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SECURITY

5. Microwave Enclosure—The technical purposes and properties of shielded enclosures are explained and a shielded enclosure is available for viewing.

6. Computer Aided EMI Test System—A computer controlled receiver system is displayed in a typical test system configuration.

7. Microelectronics—The advancement of electronic technology is displayed showing the progress from early vacuum tubes to the latest large scale integrated circuits.

8. Scanning Electron Microscope—A scanning electron microscope and an X-ray energy dispersion system are shown. Examples of the capabilities of this equipment are displayed.

9. Physiochemical Laboratory—A variety of physiochemical phenomenon such as the fluorescent characteristics of various inks and light transmission properties of certain types of paper, and their application as quality control techniques are demonstrated. Fiber optics and water soluble paper displays are also included.

10. Environmental Testing—A laboratory demonstration of a variety of test equipments including a transportation simulator, a vibration test machine, a heat shock tester, and an atmospheric simulator.

11. Printed Wiring Board Technology—Various aspects of the technology involved in this manufacturing process are shown.

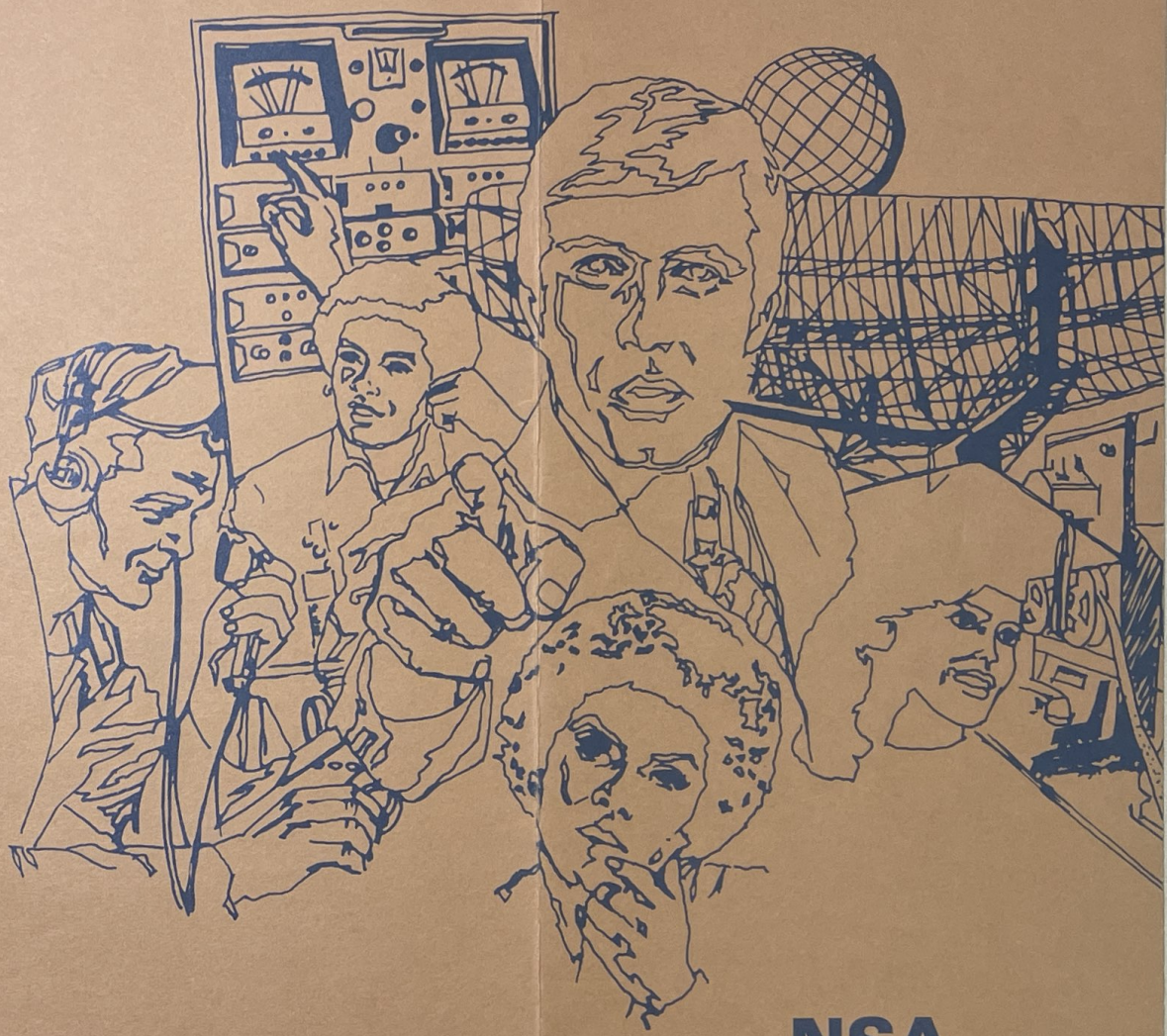
12, 13, 14, 15. Printing Plant—A look at the latest equipments and techniques used in the large scale printing operations which support the printing needs of the Agency. A walk through of these areas shows photo typesetting, composition, photo equipment, the Goss press, and printing displays.

16. Metal Oxide Semiconductor (MOS) Processing Facility—The tour of this facility shows the complexities of the production of MOS "chips", to include the "clean room" techniques necessitated by the microscopic size of the product.

17. Satellite Display—Communications equipment utilized in space satellites is on display. Two life-size scientific satellites may be seen.

