.

The Federal Executive Board of Greater St. Louis has agreed to allow the food drive to be conducted at the various Federal agencies in the St. Louis area. "The drive provides Federal agencies and employees the opportunity to continue their excellent pattern of helping those in the community that cannot help themselves," said RAdm Norman Venske, USCG, chairman of the Federal Executive Board.

The week long collection has been named FEED, which stands for Federal Employees Emergency Drive. The Aerospace Center, like other agencies, will participate in the program with food item collection points located at both Second Street and South Annex.

Participation is simple. During FEED week (April 13-17),



Federal Employees Emergency Drive

Aerospace Center employees may bring any nonperishable food stuffs (canned goods) to work and place the donated items into one of the marked FEED collection barrels. The barrels will be located at Second Street near the front entrance of Building 36 and at the entrance to the 1D Wing. Employees at South Annex will find the collection barrels located outside the snack bar located in Building 89004.

The collected food items will be delivered to the Food Crisis Network by volunteers from the Veterans Administration.

The Food Crisis Network is a vehicle for raising and channeling money and food to social service agencies and religious organizations in the St. Louis area.

Agency Goals

There are 15 major goals that have been outlined by the Defense Mapping Agency Director, Maj. Gen. William L. Nicholson, III, for the current fiscal year. Discussing the goals in a letter to component directors the general said, "You will note . . . items which will tax our programs and our administrative ability to advance DMA's internal and external

6. Initiate the Pershing II reference scene generation capability at DMA during 1981.

7. Refine the MC&G M-X error budget and production plan consistent with the approved basing concept to meet the systems IOC date.

8. Review and revamp the production and distribution pipelines of major DMA categories

landing phase of the operation, the Aerospace Center input is an integral part of the shuttle mission. During the 54 hour flight the Columbia will circle the globe 37 times. Special orbit charts will help shuttle astronauts, Crippen and Young, maintain their groundtrack, critical for navigation during the orbit phase of the mission.

The most unique portion of the entire precedent setting mission will be the landing sequence. Unlike other U.S. manned flights that involve one mission space capsules, the shuttle program is designed around a fully "reusable" space vehicle. With the dawn of the Shuttle Age the astronauts will be required to make runway landings.

The Aerospace Center was tasked by NASA with creating charts that dealt with peculiarities of the landing. The Columbia will come in for a deadstick (powerless) landing, touching down at approximately 200 miles per hour.

The landing sequence is in four phases. For **Phase I**, small scale maps were produced to support flight crew activities 400 to 200 miles from the landing site. These activities include visual acquisition of prominent natural and cultural features to establish map to ground correlation. In **Phase II**, intermediate scale maps were produced that support activities 200 to 50 miles from the landing site. This includes monitoring the shuttle flight path. For **Phase III**, large scale maps were produced to support activities 50 to 7 miles from the landing site, this includes

Aerospace Center produced a variety of products for the Shuttle Program. Among these are Star Charts which are special charts that were developed to assist the flight crew in visually locating fifty stars selected for on board navigation. Next is the World Map Book which contains intermediate scale maps used to support flight crew identification of terrain features and area during out-of-the-window viewing of the earth's land areas. The World Map Book assists in locating general areas containing visual and photoscience sites. Also produced for the Shuttle Mission were Orbit Maps which are small scale maps that support the flight crew earth surface referenced activities while in orbit. These activities include maintaining knowledge of the shuttle's groundtrack, Spaceflight Tracking and Data Network (STDN) site tracking limits, crossrange limits for landing at six sites and

for Polar Orbit Missions. These missions which begin in 1982 will be launched from Vandenberg, AFB, California. This map will also be overprinted with STDN and landing site data.

Before the Columbia reached the launch pad the Aerospace Center was involved in the shuttle program with products used in the flight simulator to train astronauts. The simulator not only duplicates the instruments, computers and control systems in the actual spacecraft, but it also portrays what crew members will see from the cockpit windows. Daylight, darkness, land or ocean below, even the position of the sun, moon and stars are duplicated by use of data and materials provided by the Aerospace Center.

As the U.S. enters the newest frontier of space exploration, the Aerospace Center, as it has since the first manned orbit mission in 1962, will be there to guide the way.

