

**NIMA St. Louis  
1997  
Open House  
Tour Book**



## HELPFUL INFORMATION

During the Open House, the NIMA St. Louis Dispensary, located in Building 36, First Floor, Section B, is available to handle medical emergencies. In the event of an emergency, notify a member of the NIMA security police at extension 3-4222 or call the Medical Emergency Extension, 3-4028.

Cameras and recording devices are not allowed inside NIMA St. Louis buildings. Security personnel can assist you if you have a problem.

Food is available only for those who have a food ticket. Adult tickets entitle the bearer only to lunch. Children's tickets are good for lunch as well as 10 carnival games.

The Civilian Welfare Council store, located in Bldg 36, Basement, B section, will be open from 12:00 to 2:00 p.m. The store stocks a variety of NIMA logo items.

The Security Office is sponsoring a Child ID program where children can be fingerprinted and photographed for future identification. This will be done in the Lobby Exhibit Hall from 10:00 a.m. to 1:30 p.m.

Be sure to stop and see the two-part exhibit, Saga of the "Lone Eagle", created to honor the 70th anniversary of Charles A. Lindbergh's momentous solo trans-Atlantic flight from New York to Paris (May 20-21, 1927). It is currently on display in Building 36, First Floor. Part I is in the 1B hallway, and Part II is around the corner and to the right (near the Snack Bar).

A City of St. Louis fire truck will be on display next to the Dining Hall from 10:00 until 12:00.

Restrooms open in the non-secure areas are located in Building 18 (first floor); Building 36, 1B (across from Snack Bar); and in the Dining Hall.

Facility problems (such as spilled liquids on the floor, electrical problems, etc.) should be reported to the Service Call Desk at 3-4023.

A meeting area for lost and found children (and adults!) has been established at the stage on the parade grounds.

No smoking is permitted in any of the buildings.

An interpreter for the deaf will be in the Lobby at 1:00 p.m. for hard of hearing/deaf persons wanting to tour the facilities.

We would like to thank the many volunteers who made this event happen. We would also like to acknowledge and thank our sponsors: The Base Restaurant Council, Civilian Welfare Council, Arsenal Credit Union and Carlson Wagonlit Travel Agency.

## **SUGGESTED PRODUCTION TOUR #1**

1. **MISSION VIDEO.** A video on the work done by the National Imagery and Mapping Agency will be shown continuously. LOCATION: 1C Conference Room, Lobby Exhibit Hall, and Dining Hall.

2. **GEODESY AND GEOPHYSICS.** The Geodesy and Geophysics (G&G) Department is responsible for providing the Department of Defense (DoD) the precise geodetic latitudes, longitudes, elevations, azimuth, and gravity-related data needed for the testing and deployment of DoD weapon and navigation systems. The department collects and maintains the world's largest database of gravity information to generate products for DoD systems. The department also tracks the Global Positioning System (GPS) satellites to provide quality assurance of the broadcast GPS message for Air Force Space Command and to generate other GPS products for DoD and international use. LOCATION: Bldg 36, Lobby Conference Room. Video, briefing boards, surveying equipment display.

3. **GEONAMES.** The Geonames Team at NIMA St. Louis has as its mission the responsibility for ensuring that all geographic feature names on NIMA map and chart products are current. To support this mission, the team utilizes a computer system called the Geographic Names Processing System (GNPS). The GNPS houses an on-line Geographic Names Database (GNDB) of approximately 4.6 million foreign geographic names together with their coordinates and feature designations (e.g., hill, populated place, stream). Using the GNDB and native sources, geonames analysts produce a mylar overlay or computer tape from which NIMA map and chart compilers obtain the names for the final product. A copy of the Geographic Names Database is available on the internet through NIMA's home page at <http://osis.nima.mil>. LOCATION: Bldg 36, 2A. Demonstration.

**4. GEOPOSITIONING.** For imagery to be useful in the generation of accurate mapping products (graphical and digital), its relationship to the earth's surface must be known. Geopositioning accomplishes this by mathematically "typing together" overlapping stereo imagery. This imagery is then "nailed down" to the earth's surface using known camera parameters or a sufficient distribution of identifiable known control points. This entire process is called photogrammetric triangulation. Support data for the imagery is updated (adjusted) based on triangulation. Using this updated support data, our customers' systems may derive accurate geospatial information (latitude, longitude, and height) from geopositioned imagery. LOCATION: Building 36, 5E. Demonstration.