18. Communications Security Laboratory—Ship-to-shore, ground-to-aircraft, and other communications security equipments having military and civilian application are exhibited.

national security agency / central security service



NSA FAMILY DAY

JUNE 14, 15, 1975

PEOPLE

HEADQUARTERS AND OPERATIONS BUILDING I

MAIN EXHIBITION AREA

The main exhibition area presents an overview of NSA from its early origins to the complex Agency it is today. The history of U.S. cryptology is traced from the Revolutionary War period to recent years. Various perspectives of the Agency – from its national defense role to interesting informational sidelights, to its diverse and unique work force and more – are presented.

WALKING TOUR

1. **Medical Center**—The walk through tour of the Medical Center includes a look at the X-ray facilities, therapy areas, laboratory, examining rooms, and reception and administrative areas.

2. **Computer Facility**—On view is a Honeywell 6050 computer which supports research engineers and scientists. A Xynetics high speed computer-controlled graphic plotter is demonstrated. Also on display are high speed printers, disc files, and tape units.

3. **Digital Voice Coding Demonstration**—A digital voice coding system employing advanced computer technology is demonstrated.

4. **Data Conversion Center**—A demonstration of an advanced process of converting information into language that a computer can understand. Key board stations are operating and the transfer of information via computer to disc storage devices is shown.

5. **Research and Engineering Laboratory**—A walk through of a typical R&E laboratory showing several large scale communications systems in various stages of development and testing.

6. **Computer Processing Area**—A view of the computer operation which supports the administrative and resource management needs of the Agency. Remote terminals and sample computer programs are demonstrated. Computer recording media including magnetic tape and disc packs may be examined.

7. **Engineering Shop Service Complex**—A walk through the R&E large scale machine shop operation, sheet metal shop, welding facility, and woodworking, finishing, and electroplating shops. Shop products are displayed.

8. **Johnson Control Room**—A view of the GSA facility where all electrical circuitry and air conditioning for the Headquarters and Operations Buildings are monitored and controlled.

PERFORMANCE

9. **Computer System**—A demonstration of a computer with graphic and alphanumeric terminals. The graphic terminal will display maps from the stored data base and an interactive drawing package which permits the user to draw a picture, a design, or a chart on the display and store it for future recall. The alphanumeric terminal will display various computer games including a hueristic game known as "Guess".

10. **Utility Core #5**—A view of one of three complex compressor systems which supply equipment and comfort cooling for the Operations Building.

11. **Telephone Center**—A walk through of the switchboard area and of the frame room housing the relay switching center of the outside telephone system. Tools and equipment used in telephone installation and maintenance are on display.

12. **Personnel Services Activities**—A look at many of the personnel services and activities of the Agency. Computer support of personnel functions is demonstrated through the use of a remote terminal.

13. **Learning Center**—Audio-visual equipments and material used by students in self-paced instruction are demonstrated.

14. **Council of Learned Organizations Display**—A series of displays by the professional societies of the Agency – The Communications Analysis Association, the Computer and Information Science Institute, the Crypto-Linguistic Association, the Crypto-Mathematics Institute and the International Affairs Institute – illustrating how the activities of these organizations aid in the professional development of Agency personnel.

15. **Office Work Area**—A look at a typical NSA office work area.

16. **Overseas Activities Exhibit**—A series of displays centered around various overseas locations where Agency personnel are assigned.

17. **Library**—A tour of the library area where collections on many diverse subject areas may be seen. Graphic displays and demonstrations of computer data networks linking the NSA Library Center and the New York Times Information Bank may be seen.

18. **Laser Demonstration**—A demonstration of the use of a laser beam to transmit a television signal. An infrared camera is used to transmit images of guests via the laser beam to a television monitor in the area.

19. **Experimental Computer Center**—A VOTRAX voice synthesizer and programming techniques are combined to give this computer the unique ability to talk. Also on display are color computer graphics used in speech research.

PROGRESS

20. **Logistical Support Exhibit**—Featured is a slide presentation concerning many of the installations and logistical functions necessary to support the facilities and operations of the Agency.

21. **Cryptologic History Exhibit**—A look at some of the many facets of the unique history of cryptology. U.S. and foreign documents and equipments as well as other interesting memorablia are displayed.

22. **National Cryptologic School Display**—A short television presentation highlights the training functions of the School. A television camera and monitor are also used to demonstrate the role of the television medium in education.

23. **Telecommunications Exhibit**—On display and functioning are teletype equipments predating WWII through the most modern equipments that display messages on a television screen. Also on display is a photographic history of past communications centers. The Technical Control facility may be viewed in operation and a look at a new Optical Character Reader intended for future Agency use is provided.

24. **Executive Office**—A walk through a typical executive level office.

25. **Convenience Facilities**—Located in this area are the barber shop, drugstore, and the new Credit Union building presently under construction. An overview of Civilian Welfare Fund activities is also presented.

26. **Administrative Center**—The concept of word processing through the use of the most modern equipment and techniques is demonstrated. A typical administrative office space is also shown.

OPERATIONS BUILDING III

1. **Communications Security Equipment Display**—On view is a variety of encoding and decoding equipment representing the old and the new in secure communications.

2. **Digital Radio Link**—A digital radio link is simulated. The conversion of analog information to digital form is displayed on an oscilloscope.

3. **Engineering Information Center**—The use of a computer in the preparation of equipment manuals and the editing, storage and retrieval of equipment data, as well as other modern information handling techniques are demonstrated.

4. **Electromagnetic Interference Demonstration**—The suppression of Electromagnetic Interference (EMI) is demonstrated through the use of a hair dryer and television set.