

Task Order Plan (TOP)

Contract Number: NNM05AB50C

TO Title: *Integrated Engineering Capability - Engineering Support*

TO Number: 30-000301 **Revision:** 11

Period of Performance: 10/02/2010 to 09/30/2011

MSFC Initiator: Ron Newby

(b)(4)

Emergency: No

The purpose of this revision (-11) is to extend this task into Contract Year 6 of the NNM05AB50C ESTS contract. This revision defines and estimates work for the period October 2, 2010 through September 30, 2011. Additionally, the Schedule, Performance Plan and Risk Assessment have been revised to reflect changes in task activities for the new period of performance.

The purpose of this revision (-10) is to extend this task into Contract Year 5 of the NNM05AB50C ESTS contract. This revision defines and estimates work for the period October 3, 2009 through October 14, 2010. Additionally, the Schedule, Performance Plan and Risk Assessment have been revised to reflect changes in task activities for the new period of performance.

The purpose of this revision (-09) is to increase engineering support for Subelement -02 by (b)(4). Additional resources were needed for Windchill 9.1 conversion and implementation. Subelement -01 was reduced by (b)(4). This work has been accomplished with fewer resources than originally estimated. The overall task estimate was increased by (b)(4). Additionally, this revision changes the (b)(4).

Revision 08: The purpose of this revision is to extend this task into Contract Year 4 of the NNM05AB50C ESTS contract. This revision defines and estimates work for the period September 27, 2008 through October 2, 2009. Additionally, the Schedule, Performance Plan and Risk Assessment have been revised to reflect changes in task activities for the new period of performance.

The purpose of revision 07 is to reflect changes in the resources and management of the task. The current Task Initiator Patrick McDuffee (ED03) is being replaced by Ronald Newby (ED03). Subelement 02, support provided by (b)(4) was completed. A new subcontractor support was initiated to continue the task activities, cost was reduced by (b)(4).

The purpose of revision 06 is to extend this task into Contract Year 3 of the NNM05AB50C ESTS contract. This revision defines and estimates work for the period 29 September 2007 through 26 September 2008. Additionally, the Schedule, Performance Plan and Risk Assessment have been revised to reflect any changes in task activities for the new period of performance.

The purpose of revision 05 is to modify the Subelements to account for end-of-year invoice scheduling and travel allowances as follows:

Subelement 01, was modified to reduce (b)(4)

Subelement 02, was modified to reduce (b)(4) and subcontractor cost was reduced by \$ (b)(4) to reflect and adjust end of FY07.

The purpose of revision 04 is to modify the Subcontractor cost estimate for this task order. Subelement 01, Subcontractor cost was reduced by (b)(4) to reflect changes from the staffing profile, caused by removing (b)(4) as a participating subcontractor.

The purpose of revision 03 is to modify the Subcontractor cost estimate for this task order. Subcontract cost on Subelement 01 was not changed. Subcontractor cost on Subelement 02 was increased by (b)(4) to reflect changes from the staffing profile. Removed (b)(4) as a participating subcontractor.

The purpose of revision 02 is to extend this task into Contract Year 2 of the NNM05AB50C ESTS contract. This revision defines and estimates work for the period 30 September 2006 through 28 September 2007.

The purpose of revision 01 is to reduce the Subcontract cost estimate for this task order. Subcontract cost on Subelement 01 was reduced by (b)(4) reflect a change from the expected staffing profile, as well as the September invoice schedule. Subcontract cost on Subelement 02 was reduced by (b)(4) to reflect the September invoice schedule.

This Task Order (TO) replaces TO 20-010001 due to the NASA/MSFC reorganization and the subsequent realignment of the NNM05AB50C ESTS contract. This TO defines and estimates work for the period 1 April 2006 through 29 September 2006. Funding for this task is provided per MSFC PR 4200163389. Additionally, the Schedule, Performance Plan and Risk Assessment have been revised to reflect changes in task activities for the new period of performance.

1.0 Task Order Description & Objectives

This task order provides software engineering and implementation support to ED03 for Integrated Engineering Capability (IEC) project. This effort involves configuration and customization of a NASA procured product lifecycle management (PLM) tool (WINDCHILL) to incorporate selected engineering processes, migrate legacy data, and integrate related tools. This customized tool referred to as the Design and Data Management System (DDMS) is a web-enabled PLM tool that provides an infrastructure for managing engineering and project data, including documents, change requests, CAD, parts, procedures, and quality records.

The IEC Project's objective is to improve the accuracy, availability, and control of engineering data through establishment of data automation and integration capabilities based on MSFC policies and processes. The system shall simplify project administration by providing team members the capability to collaborate, track changes, and manage actions in a configuration controlled environment for all project information including documentation, Computer Aided Design (CAD) drawings, models, and analysis results.

