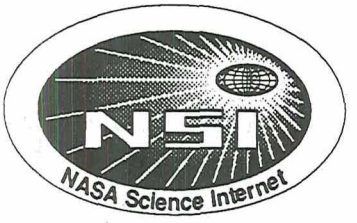
Requirements Management: A CSR's Perspective

Presentation to the NSIUWG User Services Subgroup

Joanie Thompson

Sterling Software, Inc.



Requirements Management: A CSR's Perspective

The goal of my presentation is to give the NSI User Services Subgroup an understanding of the Requirements Management process by describing the tools which the Customer Service Staff uses to manage the networking requirements.

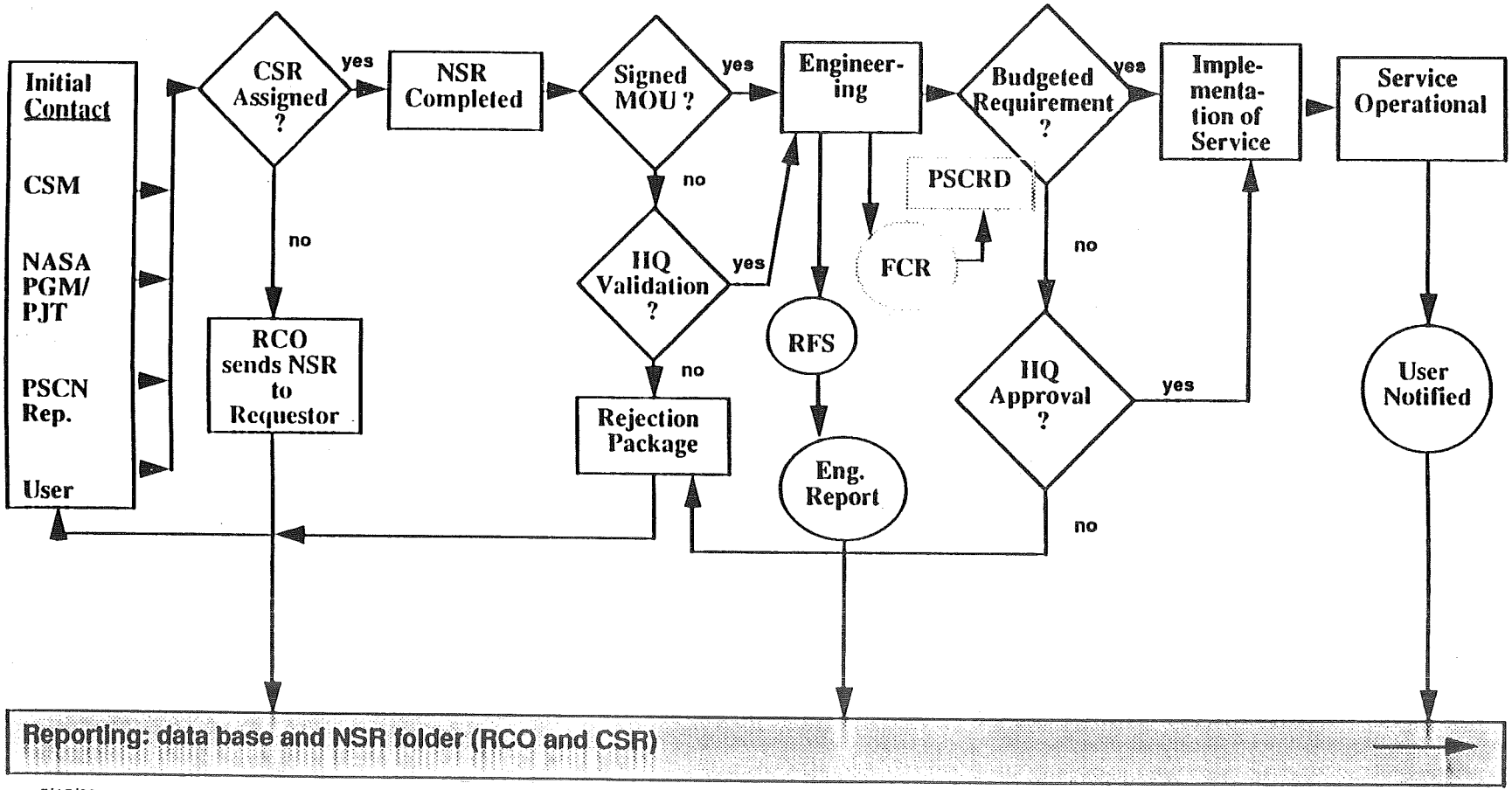
First off, take a quick look at the chart on the next page. Go ahead, then come back to this page. I'll wait...

The process is about as simple as it looks. :-) But have no fear, your Customer Service Representative (CSR) understands the chart and knows how to navigate your networking requirements into and out-of all those boxes, diamonds and rectangles.

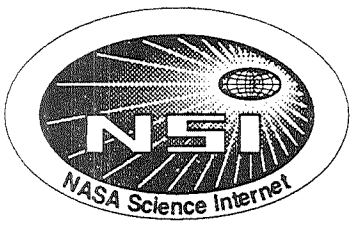
To give you a better understanding of the process (sans chart), I have designed this presentation to be more of an "narration with pictures". There is a cover page which describes the tool and how it is employed by the CSR -- that is the "narration". The "picture" is the sample chart/letter/form which follows the narration page.

Ready? Here we go....

Customer Service Overview of Network Service Request Processing



5/15/90



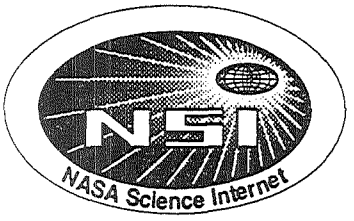
Discipline Customer Service Representative Responsibility Matrix

Get to know your CSR! If you or your project need a new network connection, an upgrade to your existing services or other network services the best place to start is with the CSR.

