NASA

NSI
NASA Science Internet

NSI Operations Center

Nancy L. Zanley, Network Operations Analyst
Sterling Federal Systems, Inc.

The NASA Science Internet (NSI) Network Operations Staff is responsible for providing reliable communication connectivity for the NASA science community. As the NSI user community expands, so does the demand for greater interoperability with users and resources on other networks (e.g., NSFnet, ESnet), both nationally and internationally.

Coupled with the science community's demand for greater access to other resources is the demand for more reliable communication connectivity. Recognizing this, the NASA Science Internet Project Office (NSIPO) expanded its Operations activities. By January 1990, Network Operations was equipped with a telephone hotline, and its staff was expanded to six Network Operations Analysts. These six analysts provide 24-hour-a-day, 7-day-a-week coverage to assist site managers with problem determination and resolution.

The NSI Operations staff monitors network circuits and their associated routers. In most instances, NSI Operations diagnoses and reports problems before users realize a problem exists.

Monitoring of the NSI TCP/IP Network is currently being done with Proteon's Overview monitoring system (see photo). The Overview monitoring system displays a map of the NSI network utilizing various colors to indicate the conditions of the components being monitored. Each node or site is polled via the Simple Network Monitoring Protocol (SNMP). If a circuit goes down, Overview alerts the Network Operations staff with an audible alarm and changes the color of the component. When an alert is received, Network Operations personnel immediately:

a) Verify and diagnose the problem
b) Coordinate repair with other networking service groups
c) Track problems, and
d) Document problem and resolution into a trouble ticket data base.

NSI Operations offers the NSI science community reliable connectivity by exercising prompt assessment and resolution of network problems.

