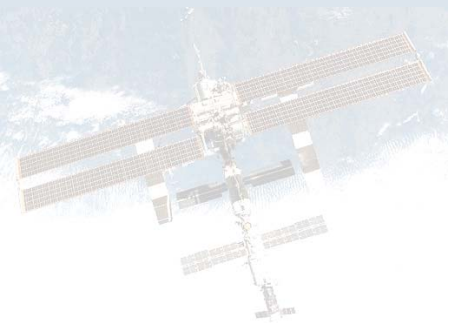


Associate Contractor Agreements (ACAs) and the International Space Station

A Success Story

Mary K. Kerber
Director of Contracts
Barrios Technology, Ltd



Associate Contractor Agreements:

- Aimed at eliminating stress at the interface points between contracts
- Intended to reduce Government involvement and eliminate the “finger pointing” between contractors dependent on data and deliverables from other contractors
- Originated in DOD, but adopted by NASA

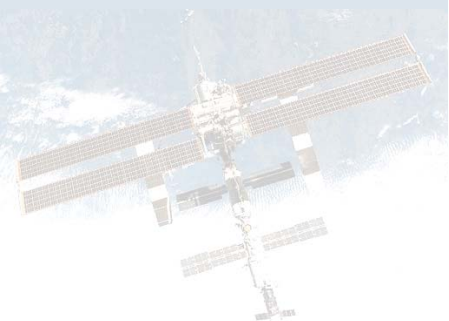


- Tried for 20 years to require ACAs but with varying degrees of success
- New Strategy for the International Space Station (ISS) prime contracts
 - ▶ Structure the contracts the way the ISS Program is managed



- Minimize formal product development, management and delivery between contract boundaries
- ACAs between the prime contractors were essential for the success of this restructure

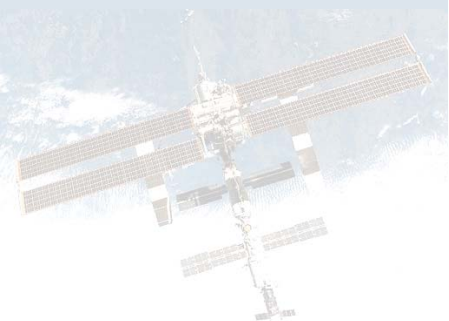
- In 2002 NASA decided to consolidate and restructure the ISS major contracts
- Inherent in this approach was the dependence of each of the new primes on data and deliverable items from each other
 - ▶ Software developed and maintained by one contract used by multiple contracts (MIDAS)
 - ▶ Hardware delivered by multiple contractors to two integration contractors



- Seven direct ISS Contracts
 - ▶ Program Integration & Control – Ares Corp.
 - ▶ Mission Integration Contract – Barrios Tech.
 - ▶ Cargo Mission Contract – Lockheed Martin
 - ▶ EVA Systems – Hamilton Sundstrand
 - ▶ Payload Integration Contract – Boeing
 - ▶ ISS Vehicle Segment Sustaining – Boeing
 - ▶ Flight Equipment Sustaining & Operations - TBD

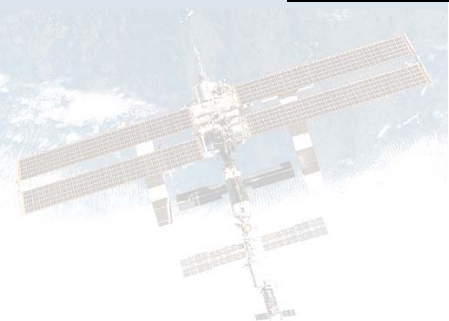


- NASA recognized that this approach required changes in the contract clauses to make it work
 - ▶ ACA clause included in each prime
 - ▶ Implementation of the ACAs was included in the Award Fee Plan of each contract as part of the subjective portion of the evaluation
- Sounds like the same old approach but there were a few significant differences



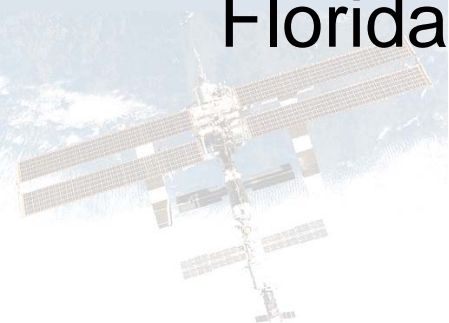
- Section H ACA Clause Excerpts:
 - ▶ “The contractors are strongly encouraged to seek out and foster cooperative efforts that will benefit the ISS Program with increased safety, efficiency, and productivity.”
 - ▶ “The contractor will engage in cooperative relationships that facilitate effective management of the overall ISS effort. This joint cooperation will be evaluated as part of the contract award fee process, as defined in the Award Fee Plan for the contract. Successful performance will be determined by the Government’s assessment of the overall and combined performance of the operation and utilization requirements in the contracts, as modified.”
 - ▶ “All program elements shall work in a coordinated fashion.”