Customer Service Representative Responsibility Matrix

CODE	DISCIPLINE	CSR	PHONE NUMBER AND EMAIL ACCESS
SZ	Astrophysics	Joanie Thompson	J. Thompson, (415) 604-4550 joanie@nsipo.nasa.gov AMES::"joanie@nsipo.nasa.gov"
SC	Communications	Maria Gallagher	M. Gallagher, (415) 962-7753 maria@nsipo.nasa.gov AMES::"maria@nsipo.nasa.gov"
SE	Earth Science and Applications	Kathy Bosovich Lenore Jackson	K. Bosovich, (415) 604-5859 bosco@nsipo.nasa.gov AMES::"bosco@nsipo.nasa.gov" L. Jackson, (301) 286-7251 NSSDCA::JACKSON jackson@nssdca.gsfc.nasa.gov
SM	Flight Systems Division	TBD Christine Falsetti	C. Falsetti, (415) 604-6935 falsetti@nsipo.nasa.gov AMES::"falsetti@nsipo.nasa.gov"
SB	Life Sciences	Kathy Bosovich Lenore Jackson	K. Bosovich, (415) 604-5859 bosco@nsipo.nasa.gov AMES::"bosco@nsipo.nasa.gov" L. Jackson, (301) 286-7251 NSSDCA::JACKSON jackson@nssdca.nasa.gov
SN	Microgravity Science and Applications	TBD Christine Falsetti	C. Falsetti, (415) 604-6935 falsetti@nsipo.nasa.gov AMES::"falsetti@nsipo.nasa.gov"
SL	Solar System Exploration	Joanie Thompson	J. Thompson, (415) 604-4550 joanie@nsipo.nasa.gov AMES::"joanie@nsipo.nasa.gov"
SS	Space Physics	Maria Gallagher	M. Gallagher, (415) 962-7753 maria@nsipo.nasa.gov AMES::"maria@nsipo.nasa.gov"

updated 3/20/91



Extract from a Sample Memorandum of Understanding

If the customer represents the interests of a science program or project, they are encouraged to work with the Customer Service Manager, Christine Falsetti, to establish a Memorandum of Understanding (MOU). The MOU is a contract between NSI and an OSSA Science Project requesting network services. For many projects, this has proven the best way to uniformly state networking requirements. The MOU is a valuable reference tool for the CSR as it states the roles and responsiblities of each party.

MEMORANDUM OF UNDERSTANDING

between

PROJECT X

and the

NASA SCIENCE INTERNET

for

PROJECT X SCIENCE NETWORK COMMUNICATIONS

September 31, 1990

Approvals:

name, Project Scientist, PROJECT X	Christine M. Falsetti, Customer Service Manager NASA Science Internet
name, Project Manager, PROJECT X	Frederic N. Rounds, Project Manager
name, Program Scientist, PROJECT X	Anthony Villasenor, Program Manager NASA Science Internet
name, Program Manager, PROJECT X	Joseph Bredekamp, Chief Information Systems Branch
name, Director, Astrophysics Division	Ray J. Arnold, Director Communications and Information Systems Division

I. PROLOGUE

NASA Flight Projects as well as Discipline Data Centers have requirements to communicate with their investigators and system users. Many of these communications require electronic connections for digital data access and transport, for access to shared computational resources and software, and for electronic mail. The distributed nature of the investigators and users who have a wide variety of computer/software systems requires national as well as international connectivity operating in a heterogeneous environment.

The NASA Science Internet Project (NSI) has been charged with integrating and implementing the Flight Project and Discipline Data Center network communications requirements within the NASA Office of Space Science and Applications (Code S) into a cost effective, efficient and reliable national communications network with international connectivity. A variety of computer systems and networking protocols are supported. The NSI-DECnet and the NSI-TCP/IP are both managed by the NSI in achieving its mission. The NSI works closely with the Code T Program Support Communications Program in providing these services.

PROJECT X : *this will be a brief description of what the project is about, its functions, goals or objectives.*

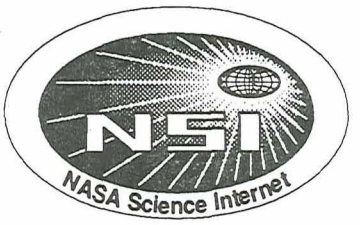
NASA OSSA Communications and Information Systems Division (Code SC) has programmatic responsibility and NASA Ames Research Center has project management responsibility for the NASA Science Internet. The NASA OSSA Astrophysics (Code SZ) has programmatic responsibility and *appropriate NASA center* has project management responsibility for PROJECT X. PROJECT X has both domestic and international science communications requirements that require the services of NSI.

This Memorandum of Understanding (MOU) defines the PROJECT X Program science communications requirements on the NASA Science Internet and describes the roles and responsibilities of these two organizations in support of these requirements.

II. INTRODUCTION

A. PURPOSE

This MOU documents the science computer networking requirements of PROJECT X and the corresponding services and equipment to be provided by the NASA Science Internet in support of these requirements. The MOU describes the roles and responsibilities of PROJECT X and NSI in the definition of requirements, design, procurement, implementation, use, operations, monitoring, maintaining, testing and evaluation of the NSI-provided networking services. This document sets the general agreements, constraints and interfaces between the two organizations.



Network Service Request Form

The Customer Service Reps use the NSR to gather and document networking requirements. The information captured on the NSR must be complete and accurate as it is submitted to our Work Control Desk for entry into NSI's master Requirements Database.

