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