Hemple New ASP Vice-President

William G. Hemple, PPIP, has been installed as the vice-president of the National American Society of Photogrammetry (ASP) during the Joint Annual Convention of the ASP and the American Congress on Surveying and Mapping held recently in Washington, D.C.

Hemple has held various regional positions during the past 19 years and has served as the region representative from 1973 to February 1981. Nationally, he has

served on the Executive Committee from 1976 to the present; he is vice-president and an original trustee of the ASP Foundation; and, more recently, was the author of the new Constitution and Bylaws for the ASP.

Hemple will progress to president-elect of the national ASP in 1982 and will become president in 1983. The American Society of Photogrammetry has approximately 7,000 members worldwide.

DMA's internal and external posture of efficiency, effectiveness, productivity and responsiveness. The listing is not intended to be all inclusive, but these significant goals should be factored into your personal and organizational objectives."

So that all employees will have an appreciation for the magnitude of the DMA mission and the objectives being sought, the following summary of the 15 items is provided:

1. Insure that future collection systems are optimally configured to satisfy MC&G requirements. Assure that Centers have the technological capability and trained personnel to fully utilize these systems materials in hydrographic, topographic and aeronautical programs.

2. Meet the minimum essential cruise missile program according to schedules developed between DMA and the user and continue to refine user requirements.

3. Phase II actions relating to the augmentation of DMA's main frame computers must continue to warrant a high priority in the Centers during FY 81. Further, reduce by 25% the abort rate found in the utilization of large scale S&T computers.

4. Establish the production capability to satisfy the minimum essential needs of the Rapid Deployment Force and continue to refine user requirements.

5. Implement the Merit Pay System for GS-13 through GS-15 grades along with other pertinent aspects of the Civil Service Reform Act.

of products through modifications of work processes, job enlargement, movement of materials, organizational changes, contracting/in-house mix of production effort, etc. Part of the effort will be to enhance the role of the DMA field offices through continued introduction of new technology, new programs and improvements in communications, training and working environment.

9. Expand DMA's cooperative mapping and charting program into new areas to reduce costs of satisfying DoD MC&G requirements.

10. Complete a full assessment of the DLMS data base in support of current weapon systems and define a standard base for satisfaction of advanced weapon systems needs through the 1990 time frame.

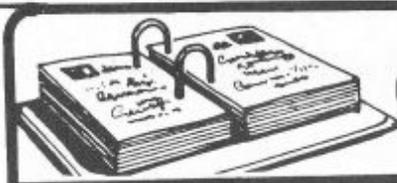
11. Strengthen production process quality control and refine production management procedures for monitoring quality control of MC&G products.

12. Strive toward the identification and formalization of an all digital "System 90" capability.

13. Implement DMA's Affirmative Action Plan and increase efforts to hire and place minorities and women at all skill levels.

14. Complete a review of the DMA Planning System, revise critical plans and undertake the development of additional plans as required.

15. Advance the role of professionalism in the DMA work force by training, development and assignments.



Calendar

April 1981

APRIL	EVENT	WHERE	RESPONSIBILITY
2	Toastmasters	Lindbergh Rm.	C. McVay/4454
7	BAG Mtg.	5th Flr Conf. Rm.	G. McGuire/4742
7	JA Mtg.	GA Conf. Rm.	J. Hagedorn/4974
9	IMAGE Mtg.	4604 Gravois	C. Athie/4276
9	Toastmasters Book Mtg.	SD Conf. Rm.	C. McVay/4454
11	DMAAC Women's Club Dinner Dance	Dining Hall	L. Swehla/631-5569
14	FBA Meeting	Carpenter's Hall	D. Black/4142
14	JA Mtg.	GA Conf. Rm.	J. Hagedorn/4974
16	AGU/AMS Joint Mtg.	Scott AFB NCO Club	J. Jones/4742
16	Arsenal '76 FEW Mtg.	Dining Hall	M. Gruenewald/4960
16	Toastmasters	Lindbergh Rm.	C. McVay/4454
17	Bloodmobile	2nd Street	C. Hardin/4047
21	JA Mtg.	GA Conf. Rm.	J. Hagedorn/4974
22	SECRETARY'S DAY		
28	NFFE Local 1827	Dining Hall	V. Haun/4044
28	JA Mtg.	GA Conf. Rm.	J. Hagedorn/4974
30	Toastmasters Extra Mtg.	Lindbergh Rm.	C. McVay/4454

Contact Nancy Brannon/4142 to have your May events listed.