NASA SCIENCE INTERNET
NETWORK SERVICE REQUEST

NSI NSR #

Date Prepared

RETURN TO:
NASA SCIENCE INTERNET PROJECT OFFICE
Mail Stop 233-8
NASA Ames Research Center
Moffett Field, CA 94035-1000
Commercial: (415) 604-5859 FTS: 464-5859
FAX: (415) 604-6999 FTS: 464-6999

FROM Designated Requirements Initiator:

Name (Please Print) NASA Org Code

CSR Assigned: _____

Principal Investigator: _____

Institution: _____

Description of Services Requested:

Requested Start Date: _____ Estimated Stop Date: _____

From End User:

Last Name First Name Initial

Organization

Facility

[Suborganization]

Address

Address

City State Zip

Commercial Phone [FTS Phone]

[E-Mail Address (if any)]

[Host/Terminal Type (Mfg. - Model)] [Operating System]

[Existing External Network Addresses (if any)]

[LAN Connection (if any)]

To Computing Resource (or another End User):

Last Name First Name Initial

[Organization]

[Facility]

[Suborganization]

[Address]

[Address]

[City] [State] [Zip]

[Commercial Phone] [FTS Phone]

[E-Mail Address (if any)]

[Host/Terminal Type (Mfg. - Model)] [Operating System]

[Existing External Network Addresses (if any)]

[LAN Connection (if any)]

Description of Service Requested: _____

1 of 2

NSI Form 1 (May '90)

NASA SCIENCE INTERNET
NETWORK SERVICE REQUEST

NSI NSR #

From End-Point Site:	To End-Point Site:
Organization	[Organization]
Facility	[Facility]
Suborganization	[Suborganization]
Building	[Building]
Floor	[Floor]
Room	[Room]
Point of Contact/NSI Site Coordinator	[Point of Contact/NSI Site Coordinator]
Email	Email
Commercial Phone FTS Phone	[Commercial Phone] [FTS Phone]

Specific NASA Program/Project Reference:

Headquarters Code _____

UPN No.: _____

Program/Project Name: _____

NASA Contract/Grant Number: _____

[Expiration Date:] _____

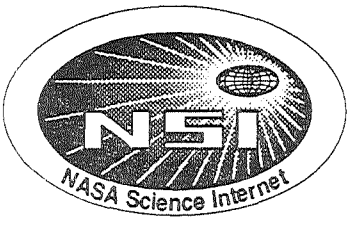
[Contracting Officer's Technical Representative]

[Commercial Phone:] _____

[FTS Phone:] _____

Description of Service (Cont'd):

NSI Form 1 (May '90)



Instructions For Completing the Network Service Request

When a customer chooses to complete the NSR, we provide an NSR Packet which includes the Form Instructions, a blank form and samples of completed forms.

Notice that the page layout of the NSR Form Instructions closely resembles the actual NSR form. This was not an accident. Keeping the customer in mind, it was seen as one of the best ways to guide the person through the form. Of course, your CSR is always available to answer questions or help complete the form.

NSR Form Instructions

The NSR form is two sided. Side one has information your Customer Service Representative will need in order to submit your request for connectivity to NSI engineering. Side two has space for more detailed information regarding the nature of service you are requesting.

Each field that appears on the NSR form is described in the subsequent table.

Accompanying these instructions are samples of completed NSR forms. These examples are meant to serve as guidelines and are based on how a request *might* look when generated. Use the example that best fits your particular situation.

Finally, if you still have difficulty, feel free to contact an NSI Customer Service Representative.

Thanks so much for your cooperation. We look forward to wo·king with you.

NSI Customer Service Staff

Field Reference: Side One of the NSR Form

NSI NSR#	This is for internal NSI use. Do not fill it out.
Date Prepared	The date you complete the form.

Description of Services Requested:

Requested Start Date:	When you want the service to start.
Requested Stop Date	When you want the service to stop, or the end of your scientific mission.

From End User: This is the individual requesting the connectivity

Last Name, First Name, Initial	Your last, first name and initial. Please include any titles and/or degrees you wish to be associated with.
Organization:	Name of the parent body with which you are affiliated.
Facility	Your site's physical location.
Suborganization	Your division within your organization (sometimes this is the project name.)
Address	Your site's full address including suite or room number.
E-Mail Address	Your electonic mail address.
Host/Terminal Type Operating System	Type of computer you are currently using as the primary network resource.
Existing External Network Addresses	The numeric IP address or DecNet address.
LAN connection	Is there a Local Area Network at your site? Are you connected to it?

To Computing Resource (or another end user): Here is where you tell us what you need on the *other end* of the connection. A *resource* can be a network, a computer, or a person.

Last Name, First Name, Initial	The full name of the computing resource, type of resource needed, or individual with which you need connectivity.
Organization	Parent organization with which you want connectivity.
Facility	Physical location of the site where you want connectivity.
Suborganization	Name of the suborganization with which you want connectivity.
Address	The full address of the remote resource (including suite or room number).
E-Mail Address	Remote end user's electonic mail address.
Host/Terminal Type Operating System	Name of the remote host computer where you need connectivity.
Existing External Network Addresses	The numeric IP address or DecNet address of the remote computer.
LAN Connection	Is there a Local Area Network at the remote site?

Description of Service Requested:
Your description should include the following:

1. Briefly describe the nature of your scientific research and your project/program's current/future needs for network services.
2. Type of service desired (what do you want the connection to accomplish for you? What will you expect to use the network for? To transfer research data? To send electronic mail? What else?
3. What type of scientific data will be transmitted? How large are the files?
4. How often (x per day) do you expect to use the network for the aforementioned purposes?

Field Reference: Side 2 of the NSR form

This side describes the technical information that the NSI staff needs from you in order to work with remote **locations and personnel** in establishing your connectivity.
End point to end point are the actual **physical** locations where the circuit will originate and terminate. NSI works closely with remote site technical personnel during all phases of establishing, and later, maintaining your network service.

From End-Point Site	Where your physical connection will originate
Organization/Facility/Suborganization	Same as side one
Floor/Room	The physical location of your host (server or networking resource)
Point of Contact (NSI Site Coordinator)	Your site's technical contact for NSI
Email	His/her email address
Commercial /FTS	His/her current phone number/s

To End-Point Site	Where your physical connection will terminate
Organization/Facility/Suborganization	Same as side one, but describing the remote site
Floor/Room	The physical location of the remote site host (server or networking) resource
Point of Contact (NSI Site Coordinator)	The remote site's technical contact for NSI
Email	His/her email address
Commercial /FTS	His/her current phone number

Specific NASA Program/Project Reference: NASA/OSSA (Office of Space Science & Applications) has standard prerequisites for validating your request for connectivity. This part of the form ensures that you are eligible for connectivity under NASA/OSSA regulations.

