

TO Donald A. Beattie
Jackie Ziemer
FROM for Don Hearth
SUBJECT Panel 7

DATE September 9, 1988

UNIVERSITY OF COLORADO

*Interdepartmental
Memorandum*

Attached is the draft material to be discussed during the Panel 7 conference call,
Monday, September 12th, 3:00 p.m. EDT.

SPACE STATION ADVISORY COMMITTEE

Panel 7 - System Engineering, Test and Verification

Beattie
Greenwood
Hearth (Chair)
Weiss
Young

September 20, 1988

PANEL CHARTER

TASK

- o "First Order" Assessment to Committee
- o Recommendations to Committee
 To NASA Now
 Future Actions by Committee/Panel

AREAS COVERED

- o Management and Implementation Responsibilities
- o Translation Of Mission Requirements To Design
- o Baseline Plans For Test and Verification
- o Procedures For Special Areas
 Software For Flight and Ground Systems
- o Accommodation For Systems Not Covered By Work
 Package Contracts
 Foreign Elements - Flight Experiments
- o Role Of Technical and Management Information
 System (TMIS)

PROCESS

- o Panel Conference Call
 - Charter
 - Agenda for Level 2 Meeting
- o August 22nd and 23rd Meeting at Level 2
- o Panel Conference Call
 - Finalize Observations and Recommendations

OBSERVATIONS

- 1 - Current Plans and Procedures Reasonable
- 2 - Program Management Structure More Complicated Than Expected
 - Increases SE & I Role
 - Level 2 SE & I Role Critical to Success In Line and Operational Not Just Management/Oversight
 - Do Centers Recognize Their Level 2 SE & I Responsibilities? ↳ DELEGATED
- 3 - Level 2 SE & I Staffing Inadequate
 - NASA and PSC too Lean
 - Experience of PSC Personnel
- 4 - Insufficient Integrated Schedule
 - Relationship Between SE & I and Work Packages
- 5 - Work Packages ^{MAY} Do Not Encourage Work Package Centers and Contractors "Ownership" OF INTEGRATED ELEMENTS
~~Lack of Traditional Motivation to Provide Leadership and Fight Fires~~
- 6 - Will Associate Contractor Approach Increase Dependency on Level 2 and/or Reduce Center "Ownership"?
- 7 - International Systems Should Be Treated More Like U.S. Work Packages

OBSERVATIONS, continued

- 8 - Need More Attention To
 - Management of Margins
 - Risk Management
 - Configuration Management
 - Hardware/Software/Interface Simulations

- 9 - Too Much Dependence on TMIS?

- 10 - Special Consideration of Software is Great, But
 - Sufficient Level 2 People?
 - Understanding/Acceptance Throughout Program
(Including Internationals?)

- 11 - Program Needs Overall Detail Test and
Verification Plan and Schedule

PANEL RECOMMENDATIONS

FORWARD TO NASA NOW

- 1 - Must Increase Level 2 SE & I Staff
Immediately
- 2 - Increase Work Package Center/Contractor
"Ownership" Wherever Possible
- 3 - Develop Integrated Program Schedule
Highlighting Level 2 SE & I Milestones
and Relationships to Centers/Work Packages
- 4 - Insure That Centers Recognize/Accept
Their Level 2 SE & I Responsibilities
- 5 - Consider Panel Observations in Context of
Brief Panel Review

FUTURE COMMITTEE ACTIONS

- 1 - Committee Carefully Examine Associate
Contractor Approach
 - Influence on Level 2 Role
and Center "Ownership"
 - Expectations Realistic?
- 2 - Panel 7 Conduct In-Depth Review in Summer 1989
[Interim Design Assessment - July 1989]
[Preliminary Design Review - June 1990]