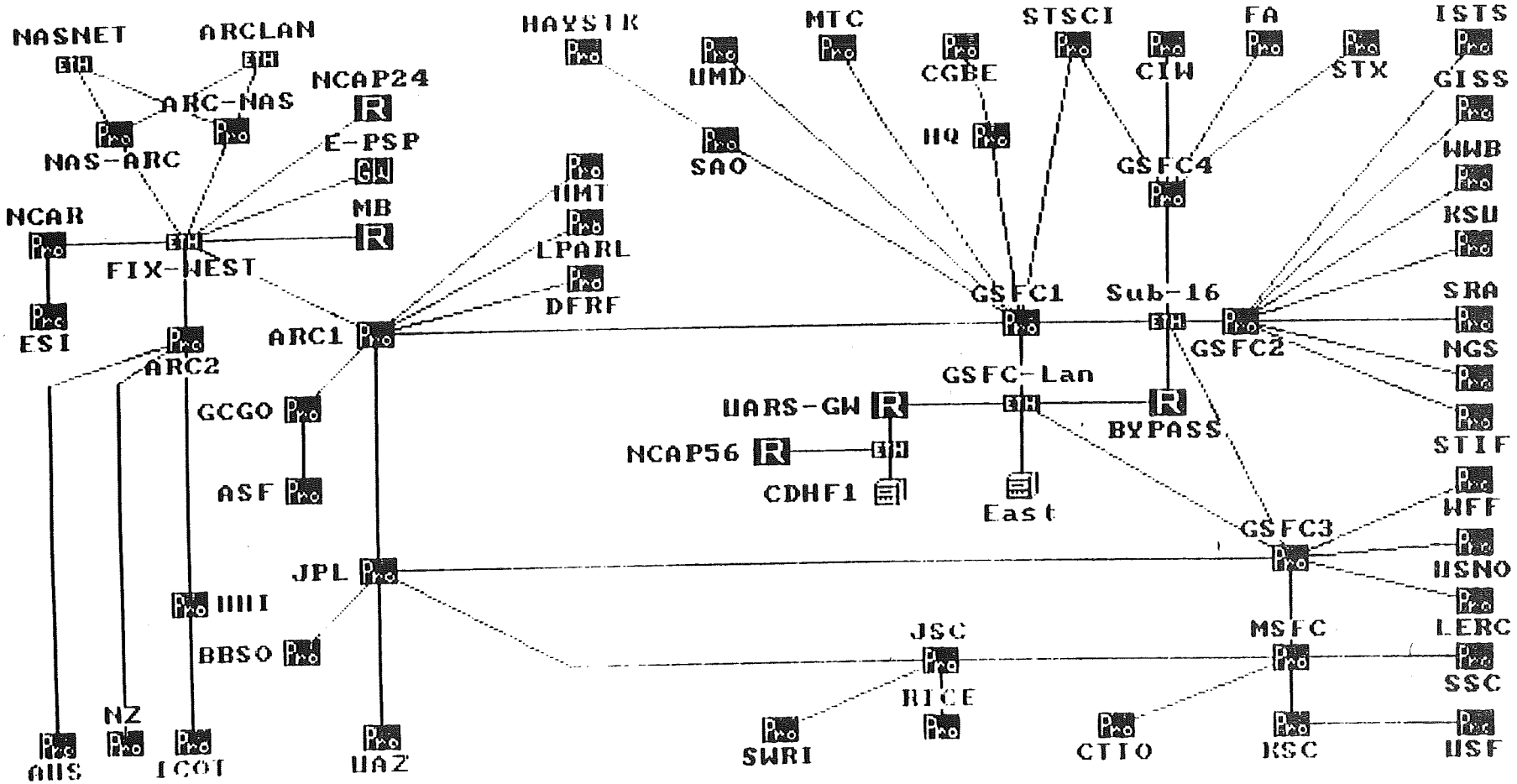
NSI2-91b

NSI Site Acronym List

ARC1	Ames Research Center, Moffett Field, CA (router #1)
ARC2	Ames Research Center, Moffett Field, CA (router #2)
ASF	Alaska SAR Facility/University of Alaska Geophysical Institute
AUS	Australian Academic Research Network
BBSO	Big Bear Solar Observatory, Big Bear City, CA
CGBE	Capital Gallery Building, East Wing, Washington, D.C.
CIW	Carnegie Institution of Washington, Washington, D.C.
CTIO	Cerro Tololo Inter-American Observatory, Chile
DFRF	Ames-Dryden Flight Research Facility, Edwards AFB, CA
E-PSP	Exterior-Packet Switching Processor Gateway to NSFNET
EAST	Interoperability Gateway
ESI	Astrophysics Data System, Ellery Systems Inc., Boulder, CO
FA	Ford Aerospace, ST DADS Program, Seabrook, MD
GCGO	Gilmore Creek Geophysical Observatory, Alaska
GISS	Goddard Institute for Space Studies, New York, NY
GSFC1	Goddard Space Flight Center, Greenbelt, MD (router #1)
GSFC2	Goddard Space Flight Center, Greenbelt, MD (router #2)
GSFC3	Goddard Space Flight Center, Greenbelt, MD (router #3)
GSFC4	Goddard Space Flight Center, Greenbelt, MD (router #4)
HAYSTK	Haystack Observatory, Westford, MA
HQ	NASA Headquarters, Washington, D.C.
ICOT	Institute for New Generation Computer Technology, Japan
ISTS	Institute for Space and Terrestrial Science, York University, Ontario, Canada
JPL	Jet Propulsion Laboratory, Pasadena, CA
JSC	Johnson Space Center, Houston, TX
KSC	Kennedy Space Center, Cape Canaveral, FL
KSU	Kansas State University, Manhattan, KS
LERC	Lewis Research Center, Cleveland, OH
LPARL	Lockheed Palo Alto Research Laboratory, Palo Alto, CA
MB	BBN Mailbridge to MILNET

MSFC	Marshall Space Flight Center, Huntsville, AL
MTC	Solar Max Mission, Maryland Trade Center, MD
NCAP24	Encapsulation for AREA 24, ARC, Moffett Field, CA
NCAP56	Encapsulation for AREA 56, UARS Project, GSFC, Greenbelt, MD
NCAR	National Center for Atmospheric Research, Boulder, CO
NGS	National Geodetic Survey, Rockville, MD
NZ	University of Waikato, New Zealand
RICE	Sesquinet, Rice University, Houston,TX
SAO	Smithsonian Astrophysical Observatory, Cambridge, MA
SRA	Science Research Associates, Glastonbury, CT
SSC	Stennis Space Center, MS
STIF	NASA Scientific and Technical Information Facility, Linthicum, MD
STSCI	Space Telescope Science Institute, Baltimore, MD
STX	ST Systems Corp, Lanham, MD
SWRI	Southwest Research Institute, San Antonio, TX
UAZ	University of Arizona, Tucson, AZ
UHI	University of Hawaii, Honolulu, HI
UMD	SURAnet, University of Maryland, College Park, MD
UMT	University of Montana, Missoula, MT
USF	University of South Florida, St. Petersburg, FL
USNO	United States Naval Observatory, Washington, D.C.
WFF	Wallops Flight Facility, Wallops Island, VA
WWB	National Oceanographic and Atmospheric Administration, World Weather Building, Camp Springs, MD

NASA SCIENCE INTERNET WIDE AREA NETWORK



NSI NOC's most frequently asked questions.

Q. What does NSI NOC mean?

A. NASA Science Internets' Network Operations Center.

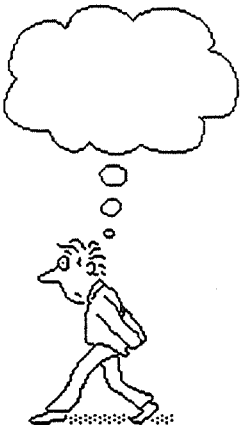
Q. What does NSI NOC do?

