

SPACE STATION SERIES

CRITICAL EVALUATION TASK FORCE (CETF)

In the wake of the Challenger accident in January of 1986, concern began to grow over the launch capacity of the Shuttle and the ability of its crew to assemble a large dual-keel space station. In addition, Congress threatened to severely slash the Station budget until "project uncertainties are clarified." (Aviation Week, 7/21/86) In response to these growing pressures Andrew Stofan, then Associate Administrator for Space Station, established the CETF at Langley Research Center on August 21, 1986. According to its Charter, the objective of the Task Force was "to critically evaluate the current Space Station baseline configuration and to identify options and assembly scenarios that address the issues of transportation limitations, EVA constraints, resource allocations, safety and utilization phasing." Members included representatives of Headquarters, all involved field centers, JSC Level B, and international partners. The activities of the CETF were monitored by a NASA Executive Technical Committee (NETC) responsible for approving the engineering analysis, technical constraints, and technical assumptions made by the Task Force. The materials in this subseries were donated by Charlie Teixeira who led the transportation issues team of the CETF. It consists largely of presentation materials and handwritten notes generated by all elements of the Task Force. Also included are supporting materials gathered from major contractors, ESA, and NRC of Canada. Documents are arranged chronologically by subject area and are dated, for the most part, in the fall of 1986.

Inventory

SubHeading:	Box Number: 1	
CETF OVERVIEW AND ORGANIZATION	Launch Capacity, EVA Concerns Force Space Station Redesign, Aviation Week and Space Technology	July 21, 1986
CETF OVERVIEW AND ORGANIZATION	Critical Evaluation Task Force, Initial Organization, Briefing Schedules, Charter	July - Sept 1986
CETF OVERVIEW AND ORGANIZATION	Space Station CETF Overview	August 1986
CETF OVERVIEW AND ORGANIZATION	NASA Station Design Focuses on Assembly, Early Activation, Aviation Week and Space Technology	Sept 22, 1986
CETF OVERVIEW AND ORGANIZATION	Hook, Ray Draft Charts for preparing Final Briefing	n.d.
SUPPORTING DOCUMENTS (PROVIDED TO CETF)	Report of the Shuttle Operations Strategic Planning Group	March 7, 1985
SUPPORTING DOCUMENTS (PROVIDED TO CETF)	OMV Assisted Space Station Resupply, Revision I	December 10, 1985
SUPPORTING DOCUMENTS (PROVIDED TO CETF)	NASA MSFC, Space Station Level C Requirements, Work Package 1	April - June 1986
SUPPORTING DOCUMENTS (PROVIDED TO CETF)	Space Station Program Concerns, Presentation by Gordon Fullerton	June 20, 1986

SUPPORTING DOCUMENTS (PROVIDED TO CETF)	Alternative Space Station Concept: A Permanently Manned Station Launched with a Single SDLV, Advanced Program Office	July 23, 1986
SUPPORTING DOCUMENTS (PROVIDED TO CETF)	Space Station Impacts of Alternate Transportation Modes, Preliminary Study (Advanced Program Office)	June 1986
SUPPORTING DOCUMENTS (PROVIDED TO CETF)	Space Station Configuration Reassessment Group Meeting Materials (program concerns)	June - July 1986
SUPPORTING DOCUMENTS (PROVIDED TO CETF)	Space Station Engineering and Operation Safety Panel, Phase I Final Report	August 19, 1986
SUPPORTING DOCUMENTS (PROVIDED TO CETF)	Level B, Configuration / Assembly Sequence Optimization Study, Space Station Program Office	August 23, 1986
SUPPORTING DOCUMENTS (PROVIDED TO CETF)	Statement by James C. Fletcher to the Subcommittee on Space Science and Applications, Committee on Science and Technology, House of Representatives, (includes related document on Space Station Management: An Analysis of Work Package Options	September - October 1986
CONTRACTOR AND INTERNATIONAL PARTNER INPUT TO CETF	Rockwell International, Space Station Program Alternatives	July 15, 1986
CONTRACTOR AND INTERNATIONAL PARTNER INPUT TO CETF	National Research Council, Canada Mobile Servicing System Presentation to CETF	August - September 1986
CONTRACTOR AND INTERNATIONAL PARTNER INPUT TO CETF	MDAC, Configuration Reassessment, Briefing to NASA CETF	August 21, 1986
CONTRACTOR AND INTERNATIONAL PARTNER INPUT TO CETF	ESA Input to CETF	September 10, 1986
CONTRACTOR AND INTERNATIONAL PARTNER INPUT TO CETF	Rockwell International, Alternate Space Station Assembly Sequence and Packaging (*NOTE: marked proprietary)	n.d.
CONTRACTOR AND INTERNATIONAL PARTNER INPUT TO CETF	General Electric, Erectable Structure System for Space Station (*NOTE: marked proprietary)	n.d.
SubHeading:	Box Number: 1 *	
CETF OVERVIEW AND ORGANIZATION	Establishment of CETF Configuration Baseline * This 74 page document has been scanned	August 23, 1986
SubHeading:	Box Number: 2	
CETF FINDINGS &	Critical Evaluation Task Force	August 28, 1986

