NETWORK OPERATING SYSTEM

SHORT TERM OBJECTIVE

IS TO DEVELOP A PROTOTYPE NETWORK OPERATING SYSTEM FOR A 100 MEGABIT / SECOND FIBER OPTIC DATA BUS.
IMPORTANT TO SPACE STATION BECAUSE

CUSTOMER INTERFACE SOFTWARE NEEDS TO
BE DEVELOPED TO SUPPORT A LARGE NUMBER
OF INDEPENDENTLY OPERATED INSTRUMENTS
AND PAYLOADS
LONG TERM OBJECTIVE

IS TO ESTABLISH GUIDELINES FOR WRITING A
DETAILED SPECIFICATION FOR A SPACE STATION
NETWORK OPERATING SYSTEM.

TO BE STUDIED:

- IMPLEMENTATION OF ISO / OSI STANDARD
- BUS ARBITRATION EFFICIENCY
- REMOTE DIAGNOSTICS
- RELIABILITY
- NOISE SENSITIVITY
- ERROR DETECTION AND HANDLING
GSFC APPROACH TO DEVELOPING AN NOS:

— AN NOS STATE-OF-THE-ART STUDY

— AN RFP FOR A PROTOTYPE NOS
COMMERCIALY AVAILABLE SYSTEMS

UNIX BASED

UNIVERSE_NET BY CHARLES RIVER DATA SYSTEMS

NFS BY SUN MICROSYSTEMS

IBM—PC BASED

NET/ONE BY UNGERMANN—BASS

NETWARE BY NOVELL, INC.
MAJOR MILESTONES

* STATE OF THE ART STUDY REPORT 5/85
* AWARD OF PROTOTYPE NOS (COMPETED) CONTRACT 7/85
* SOFTWARE REQUIREMENTS REVIEW 9/85
* PRELIMINARY DESIGN REVIEW 1/86
* CRITICAL DESIGN REVIEW 7/86
* DELIVERY OF PROTOTYPE NOS 12/86