Note: In order to receive service from NSI, you must establish that you are part of a valid NASA/OSSA (Office of Space Science Applications) funded program or project All requests for connectivity go to NASA headquarters for validation. If you are not sure about the validity of your project status, please contact your site COTR (Contracting Officers Technical Representative) for more information. If you are unsure of how to contact your COTR, please contact an NSI CSR .

Headquarters Code	The OSSA code with which you are affiliated
UPN Number	The NASA code identifier
Program/Project Name	The name of the NASA project with which you are affiliated
NASA Contract/Grant Number	The numerical contract or grant number that proves you are funded by NASA. Please make sure that you include the expiration date.
Contracting Officer's Technical Representative	The NASA official at your site who oversees and directs funding for your NASA contract or grant. This is the person to contact regarding questions you may have about validation.
Commercial Phone /FTS Phone	The COTR's current phone number
Description of Service (Con't'd)	More space to finish your description from side one

NASA SCIENCE INTERNET
NETWORK SERVICE REQUEST

NSI NSR #

Date Prepared 6/4/90

RETURN TO:
NASA SCIENCE INTERNET PROJECT OFFICE
Mail Stop 233-8
NASA Ames Research Center
Moffett Field, CA 94035-1000
Commercial: (415) 604-5859 FTS: 464-5859
FAX: (415) 604-6999 FTS: 464-6999

FROM Designated Requirements Initiator:
Jim Weiss (Name (Please Print)) SZ (NASA Org Code)
CSR Assigned: Joanie Thompson
Principal Investigator: Bill Hawkins
Institution: GSFC

Description of Services Requested:

Requested Start Date: 7/1/91 Estimated Stop Date: End of mission

From End User:

Ali Muhammud
Last Name / First Name / Initial
Univ of Hardknocks
Organization
Facility
Dept. of Astronomy
[Suborganization]
6233 Leftjab Drive
Address
Address
Sockem S.C. 61661
City / State / Zip
801/693-7275
Commercial Phone / [FTS Phone]
none
[E-Mail Address (if any)]
SUN 3/60: SUNOS, uVAX: VMS
[Host/Terminal Type (Mfg. - Model)] / [Operating System]
none
[Existing External Network Addresses (if any)]
yes, thinwire Ethernet
[LAN Connection (if any)]

To Computing Resource (or another End User):

Last Name / First Name / Initial
NASA
[Organization]
GSFC
[Facility]
IUE RDAF
[Suborganization]
Code 684.1
[Address]
[Address]
Greenbelt MD 20771
[City] / [State] / [Zip]
888-9500
[Commercial Phone] / [FTS Phone]
N/A
[E-Mail Address (if any)]
VAX 8800 VMS
[Host/Terminal Type (Mfg. - Model)] / [Operating System]
IUEGSFC NASA, IUE::
[Existing External Network Addresses (if any)]
yes,
[LAN Connection (if any)]

Description of Service Requested:

Requirement is for access to the ultraviolet spectroscopy data available from the IUE RDAF at GSFC. Access to ADS hosts required as well. Primary use of line will be for file transfer (25 Mbytes/week), remote logon and Email to colleagues at GSFC, Univ Colorado at Boulder. There are no special security considerations. Hosts at Hardknocks are on LAN.
NOTE: uVAX is running Wollongong TCP/IP product.

1 of 2

NSI Form 1 (May 90)

NASA SCIENCE INTERNET
NETWORK SERVICE REQUEST

NSI NSR #

From End-Point Site:	To End-Point Site:
Univ of Hardknocks Organization	NASA [Organization]
Central Communications Facility	GSFC [Facility]
Suborganization	Code 634.9 [Suborganization]
202 Building	21 [Building]
basement Floor	basement [Floor]
14 Room	6 [Room]
Caroline Caruso Point of Contact/NSI Site Coordinator	Randy Thompson [Point of Contact/NSI Site Coordinator]
none Email	RTHOMPSON@IUE.GSFC.NASA.GOV Email
801/693-6207 Commercial Phone / FTS Phone	888-8800 [Commercial Phone] / [FTS Phone]
FAX: 801/693-6208	FAX: 301/286-7642

Specific NASA Program/Project Reference:

Headquarters Code SZ

UPN No.: 399

Program/Project Name: IUE (International Ultraviolet Explorer)

NASA Contract/Grant Number: NAG62947

[Expiration Date:] 10/93

[Contracting Officer's Technical Representative] Dr. Don West

[Commercial Phone:] 301/286-6901

[FTS Phone:] 888-6901

Description of Service (Cont'd):

NSI Form 1 (May 90)

NASA SCIENCE INTERNET
NETWORK SERVICE REQUEST

NSI NSR #

Date Prepared 1/30/90

RETURN TO:
NASA SCIENCE INTERNET PROJECT OFFICE
Mail Stop 233-8
NASA Ames Research Center
Moffett Field, CA 94035-1000
Commercial: (415) 604-5859 FTS: 464-5859
FAX: (415) 604-6999 FTS: 464-6999

FROM Designated Requirements Initiator:
Dr Frank Six — S
Name (Please Print) — NASA Org Code
CSR Assigned: Joanie Thompson
Principal Investigator: Prof. Bob Eli
Institution: Univ of West Virginia

Description of Services Requested:

Requested Start Date: 3/30/90 — Estimated Stop Date:

From End User:

Eli, Prof Bob
Last Name, First Name, Initial
Univ of West Virginia
Organization
Dept of Civil Eng.
Facility
[Suborganization]
Address
Address
Morgantown VA 26506
City, State, Zip
304/293-3580
Commercial Phone [FTS Phone]
bob@wvnvm.bitnet
[E-Mail Address (if any)]
VAX 11/785, SGI VGS, Unix
[Host/Terminal Type (Mfg. - Model)] [Operating System]
[Existing External Network Addresses (if any)]
LAN connection planned
[LAN Connection (if any)]

To Computing Resource (or another End User):

General Internet Connectivity
Last Name, First Name, Initial [Organization]
[Facility]
[Suborganization]
[Address]
[Address]
[City] [State] [Zip]
[Commercial Phone] [FTS Phone]
[E-Mail Address (if any)]
[Host/Terminal Type (Mfg. - Model)] [Operating System]
[Existing External Network Addresses (if any)]
[LAN Connection (if any)]

Description of Service Requested:

Prof. Eli requires general internet connectivity for file transfer -- particularly from NASA centers, NSF supercomputer centers, DOE centers (LANL, Argonne Labs) to Univ. Twenty 25 Mbyte files will be transferred daily.
Email to the above sites plus the other JOVE investigators required.