REPORTS	Report to the CETF oversight Committee	
CETF FINDINGS & REPORTS	CETF, Report to the NASA Executive Technical Committee (includes team inputs)	September 8, 1986
CETF FINDINGS & REPORTS	CETF, Final Presentation to the NASA Executive Technical Committee	September 15, 1986
CETF FINDINGS & REPORTS	Findings of the Critical Evaluation Task Force (CETF)	September 17, 1986
CONFIGURATION / SYSTEMS TEAM	CETF C/S Team, System Design Drivers	August 30, 1986
CONFIGURATION / SYSTEMS TEAM	CETF C/S Team, Revision of CETF Constrained Hardware Alternative Assembly Sequence (re: 24 Hour EVA ground rule, crew safety, escape capability)	August 30, 1986
CONFIGURATION / SYSTEMS TEAM	CETF C/S Team, Description and Evaluation of NASA and Contractor Options Provided as Input to the Task Force Effort	August 1986
CONFIGURATION / SYSTEMS TEAM	CETF C/S Team, Space Station Assessment Criteria	c. August 1986
CONFIGURATION / SYSTEMS TEAM	CETF C/S Team, Candidate Equipment for Possible Relocation in Expanded Pressurized Modules	September 2, 1986
CONFIGURATION / SYSTEMS TEAM	CETF C/S Team, CETF Option Team Leaders (reference configuration descriptions attached)	September 3, 1986
CONFIGURATION / SYSTEMS TEAM	CETF C/S Team, Weight Data	September 3, 1986
CONFIGURATION / SYSTEMS TEAM	CETF C/S Team, Critical Evaluation of CETF Reference Configuration	September 1986
SubHeading:	Box Number: 3	
CONFIGURATION / SYSTEMS TEAM	CETF C/S Team, Option Descriptions (1, 1B, 1D, 2, 2A, 3, 3B, 5) (including some revisions)	September 1986
CONFIGURATION / SYSTEMS TEAM	CETF C/S Team, Node Outfitting Related data	September 1986
EVA TEAM	CETF EVA Team, CETF Sensitivity to Crew Size	September 5, 1986
EVA TEAM	CETF EVA Team, EVA and Maintenance Hour Assessments	September 5, 1986
EVA TEAM	CETF EVA Team, EMU Comparison	September 5, 1986
EVA TEAM	CETF EVA Team, Module Weight Analysis	September 11, 1986

EVA TEAM	CETF EVA Team, Maintenance Station Location	September 11, 1986
EVA TEAM	CETF EVA Team, Crew Return Vehicle (CRV) Size	September 12, 1986
EVA TEAM	CETF EVA Team, Evaluation of CETF Option IB: Robotics option	September 12, 1986
EVA TEAM	CETF EVA Team, Option 3 Projected Assembly Sequence Through PMC (permanently manned capability) and EVA Task Menu, Revision C	September 13, 1986
EVA TEAM	CETF EVA Team, Viewing Concerns	September 13, 1986
EVA TEAM	CETF EVA Team, Redundant Airlock	September 13, 1986
EVA TEAM	CETF EVA Team, Man Systems Assessment of Option 3 Synthesized Space Station	September 13, 1986
EVA TEAM	CETF EVA Team, Functional Allocation of Habitable Volume	September 13, 1986
EVA TEAM	CETF EVA Team, EVA Task Menu (Assembly, Operation, and Maintenance)	September 1986
SAFETY TEAM	CETF Safety Team, Crew Return Vehicle Safety Assessment	August 26, 1986
SAFETY TEAM	CETF Safety Team, Safety Assessment of Configuration Options	September 1986
SAFETY TEAM	CETF Safety Team, Groundrules and Issues	1986
SubHeading:	Box Number: 4	
RESOURCES TEAM	CETF Resources Team, Weight Data Update	September 6, 1986
USER CONSIDERATIONS TEAM	CETF User Team, (Payload) Contamination Considerations in Single Truss Configuration	September 12, 1986
USER CONSIDERATIONS TEAM	CETF User Team, A View of the Space Station Logistics from the User Perspective	September 12, 1986
USER CONSIDERATIONS TEAM	CETF User Team, Space Station Capability Enhancement Using Attached Payloads	September 14, 1986
TRANSPORTATION TEAM NOTES, EVALUATION FORMS, FINAL BRIEFING MATERIALS	Transportation Team (materials developed in support of the Task Force)	September 1986
TRANSPORTATION TEAM NOTES, EVALUATION FORMS, FINAL BRIEFING MATERIALS	CETF Transportation Team, Harold Miller, Notes from the CETF	September 9, 1986
TRANSPORTATION TEAM	Charlie Teixeira,	1986, n.d.