**5. DATA EXTRACTION SEGMENT.** The Data Extraction Segment is used to produce digital feature and terrain data from softcopy stereo imagery to support the NIMA mission of providing Geospatial Information in support of national security objectives. The production flow from this segment to the Product Generation Segment will also be discussed. LOCATION: Bldg 36, 5E. Demonstration.

**5.A. ANALYTICAL STEREOPLOTTERS.** These precision instruments support our world-wide customers. They are used to produce Digital Terrain Elevation Data (DTED) and Terrain Contour Matching data (TERCOM) which support mission planning, terrain modeling, and simulation activities. Two instruments are available from 1000-1200. LOCATION: Bldg 36, Basement, D wing, Room BD-08.

**6. ADVANCED EDIT SYSTEM.** This organization's mission is the automated production of aeronautical charts and an on-going program of special use products for the Joint Chiefs of Staff. LOCATION: Bldg 36, 2E. Demonstration.

7. **COMPUTER TO PLATE OPERATIONS.** This is a production area which scans all existing reprostat and creates digital files from manually-created charts. Quality edits are performed and a color digital proof is created and sent to the output device that is housed in Bldg 37. LOCATION: Bldg 36, 3C, Room 12. Demonstration.

8. **PRINTING OPERATIONS.** This area produces the final printed products. The presses are the output device for the computer-to-plate operations as well as the high speed, 40-inch digital press. LOCATION: Bldg 37. Demonstration. See sign outside building for times.

9. **ARC DIGITIZED RASTER GRAPHICS/COMPRESSED ARC DIGITIZED RASTER GRAPHICS.** ADRG (Arc Digitized Raster Graphics) is a digital, raster product produced by scanning hardcopy source. Data is collected from a single series and scale to be maintained as a worldwide seamless database. Available series include NAVPLAN products from 1:5 million to 1:250,000; TLM 1:50,000 and 1:100,000; city graphics; nautical; and MIMs (Military Installation Maps). The data is transformed into the WGS 84 datum and is stored on CD-ROM (Compact Disc-Read Only Memory).

The principal uses of ADRG are mission planning systems, flight simulators, and moving map displays. The data is also used to produce CADRG (Compressed Arc Digitized Raster Graphics) and CAC (Compressed Aeronautical Chart).

CADRG is a 1:55 compressed version of ADRG, and CAC is compressed at 1:48. CADRG is packaged into multiple scales and series and provides the customer with near ADRG image quality. The products and combinations available are GNC/JNC, ONC/TPC, JOG, and Ground Combat (includes ONCs, JOGs, TLM50 and 100s, Cities, and Combats). CAC CD-ROMs include only NAVPLAN charts and are by single series only.

The principal uses of CADRG are much the same as ADRG but with enhanced data interaction rates and a reduction in the number of CD-ROMs. CAC is a Navy-required product with much the same uses as CADRG and ADRG. LOCATION: Bldg 36, 2B. Demonstration and display.

**10. PROCESS IMPROVEMENT OFFICE.** This office provides analyses of present and future production processes and associated system developments. Their goal is to be in the forefront of the Agency's on-going improvement efforts. LOCATION: Bldg 36, second floor, Room 2501. Unattended walk-through.

**11. TECHNOLOGY WEST LABORATORY.** This office develops advanced geospatial and intelligence data products, production processes, and information services that satisfy internal and external customer needs. Leading edge technologies and commercial computing applications are used to create customer-required products and services in the most timely manner. A demonstration of the PowerScene (tm) flythrough system is available. LOCATION: Bldg 36, 4B, Room 4B-12 (former EPPE lab).