Prof Eli is modeling weather patterns on the supercomputers and post processing on the SGI.

NSI Form 1 (May 90)

NASA SCIENCE INTERNET
NETWORK SERVICE REQUEST

NSI NSR #

From End-Point Site:

Univ West Virginia
Organization

Comm. Center
Facility

Suborganization

21
Building

1
Floor

3
Room

Bill Bowers
Point of Contact/NSI Site Coordinator

bowers@wvnvm.bitnet
Email

304/293-7176
Commercial Phone | FTS Phone

To End-Point Site:

NASA
[Organization]

GSFC
[Facility]

[Suborganization]

1
[Building]

basement
[Floor]

53
[Room]

Jeff Burgan
[Point of Contact/NSI Site Coordinator]

JEFF@NSIPO.NASA.GOV
[Email]

[Commercial Phone] | 464-5705
[FTS Phone]

Specific NASA Program/Project Reference:

Headquarters Code S

UPN No.: 998

Program/Project Name: JOVE

NASA Contract/Grant Number: NA72391

[Expiration Date:] 10/92

[Contracting Officer's Technical Representative]
Bob Robbins

[Commercial Phone:]

[FTS Phone:] 824-1763

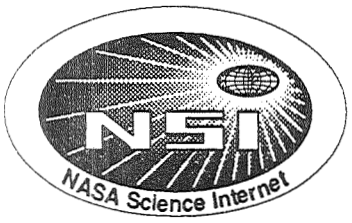
Description of Service (Cont'd):

Current BITNET connection does not satisfy connectivity requirements.

Research is not mission critical; some downtime of network acceptable

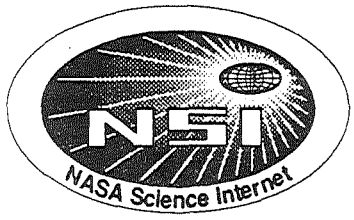
2 of 2

NSI Form 1 (May 90)



Sample Notification of Receipt

Completed NSR in hand, the customer's request for networking services is often acknowledged in a letter such as this. But sometimes, the CSR breaks down and employs the "other" technology (ie telephone). On to the validation step!



NASA Science Internet Project Office
NASA/Ames Research Center
M/S 233-8
Moffett Field, CA 94035-1000

December 21, 1990

Dr. James G. Mantovani
Florida Institute of Technology
Dept. of Physics & Space Sciences
150 W. University Blvd.
Melbourne, FL 32901-6988

Dear Dr. Mantovani,

I have received your request for a "SPAN" network connection to support your JOVE-sponsored research. It has been documented as NSR 21338 and you can get status by contacting me.

As your request is explicitly for a "SPAN" connection, I thought that the following explanation would be helpful:

The NASA Science Internet Project is currently consolidating the "SPAN" and "NASA Science Network" circuits into a network called the NASA Science Internet (NSI). Architecturally speaking "SPAN" is being redesigned, but the DECNET functionality will still exist. This is because the NASA Science Internet supports both DECNET and TCP/IP networking services over the same circuits.

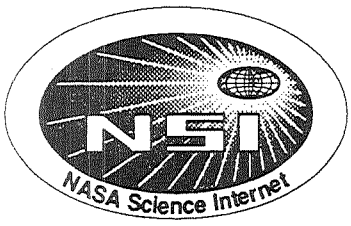
I am delighted to tell you that there already exists an NSI Interoperability Gateway which supports file transfer, remote logins from your Internet-resident VAXes to VAXes on the NSI "DECNET" and electronic mail. As it is possible that the Interoperability Gateway might satisfy your "DECNET" networking needs I am enclosing the documentation and ask that you try it out.

However, I will still want to discuss networking issues with you over the phone. You can expect to hear from me in early January 1991 when I return from vacation.

Sincerely,

Joanie Thompson
415/604-4550
joanie@nsipo.nasa.gov

cc: CFalsetti
NSR21338



Sample Validation Packages

Since every request for network connectivity must be validated, the CSRs have developed a standard "Validation Package" for submission to the appropriate Validation Contact at NASA Headquarters. The "Package" consists of a cover letter and Validation Sheet which is signed and returned to our office. The Customer Service support staff maintains a log to track the progress of the "Package" while at Hq.

National Aeronautics and Space
Administration

Ames Research Center
Moffett Field, California 94035-1000

NASA

Reply to Attn of: ED:233-8

October 29, 1990

Mr. Greg Hunolt
National Aeronautics and Space Administration
Code SE
Washington, D.C. 20546-0001

Dear Mr. Hunolt:

Please review the attached Code SE Validation Sheets for NASA Science Internet service. If we are to implement this service, we require your validation before proceeding. If you are unable to validate this request, please provide a brief explanation on the Validation Sheet. In either case, your signature is required.

The Customer Service Representative for Code SE network service requests is Kathy Bosovich. She will be happy to provide you with any additional information or status on any Code SE network request. Kathy can be reached at FTS 464-5859, (415) 604-5859 or by NASAMAIL: kjbosovich.

Return signed validation sheets to your Customer Service Representative, Kathy Bosovich at:

NASA Ames Research Center
NASA Science Internet Office
ms: 233-8
Moffett Field, CA 94035-1000

FAX (415)604-6999, FTS 464-6999.

Thank you for your assistance.