- The significant change in this approach is that the clause requires the contractors to work together for the overall effectiveness of the program
- Signals a change in the behavior of the Government related to using ACAs
 - ▶ “**Joint cooperation** will be evaluated as part of the contract award fee process....Successful performance will be determined by the Government’s assessment of **overall and combined performance...**”



Consistency in contract provisions

- Identical ACA clause included in all new ISS prime contracts
- The same ACA clause was added to the existing Boeing ISS prime contract and to the Boeing Checkout, Assembly, and Payload Processing Services (CAPPS) contract in Florida



Award Fee Plan Provisions

- NASA would evaluate the ACA performance “collectively”
- Part of the performance evaluation and earned award fee depended on how well the contractors worked “as a group” to achieve overall program success
- The same ACA criteria was included in all the ISS prime contracts (including Boeing)

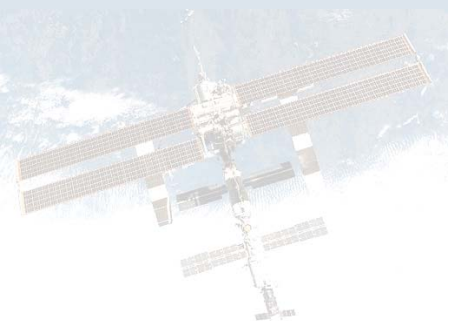


- Attachment J-4, Award Fee Plan, Excerpts:

Thirty-five percent of the potential fee will be based upon a subjective assessment of contractor performance and is intended to provide incentives for process improvements, encourage effective working relationships and cooperation between Associate ISS Contractors, and to highlight specific Areas of Emphasis (AOE) to the contractor.

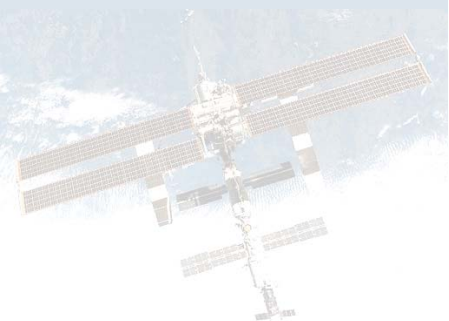


- All contractors have an identical Area of Emphasis for performance evaluations:
“The contractor will be evaluated on the implementation of Associate Contractor Agreements to achieve the efficient development, operation and utilization of the ISS with a cooperative exchange of information and measurable cross contract process improvements.”



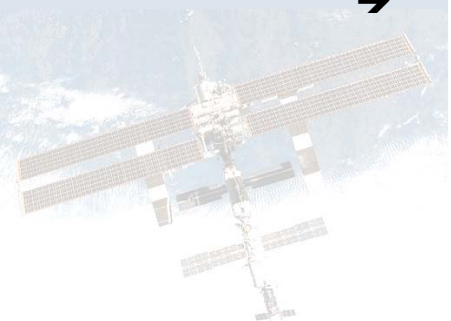
🔑 ***An award fee criteria focused on ACA implementation***

- An identical award fee criteria included in all ISS prime contracts
- Coordinated approach and implementation



ISS Implementation Activities

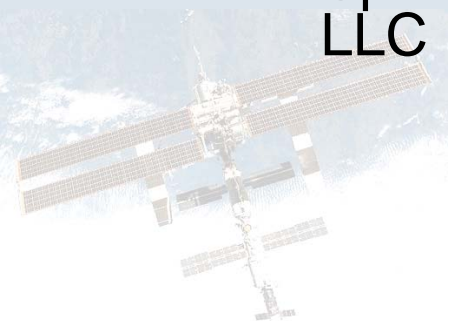
- A Program Manager insistent on success
 - ▶ Willing to expend the effort and establish the organization on the Government side to make the ACAs work
 - ▶ Contracting Officer's Technical Representatives (COTRs) implemented his direction
 - ▶ Immediately after award, the ISS Program Manager called a meeting of the newly selected and existing prime contractors
 - Stressed his desire that we all learn to work well together
 - Insisted that the ACA approach would work
 - Established a council within the program office of all prime contract COTRs
 - Insisted on coordination of performance evaluations



🔑 ***Coordinated and consistent action by the Government***

- Close coordination between the Contracting Officers and COTRs of all impacted prime contracts.
- By changing the behavior of the COs and COTRs, the Government facilitated a significant change in the behavior of the ISS prime contractors.