Irish Eyes??



Military Arrival

Air Force Technical Sergeant Mansanori M. Tanihara recently arrived for duty at the Aerospace Center as the Non-commissioned Officer in Charge of Procedures and Standardization in the Supply and Services Division of the Directorate of Logistics.

He came to the Center from the Allied Forces Central Europe in Brunssum, the Netherlands where

AGU Meeting April 16

The St. Louis Metropolitan Branch of the American Geophysical Union will hold its annual joint meeting with the American Meteorological Society on Thursday, Apr. 16 at the Scott Air Force Base NCO Club.

Professor Seymour L. Hess, Chairman, Department of Meteorology at Florida State University will be the guest speaker and talk on the subject, "Meteorological Observations on the Surface of Mars - The Viking

Missions".

The meeting will begin with social hour at 6:30 p.m. followed by dinner at 7:10 p.m.; the business meeting at 8:00 p.m.; and the speaker beginning at 8:30 p.m.

Ticket price for the meeting and dinner is \$5.25 per person. To purchase tickets at the Aerospace Center contact Joe Dicus, GDGG/8410; Inez Dimitrejevich, GDGA/4742; Carol Greco, CDC-T/4676; Don Lingle, GDLB/4238; and B.J. Boyer, GDP/4851.

Women's Club Dinner- Dance Apr. 11

The DMAAC Women's Club is sponsoring a dinner dance with the theme "A Star Spangled Banner Evening", on Saturday, Apr. 11 in the Aerospace Center Dining Hall.

The evening will begin with social hour from 7 to 8 p.m., followed by a dinner from 8:00 to 9:30 p.m. and then dancing from

9:30 p.m. until 12:30 a.m. to the music of the Larry Mantese Orchestra. The menu will be roast beef, ham, potatoes au gratin, carrots, broccoli, salad, rolls, apple sauce or chocolate cake, beverage and dinner wine.

Tickets are \$10.00 per person.

Comptrollers Meet May 27-29

The St. Louis Gateway Chapter of the American Society of Military Comptrollers will host the 1981 Professional Development Institute scheduled for May 27-29 at the Sheraton St. Louis hotel in downtown St. Louis.

The theme will be, "Professional

Comptrollership—Gateway to Mission Effectiveness." The institute will feature 20 workshops and luncheon guest speakers.

Paul B. Morton, Comptroller of the Aerospace Center, will serve as chairman of the institute.



We don't know about the Irish eyes, but the 8900 group from ADAC-B (pictured above) used the occasion of St. Patrick's Day to sample a variety of green pastries and bread in the form of serpents and other notable Irish figures. The true Irish flavor could be seen at Second Street also when Jim Mohan (left) of the Public Affairs Office donned his Irish white and green suit to proudly announce his lineage.

he was NCOIC of the Base Service Store.

Sergeant Tanihara holds a BS degree in business administration from Wayland Baptist College in Plainview, Texas. He is a native of Rohwer, Ark.

In Sympathy

Word has been received of the Mar. 15 death of William B. Scott, former employee of the Aerospace Center. He retired approximately 10 years ago where he worked in the Cartography Department.

His death occurred in Columbia, Mo.

Word, has also been received of the Mar. 5 death of Bill Emanuel, former employee of Det-1, ACIC, who passed away while on vacation in Florida.

Burial was at Arlington National Cemetery on Mar. 23.

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, as authorized by DoD Instruction 5120.4. Opinions expressed herein do not necessarily represent those of the DoD.

Col. Robert C. Burns
Director

David L. Black
Chief, Public Affairs Office

Nancy Brannon
Editor

87, A Long Time

If his uncle is any example, Vernon Charleston may be working in the Aerospace Center's Comptroller office for a long time.

According to a recent article in the Festus-Crystal City The

Democrat-Pilot, Vernon's 87 year old uncle, Harvey Charleston, is the oldest, still active, blacksmith in Missouri.

Harvey has been a smithy for more than 50 years in the Twin Cities area and still is called upon to pound plow shears and brush hog blades on his anvil. He gave up shoeing horses "early on" and focused his attention on welding and metal work, stated the article. "Those animals would lean on you something awful. When one of them bit me in the back, I decided to quit that part of it."