NOTES, EVALUATION FORMS, FINAL BRIEFING MATERIALS	Transportation Team Leader Notes and Data	
TRANSPORTATION TEAM NOTES, EVALUATION FORMS, FINAL BRIEFING MATERIALS	CETF Transportation Team, Option Evaluation Forms	1986
TRANSPORTATION TEAM GROUND RULES & GUIDELINES	Groundrules and Guidelines	1986, n.d.
TRANSPORTATION ISSUES & OPTIONS - ASSEMBLY TASK	OMV - ELV to Augment / Enhance Assembly	August 18, 1986
TRANSPORTATION ISSUES & OPTIONS - ASSEMBLY TASK	Assessment of Space Station Re-phased Assembly Sequence on Assembly and Servicing	August 20, 1986
TRANSPORTATION ISSUES & OPTIONS - ASSEMBLY TASK	CETF Constrained Option, Alternate Assembly Sequence Study Report	August 25, 1986
TRANSPORTATION ISSUES & OPTIONS - ASSEMBLY TASK	Standard CETF Summary Assembly Flight Timelines	August 28, 1986
TRANSPORTATION ISSUES & OPTIONS - ASSEMBLY TASK	Assembly Sequence Optimization Study	August 1986
TRANSPORTATION ISSUES & OPTIONS - ASSEMBLY TASK	Consideration of Major Payload Impact (large centrifuge) (assembly issue)	September 4, 1986
TRANSPORTATION ISSUES & OPTIONS - ASSEMBLY TASK	Assembly Sequence Related Information	1986
TRANSPORTATION ISSUES & OPTIONS - OPERATIONAL PHASE / LOGISTICS	Shuttle Based OMV Operations with the Space Station	May 14, 1986
TRANSPORTATION ISSUES & OPTIONS - OPERATIONAL PHASE / LOGISTICS	Space Station Program Logistics Discussions (Eagle Engineering)	May 21, 1986
TRANSPORTATION ISSUES & OPTIONS - OPERATIONAL PHASE / LOGISTICS	IOC Logistics Requirements	August 23, 1986
TRANSPORTATION ISSUES & OPTIONS - OPERATIONAL PHASE / LOGISTICS	O'Keefe Sullivan, Logistics Requirements / Elements	September 3, 1986
SubHeading:	Box Number: 5	
TRANSPORTATION AUGMENTATION & CONTINGENCY OPTIONS - NSTS, ELV, CELV, SDLV	Space Station Advanced Transportation Systems Interactions (Assembly, IOC, & Growth)	April 23, 1986
TRANSPORTATION AUGMENTATION & CONTINGENCY OPTIONS - NSTS, ELV, CELV, SDLV	Use of Shuttle Derived Unmanned Launch Vehicle (ULV) to Support the Space Station Program	June 9, 1986
TRANSPORTATION AUGMENTATION &	Space Shuttle Support for Space Station, Performance, Capability, Flight Rate	June - September 1986

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C. Teixeira, Post 51-L Space
Station Transportation
Assessment

July 28, 1986

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August 5, 1986

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Titan Launch Vehicles, Space
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August 27, 1986

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Potential Roles for ELV's in
Space Station Logistics

August 1986

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September 9, 1986

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TRANSPORTATION
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ELV Study (appendix A to
unknown document)

n.d.