**12. ELECTRONIC GATEWAY DEPARTMENT.** The Electronic Gateway Department is compiled of many components which are intertwined and definitely interdependent upon one another in order to effectively provide Geospatial Information to our customers. This process begins with the Customer Assistance process which provides constant and up-to-date information to all customers. The Electronic Gateway Department is an organization consisting of three branches: Web Management, Requirements and Development, and Data Management. The major concerns of the employees who work here are to maintain, manage, and ensure the constant enhancement of the NIMA electronic gateway operations, manage the Cartographic Database, and provide dissemination of digital products. This office maintains NIMA electronic gateway home pages for the base servers while providing oversight to all NIMA webpage authoring, supports the gateway infrastructure, and works closely with Systems and Technology to plan,

schedule, modify, train, and implement gateway hardware and software modifications. LOCATION: Bldg 36, 1D. Demonstration.

**13. MANUAL EXTRACTION / INFORMATION GENERATION SOURCE PACKAGING TEAMS.** This organization performs many functions in preparing and packaging images, graphics, and textual source materials for compilation of non-digital map/chart products (navigation/planning charts, topographic line maps, and target and aeronautical charts). They research, retrieve, analyze, order, and package all materials/information required for manual compilation of mapping and charting products. LOCATION: Bldg 36, 5C. Display boards attended by office personnel.

**14. MARKETING NIMA DATA.** In the "Warrior Support Room" there is a continuous presentation showing how NIMA mapping datasets and imagery files are used with government and commercial software applications. The data to be used include Digital Terrain Elevation Data (DTED); 5 and 10 meter Controlled Image Base (CIB); Compressed Arc Digitized Raster Graphics (CADRG); Digital Aeronautical Flight Information Files (DAFIF); Vector Map Level 0 (VMAP0); and Digital Nautical Chart (DNC). The software programs that will be used are NIMAMUSE 2.1.1; MapInfo 4.1; ArcView 3.0a; MicroDem 9.1 and FalconView 3.0. LOCATION: Bldg 36, 6B (east). Demonstration.

## **SUGGESTED TOUR #2: PRODUCTION FLOW**

**1. MISSION VIDEO.** A video on the work done by the National Imagery and Mapping Agency will be shown continuously. LOCATION: 1C Conference Room, Lobby Exhibit Hall, and Dining Hall.

**2. GEODESY AND GEOPHYSICS.** The Geodesy and Geophysics (G&G) Department is responsible for providing the Department of Defense (DoD) the precise geodetic latitudes, longitudes, elevations, azimuth, and gravity-related data needed for the testing and deployment of DoD weapon and navigation systems. The department collects and maintains the world's largest database of gravity information to generate products for DoD systems. The department also tracks the Global Positioning System (GPS) satellites to provide quality assurance of the broadcast GPS message for Air Force Space Command and to generate other GPS products for DoD and international use. LOCATION: Bldg 36, Lobby Conference Room. Video, briefing boards, surveying equipment display.

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4. **AERONAUTICAL NAVIGATION DEPARTMENT.** The Aeronautical Navigation Department primarily serves DoD aircrews by supplying global aeronautical Geospatial Information and Services to support national security objectives. This department has the following displays:

a. Terminal Procedures. LOCATION: Aeronautical Library, Bldg 36, Room 1B-28. Demonstration.

b. Mapinfo. LOCATION: Bldg 36, Room 3B-28. Demonstration.

c. FLIP Display and Workstation Clusters. LOCATION: Bldg 36, Room 3B-25. Display and office personnel.

5. **MARKETING NIMA DATA.** In the "Warrior Support Room" there is a continuous presentation showing how NIMA mapping datasets and imagery files are used with government and commercial software applications. The data to be used include Digital Terrain Elevation Data (DTED); 5 and 10 meter Controlled Image Base (CIB); Compressed Arc Digitized Raster Graphics (CADRG); Digital Aeronautical Flight Information Files (DAFIF); Vector Map Level 0 (VMAP0); and Digital Nautical Chart (DNC). The software programs that will be used are NIMAMUSE 2.1.1; MapInfo 4.1; ArcView 3.0a; MicroDem 9.1 and FalconView 3.0. LOCATION: Bldg 36, 6B (east). Demonstration.