Deborah D. Puku

for Christine M. Falsetti
Customer Service Manager
NASA Science Internet Office

cc: DPuku
FRounds
KBosovich
MGoodman

NASA HQ VALIDATION SHEET
from the
NASA Science Internet Office
October 29, 1990

The following narrative describes a request for networking services. We ask that you review it and indicate whether the requirement is valid or not valid. If not valid, please provide a brief explanation. If you require more information about this request, contact the Customer Service Representative (CSR) for Code SE.

Mr. Michael Goodman at Marshall Space Flight Center has requested general Internet connectivity for the following locations in support of the WETnet Project. WETnet needs capability to transfer files from mainframe to mainframe McIDAS without using McIDAS communication protocols, and interactive file transfer between mainframe McIDAS and PC-McIDAS.

Listed below are the location that are requested for WETnet connectivity:

Eric Barrett, Remote Sensing Unit, University of Bristol, England NSR 21122
Francis Bretherton, Space Science & Engring Ctr, Univ of WI, NSR 21123
Robert Brown, Dept of Atmospheric Sciences, Univ of WA, NSR 21124
Robert Chase, CO Ctr for Astrodynamics Res Univ of CO, NSR 21127
William Emery, CO Ctr for Astrodynamic Res, Univ of CO, NSR 21131
Robert Crane, Dept of Geography, Pennsylvania State Univ, NSR 21129
Jerry Felde, Geophysics Laboratory (AFSC), Hanscom AFB, NSR 21132
Catherine Gautier, Univ of CA-San Diego, Scripps Insititute, NSR 21133
Barry Rock, Univ of New Hampshire, NSR 21137
William Olson, Univ of Wisconsin-Madison, NSR 21136
John Janowiak, NOAA/NWS/NMC-Climate Analysis Ctr, W.D.C., NSR 21134
Rod Scofield, NOAA/NESDIS, Camp Springs, MD, NSR 21139

Please indicate if this request is: (check one)

___✓___ a valid requirement for Code SE.

_____ not a valid requirement for Code SE. (Please provide brief explanation below.)

comments:

Signed: Greg Hunolt Date: Nov. 6, 1990
Greg Hunolt, NASA HQ: Code SE

Please return to:

Kathy Bosovich
NASA Ames Research Center
NSIO
ms: 233-8
Moffett Field, CA 94035-1000

National Aeronautics and Space
Administration

Ames Research Center
Moffett Field, California 94035-1000

NASA

Reply to Attn of: ED:233-8

February 14, 1991

Dr. James Willett
Code SS
National Aeronautics and Space Administration
Washington, D.C. 20546-3191

Dear Dr. Willett:

Please review the attached Code SS Validation Sheets for NASA Science Internet service. If we are to implement this service, we require your validation before proceeding. If you are unable to validate this request, please provide a brief explanation on the Validation Sheet. In either case, your signature is required.

The Customer Service Representative for Code SS network service requests is Maria Gallagher. She will be happy to provide you with any additional information or status on any Code SS network request. Maria can be reached at FTS 464-3601, (415) 604-3601 or by NASAMAIL: mlgallagher.

Return signed validation sheets to your Customer Service Representative, Maria Gallagher at:

mail stop 233-8
NASA Ames Research Center
NASA Science Internet Office
Moffett Field, CA 94035-1000

FAX (415)604-0063, FTS 464-0063.

Thank you for your assistance.

Christine M. Falsetti
Customer Service Manager
NASA Science Internet Office

cc: MGallagher
DPuku
FRounds

NASA HQ VALIDATION SHEET
from the
NASA Science Internet Office
February 14, 1991

The following narrative describes a request for networking services. We ask that you review it and indicate whether the requirement is valid or not valid. If not valid, please provide a brief explanation. If you require more information about this request, contact the Customer Service Representative (CSR) for Code SS, Maria Gallagher.

Gordon Lentz of the University of Chicago has requested an upgrade in the existing 9.6 DECnet circuit from the University of Chicago to MSFC, in anticipation of a substantial increase in use of the network to support various experiments on both the CRRES and Ulysses spacecraft. (NSR #21299)

The PI at the University of Chicago is Dr. J. Simpson who is working with various Co-Investigators in both the U.S. (primarily at JPL and AFGL) and Europe. (NSR #21300)

The connectivity will be used for quick-look data access from the ionboard experiments on both crafts, as well as increased data exchange and transfer among the experimentors.

Please indicate if this request is: (check one)

__X__ **a valid** requirement for Code SS.

_____ **not a valid** requirement for Code SS. (Please provide brief explanation below.)

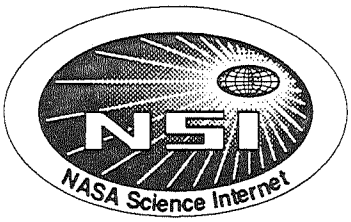
comments:

Signed: James Willett Date: 3-1-91
Dr. James Willett, NASA HQ: Code SS

note: For tracking purposes, NSI has assigned these requests as #21299 and #21300. Your Customer Service Representative can provide more information and/or status on these NSRs.

Please return to:

Maria Gallagher
ms: 233-8
NASA Science Internet Office
NASA Ames Research Center
Moffett Field, CA 94035-1000
(415) 604-3601

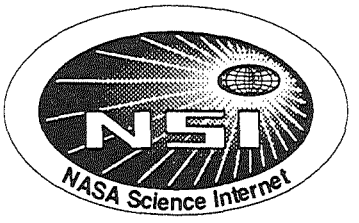


Headquarters Validation Contacts

The following chart shows who the CSR applies to for Validation of requirements. Validation is a necessary and crucial step in the NSR Process since NSI Engineering is unable to perform cost analyses, design network solutions or order circuits without it.