While Vernon, the nephew, may work in a building that dates to the 1840's and on an installation that probably had a resident blacksmith in it's glory days of the Civil War, he hasn't had the problem of horse bite, at least not yet.

Patrolman of Month



Freddie Williams was selected Security Policeman for the month of February. According to security officials, "Williams, who works the day shift, is becoming well known for his courteous and professional attitude, neat appearance and willingness to offer assistance to visitors and employees of the Aerospace Center."

Williams has been at the Center for 2 year, 6 months. He also served in the U.S. Army from 1943 until 1968.



When you work on your Federal income tax return this year, be careful. Read the tax instructions carefully to find the rate schedule or tax table for you. Only one table or schedule applies to you.

You will find instructions for the tax tables in the tax package you received in the mail. Select the appropriate table and fill out your return accurately.

Center Data Base Key to Future Flying System

In the future pilots may be able to fold up their paper navigational charts and turn on, instead, a TV display for pertinent map information, according to engineers at the Air Force Aeronautical Systems Division, Wright Patterson AFB, Ohio.

The map display—updated continuously from a digital memory of terrain data—would give airborne pilots perspective views of terrain with both natural and man-made features added. In effect, the map would permit pilots to see what's ahead and below their aircraft despite weather, darkness and radar jamming.

The digitized data bank of large terrain features for the electronic map test program is being provided by the Aerospace Center from the digital data base file currently used for digital radar landmass simulation.

Under the sponsorship of the Avionics Laboratory (Wright-Patterson), a program entitled the Airborne Electronic Terrain Map System calls for delivery in August 1982 of a "brassboard" model of an electronic map. Last fall Hughes Aircraft Co. was selected to complete final design and build one brassboard model of the terrain map.

Air Force project engineer Donald Small says testing the

electronic map will be helpful in establishing which map features pilots like and would use—if the map were in operational aircraft.

"We've had enthusiastic comments from pilots who have seen a computer simulation of the terrain map built in-house by map developer Dr. Louis Tamburino and computer scientists," said Small. "But this new model will have many refinements and more closely resemble what could be built in production quantities."

For the laboratory tests and in operational use, the new map will be coupled to an aircraft's navigation computer that calculates the vehicle's "state vector"—e.g., heading, altitude, latitude, longitude. Thus, a pilot glancing at the map display would see a combination of light data and terrain information.

Ultimately, production models of the map could be tailored to display the navigational check points that a pilot prefers, e.g., one pilot may want to see roads whereas another may prefer natural terrain features. Since the maps electronics would be programmable such tailoring should be a relatively easy task, Small said.

As installed in the test cockpit the new map will depict terrain with cultural or man-made features, e.g., buildings, dams, on

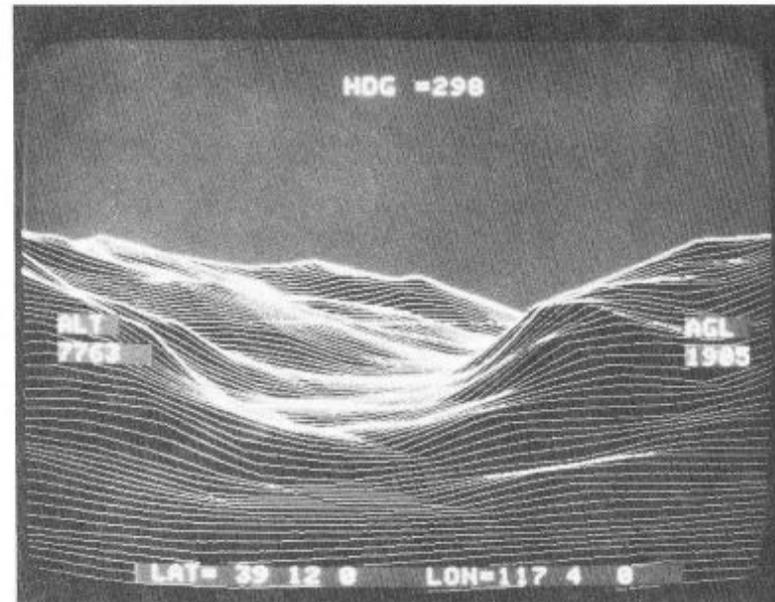
a standard color television screen and the head-up display already in the laboratory test cockpit. Additionally, the display could be used for bar graphs and chart displays of various flight parameters.