**SUGGESTED TOUR #3: TECHNICAL SUPPORT ORGANIZATIONS**

- 1. MISSION VIDEO.** A video on the work done by the National Imagery and Mapping Agency will be shown continuously. LOCATION: 1C Conference Room, Lobby Exhibit Hall, and Dining Hall.
- 2. HARDWARE ENGINEERING DIVISION.** This area provides the full range of life cycle support services for the St. Louis area and associated organizations in support of production and mission support activities: acquisition planning; engineering and design; network design; systems' integration; configuration management; systems' installations and moves; and maintenance services (corrective and preventive). In addition to displays, this area has several personal computers set up for interaction with children and also has active displays of the NASA website showing the Mars probe. LOCATION: Bldg 36, Basement, Room C33.
- 3. NETWORKS AND ENTERPRISE SYSTEMS (OFFICE).** This office assures connectivity (e-mail, secure phone, videoteleconferencing, messages, geospatial information) between NIMA locations, its customers and other agencies, at multiple security levels, to support NIMA's mission. They provide hardware maintenance engineering support to the operational elements and operate the mainframe computers. LOCATION: Bldg 36, 4B. Unattended walk-through.
- 4. UNISYS COMPUTER FACILITY.** This area provides Unisys mainframe computer support, plotter support, and ADP services to NIMA organizations who are responsible for producing Geospatial Information for customers. In addition, computer support is provided to NIMA organizations regarding the Phase IV business/manpower requirements. LOCATION: Bldg 36, 1E. Unattended walk-through.

5. **IBM COMPUTER FACILITY.** This area provides IBM mainframe computer support, plotter support, and ADP services to NIMA organizations who are responsible for producing Geospatial Information for customers. LOCATION: Bldg 36, 2E. Unattended walk-through.

6. **PLANS AND CUSTOMER SUPPORT DIVISION.** CNPCA operates the NIMA Trouble Desk which supports both internal and external maintenance notification. These employees also manage and maintain NIMA's equipment asset database and maintenance history files (MMIS). CNPP supports NIMA-wide contract maintenance services through general contracting and replacement equipment for all NIMA internal customers. LOCATION: Bldg 36, 1C. Unattended walk-through.

7. **NETWORKS SYSTEMS DIVISION.** This area provides network connectivity to all of NIMA's telecommunications systems. Operates, administers and maintains NIMA's client servers and associated software. LOCATION: Bldg 36, 1E. Unattended walk-through.

8. **TECHNOLOGY WEST LABORATORY.** This office develops advanced geospatial and intelligence data products, production processes, and information services that satisfy internal and external customer needs. Leading edge technologies and commercial computing applications are used to create customer-required products and services in the most timely manner. A demonstration of the PowerScene (tm) flythrough system is available. LOCATION: Bldg 36, 4B, Room 4B-12 (former EPPE lab).

**9. ELECTRONIC GATEWAY DEPARTMENT.** The Electronic Gateway Department is compiled of many components which are intertwined and definitely interdependent upon one another in order to effectively provide Geospatial Information to our customers. This process begins with the Customer Assistance process which provides constant and up-to-date information to all customers. The Electronic Gateway Department is an organization consisting of three branches: Web Management, Requirements and Development, and Data Management. The major concerns of the employees who work here are to maintain, manage, and ensure the constant enhancement of the NIMA electronic gateway operations, manage the Cartographic Database, and provide dissemination of digital products. This office maintains NIMA electronic gateway home pages for the base servers while providing oversight to all NIMA webpage authoring, supports the gateway infrastructure, and works closely with Systems and Technology to plan, schedule, modify, train, and implement gateway hardware and software modifications. LOCATION: Bldg 36, 1D. Demonstration.

**10. EXPLOITATION SYSTEMS OFFICE, EXTRACTION AND FINISHING SYSTEMS SUPPORT WEST BRANCH.** This office provides technical support to the Data Extraction Segment of the Digital Production System by employing software engineering solutions using the Integrated Development and Maintenance Environment (IDME). The IDME is a developmental and testing ground where engineers resolve software problems that appear in the production environment. LOCATION: Bldg 36, 5C, Rooms 5C-01 and 5C-13. Office personnel on hand to answer questions.