CHRISTINE FALSETTI
CUSTOMER SERVICE MANAGER

CODE	DISCIPLINE	CUSTOMER SERVICE REPRESENTATIVE	HQ OFFICIAL VALIDATOR	DESIGNATED VALIDATOR
S	Office of Space Science and Applications	Joanie Thompson-JOVE	Dr. Joseph Alexander (Code S) Robert C. Rhome (Code R)	
SZ	Astrophysics	Joanie Thompson	Dr. Frank Giovane	Dr. Guenter Riegler
SC	Communications	Maria Gallagher	Dr. Anthony Villasenor	
SE	Earth Science and Applications	Kathy Bosovich and Lenore Jackson	(Dr.) Greg Hunolt	
SM	Flight Systems Division	TBD/Christine Falsetti	Dr. Phillip J. Cressy Jr.	
SB	Life Sciences	Kathy Bosovich	Dr. Richard (Dick) Keefe	D. Duncan Atchison (Lockheed)
SN	Microgravity Science and Applications	TBD/Christine Falsetti	(Dr.) Mary Kicza	
SL	Solar System Exploration	Joanie Thompson	Dr. Guenter Strobel	
SS	Space Physics	Maria Gallagher	Dr. James Willett	(Dr.) Eldon Whipple



Sample Rejection Letter

Not very often, the Headquarters Validation Contact flags a requirement as invalid and the CSR drafts a letter like the following.

July 31, 1990

Mr. Alan Strong
Project Coordinator, CEORS
Department of the Navy
United States Military Academy
Annapolis, MD 21402

Dear Mr. Strong,

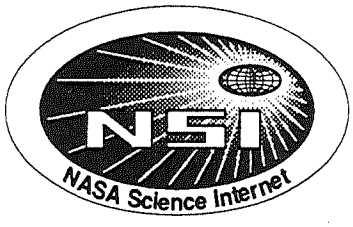
We regret to inform you that your request for connectivity to the NASA Science Internet has been denied.

All of our requirements must go through the NASA headquarters validation process in order to be approved for funding. When your request was submitted to NASA headquarters for validation, neither Dr. George Ludwig (Earth Sciences Discipline validator) nor Dr. Marion Lewis were able to associate your request with a valid NASA OSSA program or project.

Currently, we consider this request closed. Further supporting documentation providing evidence of a NASA/OSSA grant or contract for your site is needed if you wish to pursue this matter further. If you have any questions, please feel free to contact me at the number below. Thank you for your patience in this matter.

Sincerely,
Lenore Jackson

NSI Customer Service Representative
Code SE
(301) 286-7251
NSSDCA::JACKSON
jackson@nssdca.gsfc.nasa.gov



Interface with Engineering

Once validated, the CSR introduces the requirement to the NSI Engineering staff. The Engineering Manager assigns one of his staff to seek costing estimates and perform design analyses and makes recommendations on implementation. The Engineering Manager makes the final decision on implementation.

The CSR staff maintains records and tracks the progress of requirements through this phase of the process too.

WHAT: Agenda for the Requirements Engineering Meeting

WHEN: Thurs, March 7, 1991 2:30-3:30

WHERE: Room 247

WHO: Engineering staff and Customer Service Reps

NEW REQUIREMENTS

NSR 21299 Request for upgrade to existing NSI-DECnet services between Univ of Chicago and MSFC, GSFC
PROJECT: CRRES
CSR: Maria

NSR 21300 Request for upgrade to existing NSI-DECnet services between Univ of Chicago and JPL
PROJECT: Ulysses
CSR: Maria

NSR 21366 Reqmt for Email, remote logon, file transfer between University of Puerto Rico and MSFC
PROJECT: JOVE
CSR: Joanie

ACTIVE REQUIREMENTS open for discussion

NSR 21027 Request to upgrade existing 9.6 NSI-DECnet to 56Kbps dual-protocol between GSFC and Yale University.
PROJECT: Code SZ Astrophysical Theory Program
CSR: Joanie
History

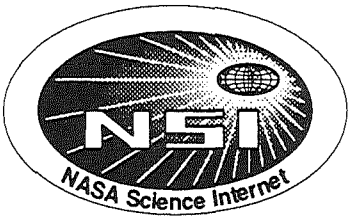
02/28/91: Eng requested copies of the users proposal to NSI.
03/07/91:

NSR 21345 Onizuka AFB, Sunnyvale, CA to ARC
NSI/DECnet services requested to support researcher.
PROJECT: CRRES
CSR: Maria
History

01/31/91: Milo M. recommends NSI use PacBell for this reqmt. Concurrence by Bill J. SR to B.Yeager required. NSI to provide DSU & maint.
02/21/91: Mark to prepare and submit SR.
02/28/91: Thom delegated job of preparing SR. ARC POC is Jeff Burgan.
03/07/91:

NSR 21352 Internet connectivity from Crystal City, DC to NASA HQ
PROJECT: Scientific and Technical Info Division Code NT
CSR: Kathy
History

01/31/91: Eng will talk to Jeff concerning this issue. Ckt provider



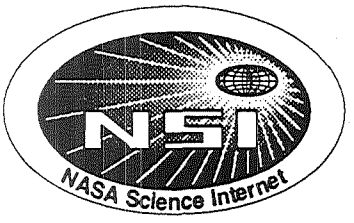
Customer Notification of Completion/Confirmation

In reality, the CSR is alerted by the NSI Network Manager when the service is in place and operational. A phone call to the customer is usually made before the Notification of Completion/Confirmation is produced.

From this point forward, the CSRs' role is largely complete. But there are two other NSI groups who are providing services to the network user; NSI Operations Center (NOC) and NSI User Support Office.

With the help of sophisticated Network Monitoring techniques, The NOC Staff are able to act upon network problems well before the users notice and report the problem. Network monitoring is ongoing 24 hours a day, 7 days a week.

The NSI User Support Office staffs a user help desk which is the first stop for all user questions/problems. The help desk is available 12 hours a day, 5 days a week with off-shift support from the NOC. The office also maintains an on-line Network Information Center (NIC) which is available through the network.