All of the data display is a result of the Aerospace Center data bank of digitized data. The electronic map is being designed to store very large areas which, in turn, require sophisticated data management and data compression techniques.

The prototype map will store a quarter of a million square miles and use more than 1,500 bits per square mile to encode both terrain and limited cultural data. Small size and portability are among the distinguishing design features of the airborne map. These features necessitate a customized map design which processes data more than 100 times faster than conventional mini/micro computers.

Besides in-flight applications, the electronic map also is envisioned as a pre-flight briefing tool. Before take-off the pilot could switch on the map video and preview his flight route.

The use of the Aerospace Center digital data base in the electronic map test program is just another example of the close technological relationship that exists between the MC&G community and the developing aerospace systems.



This is the airborne approach to a mountain range as depicted on an engineering model of the color electronic terrain map under development by Avionics Laboratory at Wright-Patterson AFB as a navigation aid for pilots. Aerospace Center digital data bases are an integral part of the new developmental project. As the aircraft flies, the new map would display scenes of the ground reconstructed from data in a massive digital memory of terrain features. When the aircraft altitude and heading change, the picture is continually updated automatically many times per second to give perspective views of ground features. Since the map is coupled to a navigational computer, aircraft heading, altitude, latitude and longitude readings can be superimposed over the map.

From Upward to Onward

After more than four long years of rigorous and intense training, the "Upward" in Upward Mobility has become a reality for those enrolled in the Center's cartographic upward mobility program. Now it's "Onward" to new careers.

It all started four and one-half years ago when 14 employees from a variety of backgrounds—clerk-typists, computer aides, editorial clerks, secretary-stenos, cartographic technicians, elected to

Forest Park Community Colleges to teach these courses. Additionally, there were more than 1,000 hours of different courses taught by instructors at the Center. Mixed in with the academic requirements were hours and hours of hands-on-training in actual production environments. As one new cartographer put it, "It was like 24-hour school for four and one-half years."

For one, the long hours and hard

Carto Class Grads



*Bits
And
Pieces*



Recent graduates of Cartographic Training Class 81-C were: First row, left to right: Charles E. Hubbard, AB Washington University, St. Louis, MO.; MAT Webster College, Webster Groves, Mo.; Gregory A. Papcun, Virginia State University; Paul P. Koniak III, Southern Illinois University, Edwardsville, Ill.; Russell W. Causey, Western Kentucky University. Second row, left to right: Brian J. Michael, Illinois State University, Normal, Ill.; B. Clay Biberdorf, Arizona State University; Susan D. Chambless, Florida International University; Mary Jo Staron, South Dakota State University; Barbara A. McIntosh, Harris Stowe State, St. Louis, Mo.; Alice J. Fyalka, Southern Illinois University, Edwardsville, Ill.; Marjorie S. Zimmerman, AB Smith College, MAT Harvard University; Thomas N. Lane, Kansas State College. Third row, left to right: Walter L. Rohn, Central Michigan University, Todd W. Smith, Miami University, Oxford, Ohio; Joseph E. Barron, St. Louis University, St. Louis, Mo.; Kim R. Wilson, Southern Illinois University, Edwardsville, Ill.; Thomas J. Nowotny, Washington University, St. Louis, Mo.; John E. Liebsch, South Dakota State University; Mark E. Oswald, South Dakota State University.

Lockhardt Makes List

Janet E. Lockhart, DAS, recently made the Dean's List at Florissant Valley Community College for the Fall 1980 semester. She was also initiated into the Phi Theta Kappa Fraternity, which is the national honor fraternity for

community colleges.

Lockhart plans to graduate in December 1981 with an Associate of Arts degree in business administration. She carries a grade point average of 3.75.