- Signed an ACA between all ISS primes committing to the establishment of an infrastructure
 - ▶ Mission Integration Contract – Barrios Technology, Ltd.
 - ▶ Cargo Mission Contract – Lockheed Martin
 - ▶ US On-Orbit Segment Vehicle System Sustaining Engineering (known as the 10K Contract) – The Boeing Company
 - ▶ Flight Crew Equipment Contract – Hamilton Sundstrand
 - ▶ ISS Payload Integration Contract – The Boeing Company
 - ▶ Checkout, Assembly, and Payload Processing Services (CAPPS) – Boeing (Florida)
 - ▶ Space Flight Operations Contract – United Space Alliance, LLC



ACA Implementation Activities

- Established a working group structure called the ACA Leadership Team
 - ▶ Meets every two weeks
 - ▶ Composed of programmatic and contracts personnel from each of the primes
 - ▶ Serves as the focal point where needed to the rest of the contract personnel
 - ▶ Started out by identifying all possible interface points between all contracts (some 1200 potential points)
 - ▶ Identified counterparts within each contract and made that information available to all participants
 - ▶ Shared org charts and phone numbers
 - ▶ Setup a website on the JSC domain



October 25, 2004

International Space Station

Johnson Space Center

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Welcome Microsoft Internet Explor

ASSOCIATE CONTRACTOR AGREEMENTS

- [ACA Preamble](#)
- [Multilateral ACA](#)
 - [ISS Contractor Summaries](#)
 - [PI&C](#)
 - [MIC](#)
 - [CMC](#)
 - [EVA](#)
 - [SFOC](#)
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 - [CAPPS](#)
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- [ACA Steering Committee Members](#)
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- [Operational Agreements \(OA\)](#)
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 - [OA Status](#)
 - [Program Integration and Control \(PI&C\)](#)
 - [PIC-1 Requirements & Interfaces](#)
 - [PIC-2 On-Orbit Assembly, Modeling & Mass Properties Data Book](#)
 - [PIC-5 ISS 3D CAD Model Data](#)
 - [PIC-6 Traffic Model Data and Models/Tools](#)



The screenshot shows a Microsoft Internet Explorer browser window displaying the website for Associate Contractor Agreements (ACA) Process Improvements at the Johnson Space Center. The browser's address bar shows the URL: <https://r2s.jsc.nasa.gov> - ISS ASSOCIATE CONTRACTOR AGREEMENTS - Microsoft Internet Explorer. The page content includes a date of October 25, 2004, a search bar, and a list of process improvement categories with sub-links.

October 25, 2004

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ASSOCIATE CONTRACTOR AGREEMENTS

Process Improvements

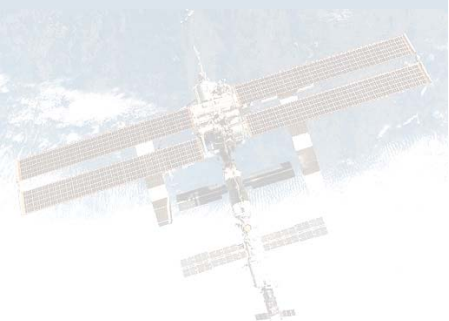
- Bench Review
- Manifesting
 - [Process Improvement Description](#)
 - [Manifesting Process](#)
 - [MIDAS Quick Reference Guide](#)
 - [Quick Reference Directory](#)
- Configuration Management
 - [Process Improvement Description](#)
- COFR Process
 - [Process Improvement Description](#)
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 - [Study Results](#)
- Export Control
 - [JSC Export Representatives](#)
 - [ATV Project POCs](#)
 - [Canadian Project POCs](#)
 - [HTV Project POCs](#)
- Cargo Integration
 - [Purpose & Scope](#)

Done

start

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- Established the infrastructure and ground-rules for the generation of lower level Operational Agreements (OAs) wherever clarification/definition of the interfaces was required – some multi-lateral, some bi-lateral
 - ▶ Example: No OA would require a contractor to make an extra delivery or perform effort not already included in the contract Statement of Work



- Wherever the required interface could be satisfied with an existing contract Data item, no OA would be required. (All such data items are made accessible to any contractors with an identified need through the Electronic Data Management System (EDMS))
 - ▶ Could change a format when the words “contractor format is acceptable” appears in a DRD
 - ▶ Identified changes in the actual DRD requirements where appropriate
 - ▶ Could result in additions to the DRD distribution list

The Results

- A close and cohesive contractor team has formed to work any and all issues that arise between contracts
- Contractors are sharing information, best practices, process improvements, and experiences at a level not seen before in the community
- NASA has been freed from the time-consuming effort required to “referee” disagreements between contractors
- All contractors received a written strength in the last performance evaluation related to participation in the ACA Leadership Team activities



The ISS ACA Approach is Working!

- By using an innovative contract approach and by changing the behavior of Government personnel administering the ISS prime contracts, NASA has facilitated significant changes in the behavior of the contractors.
- The ACA implementation has led to greatly improved communication and data flow between prime contractors dependent on each other's products
- The contractor team is focusing now on process improvements that promise to yield great benefits to the ISS Program in terms of efficiency as well as cost savings