A. The NSI network operations staff monitors the NASA Science Internet.

Q. Does NSI NOC perform other duties besides monitoring the NASA Science Internet?

A. Yes, we are also site contacts for other NOCs.

NOC Questions, continued



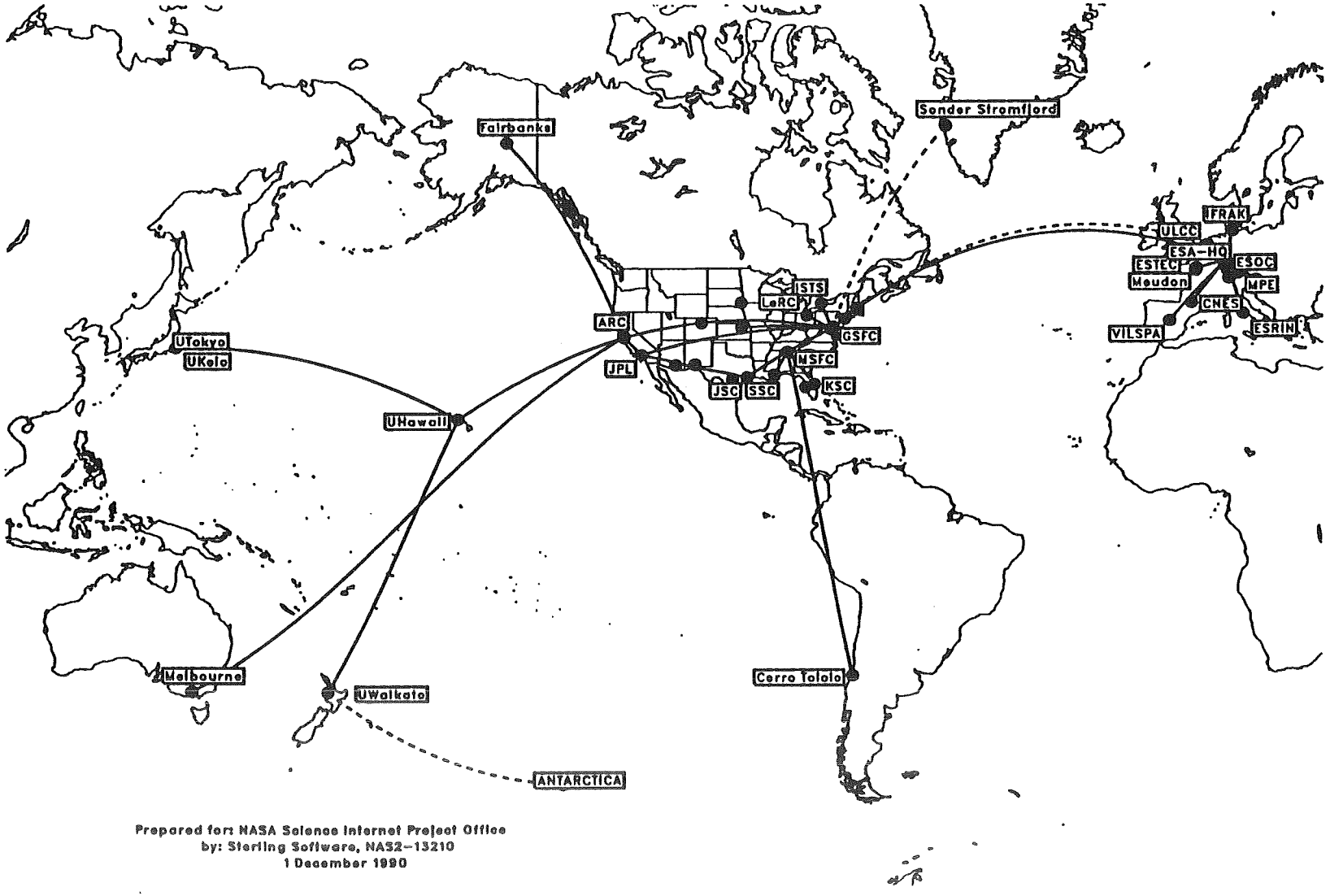
Q. What hours during the day can NSI NOC be reached?

A. 24 hours a day, 7 days a week.

Q. Who do I contact when I'm experiencing networking problems?

A. If you are unable to solve problem through your local site manager, call NSI NOC directly at 415 604-3655.

NASA Science Internet



Prepared for: NASA Science Internet Project Office
by: Sterling Software, NAS2-13210
1 December 1990