From the Black book:

Every once in a while our research of a story takes us into the morgue files of old newspapers. Usually such a journey results in much more information being obtained than the original story required, in fact, most of the additional info falls in the category of trivia. So it was the other day when we were looking through a December 9, 1932 copy of the *St. Louis Star-Times* and the large layout ads caught our eye. Here is a sampling of the items and prices from the Boyd's Subway Store advertisement: overcoats \$13.85, white shirts \$1.00, and pajamas for only \$1.00. In some of the other ads of the December 9 edition we noted women's and misses footwear for \$1.44, silk undies 44¢, chiffon stockings just 50¢, silk lingerie \$1.98, men's ties 89¢ (makes me shudder—I just paid \$12.50 for one). Perhaps the ad that brought back the most memories for me was the 12 tube, long and short wave radio for only \$29.50 or \$1.00 a week on terms. I can remember days when the family gathered around the radio at night to hear the Cardinal ballgames and because of the distance we lived from St. Louis (1000 miles) we had to put our hand on top of the radio to make KMOX come in better. I guess things really haven't changed as much as I thought . . . today we get up and fidget with the TV antenna so that when the pitcher throws the ball it doesn't look like two batters at the plate.

dlb . . .

Pieces

clerks, secretary-stenographers, cartographic technicians—elected to try for the coveted title of professional cartographer. The group averaged six years of Federal service each, and had an average grade of GS-5 when they entered the program.

With the graduation of the final five in the program early this month, the participants have all reached the GS-9 level as cartographers with some advancing to the GS-11 level based on advanced educational and work experience. Only one of the original group did not choose to complete the program.

"The program was good because I got my GS-9, but four and one-half years was too long for training and it got discouraging," said one graduate. She quickly added, "The program was worth it because of the money and because I like the job, it is very interesting work. My plans for the future are to finish school and get my degree in Systems and Data Processing."

Some of the participants, because of previous work experience and/or education, were able to accelerate under the program. Several took extra off-duty educational courses and earned degrees.

The basic program was one of hard work. The Aerospace Center provided a total of 27 semester hours in such courses as trigonometry, physical geography, cartographic methods, photo interpretation and geomorphology, by bringing to the Center professors from Meramec and

For one, the long hours and hard work brought this comment, "Monetary-wise, the program was worth it—mental wise it was questionable." But there is no doubt that the program represented a means to an end for her as she expressed a desire some day to be a division chief.

Perhaps the entire purpose and result of the program was summed-up by Robbi Braundel when she said, "It was worthwhile because it gave us an opportunity to get into a field where the work was more interesting and challenging than what we were in." Mrs. Braundel was one of those who spent extra hours on her own to earn a degree in Data Information Systems, graduating with a 4.0 grade average. She also took time out from the course to have a baby, thus resulting in her being in the final group of graduates.

Peggy Matkin, who has been the group's supervisor for the past two years, complimented them all. "The students that have been given this opportunity (Upward Mobility training) and completed the program are good cartographers. They are all very capable of doing cartographic work."

Originally the program was conceived to identify high potential Center employees occupying lower level dead-end jobs and to provide those individuals the opportunity to progress in a career program. For 13 the opportunity was grasped; the challenge accepted; and now the reward has been reaped.

We Asked Them

What are the advantages/disadvantages of working at South Annex?

And They Answered. . .



"I think I like the smaller environment, we have a better camaraderie. I feel I can have a more personal working relationship. Secondary advantage is parking—you can park right outside the door and on rainy days it's a Godsend. The disadvantages are being separated from Second Street we feel the time lag (distance between installations). I also feel it affects our production. I also lost my carpool by being assigned to the Annex."

—Dennis Franklin/CDAT



"The advantages are it is closer to home; a more relaxed atmosphere; we are in a newly renovated area which is nice; and you can walk around the lakes at lunch time. The disadvantages are that I miss seeing people at Second Street on a daily basis, and the computer I use is located at Second Street which means loss of time in travel. One great thing about South Annex, though, is the elevators never break down."

—Robbi Braundel/CDAT



"Parking is a definite advantage. The disadvantages are that I miss all the people up at Second Street, it's hard getting stuff in the mail, and it is farther from my home."

—Ernie South/CDAD



"For me the disadvantage is I have to drive five miles farther to work. Parking is terrific down here, you park and walk right in the door. I like it because there's not as many people, it's quieter, not the hustle and bustle of Second Street. I worked at Second Street for 12 years and didn't think I would like it, but I do."

—Betty Forniss/DAPR

JAers Fare Well

The three Junior Achievement Companies sponsored by the Aerospace Center—Money Manufacturers, Children of Production, and Excellence's Enterprise—attended a Trade Fair held recently at Jamestown Mall.