**11. SOURCE MANAGEMENT SYSTEMS SUPPORT, WEST.** This office provides software and operations support for the production computer systems of the Source Management organization, in concert with the Multi-Systems Maintenance Services (MSMS) contractor team. LOCATION: Bldg 36, 4A (west). Unattended walk-through.

**12. EXPLOITATION SYSTEMS, EXTRACTION AND FINISHING SYSTEM SUPPORT WEST, BRANCH 2.** This office is responsible for acquisition and maintenance of those component architecture necessary of imagery exploitation. Their efforts are specifically directed at those activities that provide data extraction, production generation, and product finishing, including the software and hardware migration of the aeronautical data base functions. LOCATION: Bldg 36, 4A (west). Unattended walk-through.

## **SUGGESTED TOUR #4: ADMINISTRATIVE SUPPORT ORGANIZATIONS**

1. **MISSION VIDEO.** A video on the work done by the National Imagery and Mapping Agency will be shown continuously. LOCATION: 1C Conference Room, Lobby Exhibit Hall, and Dining Hall.

2. **REGIONAL COMMANDER'S OFFICE.** The Regional Commander commands the NIMA installations in St. Louis, Missouri. He is directly responsible for the management of multi-million dollar real property and equipment and manages the construction program and budget as well. He is also responsible for physical and computer security, logistics, disaster preparedness, medical support, safety, and environmental services. He exercises command responsibility for disaster preparedness/continuity of operations, inter-service support agreements, non-appropriated funds, and legal and administrative actions pertaining to good order and discipline of the command. LOCATION: Bldg 36, 6B. Unattended walk-through.

3. **COMPTROLLER SERVICES WEST.** This office provides resources support to all NIMA St. Louis offices. LOCATION: Bldg 36, 6B. Unattended walk-through.

4. **ARNOLD TRANSITION DEPARTMENT.** This office manages the transition of people, equipment, and processes into the new NIMA facility under construction in Jefferson County near the city of Arnold. LOCATION: Bldg 36, 4A. Display boards.

**5. INFORMATION SERVICES QUALITY DEPARTMENT.**

This area serves as lead for quality issues such as process modeling, reengineering, process improvement initiatives, customer feedback, suggestion program, Quality Assistance Visits, and provides the leadership necessary to all Quality Advocates with Information Services Divisions. LOCATION: Bldg 36, 4A. Unattended walk-through.

**6. HUMAN RESOURCES ORGANIZATION DEVELOPMENT AND CAREER MANAGEMENT DIVISION.**

This office offers NIMA employees the chance to obtain career development and career management skills through a variety of training, education, and development opportunities. The Career Management Office manages NIMA's ongoing education and development programs such as Long-Term Full-Time Training and Tuition Assistance; offers career counseling services; and provides employees reference and career guidance materials such as books, tapes, and videos. The Career Development School supports the NIMA College by offering courses related to such topics as professional development, supervisory/managerial, and career transition/retirement. LOCATION: Bldg 36, Room 1A-77. Walk-through and office personnel.

**7. NATIONAL IMAGERY AND MAPPING COLLEGE (NIMC) ST. LOUIS.** NIMC is a professional learning center delivering full service, timely, and relevant training and education for NIMA and its global customers. LOCATION: Bldg 22. Briefing boards and office personnel.

**8. RESEARCH SERVICES, REFERENCE BRANCH.** The Reference Branch provides information on such topics as: Science & Technology, U.S. and Foreign Governments, Data Processing/Computer Topics, Mathematics, Cartography, Geo-Sciences, and Business & Management. Knowledgeable librarians are available to assist employees with information analysis and database searching. LOCATION: Bldg 36, 2A. Walk-through and office personnel.

9.       **ARSENAL MUSEUM.** The National Imagery and Mapping Agency is located on the grounds of the old St. Louis Arsenal. A museum featuring artifacts unearthed during construction in the mid-1980s has been opened in the original commander's quarters in Bldg 26. The artifacts, along with other displays, trace the history of the Arsenal from its days as a frontier outpost to the present aerospace age. The entire first floor of Bldg 25 has been restored to the early 1900s time period and is open for walk-through. LOCATION: Bldg 25, first floor. Walk-through, video, and office personnel.