NASA Science Internet Project Office
NASA/Ames Research Center
M/S 233-8
Moffett Field, CA 94035-1000

May 16, 1990

Dr. Joseph Veverka
Cornell University
Center for Radiophysics & Space Research
422 Space Sciences Bldg.
Ithaca, NY 14853

Dear Dr. Veverka,

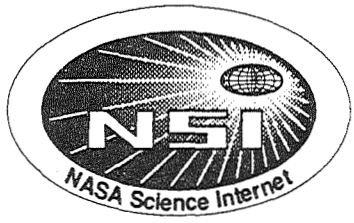
Your request for an upgrade to the existing network service between Cornell University and JPL to facilitate your work as a member of Galileo's Solid-State Imaging team has been implemented and is now fully operational.

NSI Engineering has worked with Mr. Joel Plutchak for your site to verify that the circuit is performing reliably. NSI Operations will monitor the circuit 7 days a week, 24 hours a day. Should you experience problems with this new service, your first course of action should be to contact your local networking expert who would then contact NSI Operations staff should it be necessary.

Sincerely,

Joanie Thompson
NSI Customer Services
415/604-4550

cc: Ted Clarke/JPL
Mark Leon/ARC
Christine Falsetti/ARC



An Article Reprint: Requirements Management

What the CSRs would like their customers to understand is that the CSR is the focal point for getting the requirements into and through the NSR Process. There are a number of internal and external groups which the CSR interfaces with to complete a service request. The following article indicates the groups while describing the process.

Requirements Management in the NASA Science Internet

by Deborah D. Puku

In October 1990, the NASA Science Internet (NSI) Project established the Customer Service group to manage collection of OSSA program and project science data communications requirements. Currently, the Customer Service responsibilities include communications requirements management, program and project interface, publication distribution, and other value-added services for NSI.

The Customer Service group is managed by Christine Falsetti at NASA Ames Research Center, who reports directly to Fred Rounds, the NSI Project Manager. Currently, group members are located at Ames Research Center and Goddard Space Flight Center. Customer Service representatives (CSRs) are assigned the requirements management responsibilities by OSSA discipline, as follows:

CODE	DISCIPLINE	CUSTOMER SERVICE REPRESENTATIVE
SZ	Astrophysics	Joanie Thompson
SC	Communications	Maria Gallagher
SE	Earth Science and Applications	Kathy Bosovich and Lenore Jackson
SM	Flight Systems Division	TBD/Christine Falsetti
SB	Life Sciences	Kathy Bosovich and Lenore Jackson
SN	Microgravity Science and Applications	TBD/Christine Falsetti
SL	Solar System Exploration	Joanie Thompson
SS	Space Physics	Maria Gallagher

PHONE NUMBER AND EMAIL ACCESS

K. Bosovich, (415) 604-5859
bosco@nsipo.nasa.gov

M. Gallagher, (415) 604-6362
maria@nsipo.nasa.gov

C. Falsetti, (415) 604-6935
falsetti@nsipo.nasa.gov

L. Jackson, (301) 286-7251
jackson@nssdca.gsfc.nasa.gov

J. Thompson, (415) 604-4550
joanie@nsipo.nasa.gov

For NSI service, program and project managers are encouraged to work with the NSI Customer Service Manager to establish a Memorandum of Understanding. (Individual requestors seeking NSI services should contact their discipline CSR: see chart.) A Memorandum of Understanding (MOU) is a contract between NSI and the program or project requesting network services. It describes the roles and responsibilities of each party, and details the requirements for wide area network connections. An MOU also offers several advantages: program requirements are

uniformly documented, MOU customers are given project priority, requirements are documented in the NSI budget cycles, and the requests for service are potentially expedited through the validation process.

As an MOU is being negotiated, a CSR is assigned and a Science Networking Representative (SNR) from the OSSA program or project is identified. Requests for network connections are documented on a Network Service Request (NSR) form by the Science Networking Representative with the help of the Customer Service Representative. The requirements are tracked through the NSR process as outlined in brief here:

I. Requirements Gathering--

Information needed includes site addresses, host/terminal type, any existing network connection information, and a comprehensive description of service requested. Also necessary are names of the associated OSSA program or project, NASA Headquarters code, grant numbers, and names needed for Headquarter validation and approval.

II. Headquarters Validation--

Note: This step can be waived with an approved MOU. When the NSR is complete, a description of service is forwarded to the designated validator of the appropriate discipline at NASA Headquarters (i.e., Life Sciences, Astrophysics, etc.). The discipline involved then reviews the request and decides whether the service is necessary and relevant in support of the identified OSSA program/project. This process can take anywhere from a week to months, depending on the schedules of OSSA discipline representatives.

III. Engineering Review--

Once the NSR is validated, NSI Engineering performs design analyses. Decisions are based on a number of factors including existing network connections or proximity, and use of shared bandwidth. The goal is to maximize bandwidth efficiency while delivering the desired level of performance to the user.

IV. Administration Review--

The Engineering plans, when complete, are then given to Administration for a budget review. If the request is submitted early enough, cost can be forecasted into NSI's budget for the appropriate fiscal year. Many NSRs are entered years in advance to ensure they will be funded by NSI.

V. Implementation--

The NSI Site Installation and Engineering Teams work with the Program Support Communications Network and other circuit providers to implement design plans and ensure that the connection is functional and running.

VI. Operations--

All network connections are monitored 24 hours a day, seven days a week. NSI Operations has a hotline number for immediate service, (415) 604-3655. They monitor the wide area network, diagnose and verify problems, coordinate resolutions, and track and document findings.

Through all phases of the NSR process, the user has one designated CSR. The CSR will keep the users updated and notified on any status changes.

An important complimentary function to the requirements management process is NSI support of major OSSA conferences by providing network connections to attendees. This allows members of the science community access their home institutions for electronic mail, remote login,

and file transfers. It also allows attendees to meet their CSRs, pick up documentation, and discuss the requirements process.

If you would like to benefit from any of the services provided by the NSI Customer Service group, please contact your appropriate Customer Service Representative listed in the chart above.

Reprinted from the Office of Space Science and Applications Information Systems Quarterly *October 1990 Issue No. 1. Updated for the NSI Users Working Group Proceedings, February 1991.*