The Fair netted the achievers over two hundred dollars in sales of items such as pen holder sets, can lamps, zodiac plaques, art and crafts plaques, bottle lamps, trivets and shopping pads. The achievers were able to use the sales techniques taught by their advisors. Those from the Center in attendance were: Allen Williams, GDMCD; Johnetta Lowe, CDIAD; Maurice D. Williams, SDDSC; Jo Ellen Young, CDIDD; Beverly Williams, SDCS; Gross T. Marcus, CDCB; and Willie Petty, CDCDB.

Junior Achievement is designed to give young people the opportunity to learn about the free enterprise system through the operation of their own mini business. Adult leadership is provided on a voluntary basis by Aerospace Center employees.

Sport & Rec News

The Aerospace Center Sports & Recreation Council wishes to announce a DMAAC night on the Goldenrod Showboat on Sunday, Apr. 26. Group rates are available

Men's Basketball League

The 1980-81 DMAAC Men's Basketball regular season championship belongs to the Fast-Breaks. The Fast-Breaks concluded their season with a record of 17 wins and 1 loss. With the Fast-Breaks impressive league record, they are the tournament favorites to capture the DMAAC Men's Basketball Championship. Today is the championship game beginning at 4:00 p.m. at the Souldard Recreation Center.

On Mar. 5, Rob Goodrich poured in 22 points and Joe Wilson added 19 to carry Tom & Jerry's to a 78-50 victory over Mike & Min's. Chuck Arns scored 20 points for Mike & Min's.

In the second game of the evening, Ronnie Boyd (26 points) and the M.G. Bumpers continued their excellent play as they defeated the Gorillas, 74-52. Alex Coleman tallied 13 points for M.G. Bumpers while Mike Kuhnline and Bill Small scored 13 and 12 points respectively for the Gorillas.

On Mar. 9, clutch shooting by Dave Paulton (14 points) and Rob Goodrich (16 points) enabled Tom & Jerry's to defeat the Bruins, 58-46. Joe Wilson contributed 15 points for the winners while Brian Lewis had an excellent night for the Bruins with 23 points.

Jeff Connor's 20 points paced the Rookies to a 59-36 victory over Mike & Min's. Greg Shepherd and Mark Oswald scored 10 points each for the Rookies. Ken Street tallied 14 points for Mike & Min's.

On Mar. 11, Eugene Allen hit a jump-shot with 4 seconds left in the game, to give the Fast-Breaks a thrilling 46-44 victory over Thurmurs. Lee Fuqua and Art Bennett scored 17 and 16 points respectively for the Fast-Breaks while

led a balanced Bruin attack as they defeated the Minutemen in a hard-fought game, 59-56. Brian Sikes (28 points) and Dave Hocksteder (17 points) had excellent shooting nights for the Minutemen.

In a game closer than the final score, Mike & Min's played M.G. Bumpers even in the 1st half until Ronnie Boyd (10 points) and Zachrey Franklin (17 points) gave M.G. Bumpers a 76-49 victory. M.G. Bumpers completed their schedule with a 13-5 record. Dennis Shannon led Mike & Min's with 11 points.

On Mar. 16, the Hollywoods concluded their schedule with a 55-25 victory over the Minutemen. Victor Wright paced the Hollywoods scoring with 15 points while Willie Pearson and Willie Petty scored 14 and 12 points respectively. Dave Hocksteder scored 15 points for the Minutemen.

In their best game of the season, the Fast-Breaks exploded for a 87-58 victory over Tom & Jerry's to win the league championship. The Fast-Breaks had a phenomenal shooting night as 5 players scored in double-figures. Lee Fuqua paced the Fast-Break attack with 21 points while Robert Bradley and Art Bennett added 19 and 18 points respectively. Thales McReynolds hit 17 points for Tom & Jerry's.

On Mar. 18, the Fast-Breaks defeated the Bruins, 58-38. Lee Fuqua scored 22 points and Eugene Allen added 14 points for the Fast-Breaks, Brian Lewis led the Bruins with 14 points.

Dave Starkey's 25 points led Thurmurs to an easy 82-39 victory over the Gorillas. Mike Lewis and Steve Wallach scored 17 and 16 points respectively for Thurmurs. Mike Kuhnline led the Gorillas with 13 points.



"Up until recently one of the advantages was the parking. The entire atmosphere at the Annex is less congested—you don't feel like you're in a big department store. The only disadvantage is the distance from my home which means more gas money. But still, I would rather be at the Annex."

—Richard Broaddus/LOSI



"The advantages are the parking—it's still better than Second Street, and it's closer to my home. One disadvantage is I don't think you get out of your office as much—had broader horizons at Second Street. But, people are friendly at both locations."

—Debbi Lynch/ADT

Airmen & Families To Walk Around World

Service members and their families will march around the world June 6 in a day-long volksmarch relay sponsored by the morale, welfare, and recreation directorate of the Air Force Manpower and Personnel Center here.

The march — called Global I — is part of MWR's Year of the Family celebration. The first leg of the relay will begin at Andersen AB, Guam, and the anchor leg will be walked by Tin City AFS, Alaska, residents. Andersen is the first base west of the international dateline. As people in Alaska finish the event, those in Guam will be

speaking of it in terms of yesterday.

Walkers will follow the sun, with marches beginning as the sun rises over their base. The closed-loop route is usually 10 to 15 kilometers (6.2 to 9.3 miles) but 20- to 25-kilometer (12.4 to 15.5 miles) treks can be taken by the more ambitious volksmarchers.

Volksmarchers is a non-competitive, family event with participants following the marked route at their own pace, stopping at designated points for rest and refreshments. All Global I participants will receive a specially cast medal in recognition of their achievement.

Apr. 26. Group rates are available for \$11.95 per person, which includes dinner and show. Reservations are required for dinner with times of either 5:30 pm. or 6:45 p.m. with the show starting at 8:00 p.m. The show for the evening will be "Svengali" which is the tale of the infamous Machiavellian Mesmerer who casts his spell on the innocent Trilby.

Tickets may be purchased from Carol Greco, 4676, Noble Ladd, Kate Doyle, 4425, Roger Mitchell, 4425, Paulette Martin, 8309 and Chuck Arns, 4901. Dinner reservations can be made with the ticket purchase from the Council members. Deadline for purchase of tickets is Friday, Apr. 10.

Dave Starkey led Thurmurs with 17 points.

After a close 1st half, the Hollywoods pulled away from the Gorillas to gain a 63-51 victory. Robert Bryan paced the Hollywood's attack with 21 points while game honors went to the Gorillas Mike Kuhnline with 27 points.

Gary Brown led M.G. Bummurs with 20 points as M.G. Bummurs defeated the Minutemen, 61-27. Willie Gibson and Alex Coleman scored 12 and 11 points respectively for M.G. Bummurs. Dewey Strobel scored 12 points for the Minutemen.

On Mar. 12, Stan Allen (14 points) and Brian Lewis (12 points)

with 13 points.

Rob Goodrich (15 points) and Joe Wilson (13 points) led Tom & Jerry's to a 55-35 win over the Rookies. After a close 1st half, Tom & Jerry's pulled away with a strong defense.

—Chuck Arns

Final Standings

	Won	Lost
Fast-Breaks	17	1
Tom & Jerry's	14	4
M.G. Bummurs	13	5
Thurmurs	13	5
Hollywoods	12	6
Bruins	8	10
Rookies	7	11
Gorillas	4	14
Mike & Min's	2	16
Minutemen	0	18

Fuqua Is Basketball Scoring Champ

Lee Fuqua, the 6 foot guard for the Fast-Breaks, is the DMAAC Basketball League scoring champion. Lee combined outcourt shooting and quickness to score 388 points for an average of 22.8 points per game. The top ten scorers in the league are as follows:

	GAMES	POINTS	AVERAGE PER GAME
Lee Fuqua - Fast-Breaks	17	388	22.8
Mike Kuhnline - Gorillas	17	266	15.6
Dave Starkey - Thurmurs	16	246	15.4
Alan Kerkemeyer - Hollywoods	15	225	15.0
Ronnie Boyd - M.G. Bummurs	16	236	14.8
Art Bennett - Fast-Breaks	18	260	14.4
Robert Bradley - Fast-Breaks	17	242	14.2
Brian Sikes - Minutemen	16	227	14.2
Brian Lewis - Bruins	13	172	13.2
Joe Wilson - Tom & Jerry's	18	235	13.1



Lee Fuqua displays the form that won him the basketball scoring title as he goes up for a shot.