2.0 Technical Approach (Including required input, guidelines & assumptions)

Subelement 01 – Software Engineering and Implementation Support

In order to support the incorporation of engineering processes into the IEC DDMS, subelement personnel will:

- Work closely with owners of the selected engineering processes (customers) to understand/capture their processes, workflows and requirements.
- Customize the product data management software application WINDCHILL (Java and Oracle based) for the most effective incorporation of customer processes/workflows/ requirements. This effort will require software development on IEC internal computers/systems.

- Verify capability and deploy customized WINDCHILL software on customer operational computers/systems.
- Coordinate with and participate in architecture meetings with other NASA centers to understand and share WINDCHILL capabilities.

Subelement 02 – IEC Architecture and Implementation Support

In order to support the incorporation of engineering processes into the IEC DDMS, subelement personnel will:

- Work closely with owners of the selected engineering processes (customers) to understand/capture their processes, workflows and requirements.
- Establish MSFC planning and requirements to implement a Windchill parts and CAD management capability. Work closely with stakeholders, customers, and engineering process owners to define a clear design and development approach for implementing a federated parts and CAD management solution with Johnson Space Center, incorporating MSFC and Michoud Assembly Facility business processes and requirements for parts.
- Coordinate with WINDCHILL programmers the efforts needed to customize, configure and deploy proposed IEC data products.
- Provide recommendations in planning, scheduling, coordination, and prioritizing efforts for proposed IEC data products.
- Customize the product lifecycle management software application WINDCHILL (Java and Oracle based) for the most effective incorporation of customer processes/workflows/ requirements. This effort will require software development on IEC internal computers/systems.
- Coordinate with and participate in architecture meetings with other NASA centers to understand and share WINDCHILL capabilities.
- Provide WINDCHILL Customization/Implementation Training specific to IEC DDMS.

3.0 Discussion of Skills Required

(b)(4) with a Bachelors degree in Computer Science, Engineering or other technical discipline, three years work experience associated with the WINDCHILL PLM system and experience or training in WINDCHILL customization and integration. This position requires the ability to immediately understand customized software solutions in WINDCHILL, implement customizations, incorporate appropriate databases and proprietary application servers, and understand legacy data access technology is required. The individuals must also possess the following core skills:

- Required knowledge of supporting technologies: Java, JavaScript, JSP, XML, JUnit, Ant, HTML, SQL,
- Intimate knowledge of Windchill database schema/db contents
- Experience in providing support on enterprise deployment of Windchill
- 9.0 Customizations for PDMLink, ProjectLink and MPMLink
- Experience with Cognos Business Reporting integration
- Unit Testing of Windchill custom code
- Unit Testing of Windchill custom process
- Experience with Netbeans or Eclipse IDE
- Implement software customization derived from customers' business process.

4.0 Special Tools Required

None

ESTS Contract Task Order Request Performance Plan

Task Order Title: [Integrated Engineering Capability - Engineering Support](#)

Task Order Number: [30-000301](#) Revision: 11

Category	Weighting Technical %	End of Period Technical Score
Technical Objectives	65%	X 65% = Justification
Develop use cases for selected engineering processes. Implement each process into the IEC PLM. Incorporate (where applicable) code re-use.		
Schedule Objectives (Milestones)	Weighting Schedule % 10% (min 10%)	Schedule Score X 10% = Justification
System Design Reviews (SRR, PDR, CDR). Technical Interchange Meetings.		
Cost (actual vs. negotiated)	Weighting Cost% 25% (min.25%)	Cost Score X 25% = Justification
	Weighting Total % 100.00%	Total Score

Technical, Schedule, and Cost Grading Scale

Score	Description
9.0-10.0	Exceeded TO Performance Plan objectives resulting in major benefit(s)
8.0-8.9	Exceeded TO Performance Plan objectives resulting in modest benefit(s)
7.0-7.9	Met TO Performance Plan objectives
3.0-6.9	Did not meet all TO Performance Plan objectives resulting in minimal impact or requiring additional agency funds
0.0-2.9	Did not meet TO Performance Plan objectives resulting in substantial impact and/or requiring additional agency funds

ESTS Contract Task Order Request Performance Plan

Task Order Number: [Integrated Engineering Capability - Engineering Support](#)

Task Order Number: [30-000301](#) Revision: 11

Comments:

Risk Assessment

Contract Number: NNM05AB50C

TO Title: Integrated Engineering Capability - Engineering Support

TO Number: 30-000301 Revision: 11

Period of Performance: 10/02/2010 to 09/30/2011

MSFC Initiator: Ron Newby

(b)(4)

Task Order Risk Assessment to Cost, Technical, and Schedule

List identified risk associated with Task Order performance as related to task cost, technical, and schedule. Classify the risk(s) according to probability of occurrence and impact as defined below and enter the risk into risk matrix.

Risk	Risk Type	Probability (1-4)	Impact (1-4)	Risk Description
Risk C1	Cost			No Cost risks have been identified for this Task Order.
Risk C2	Cost			
Risk T1	Technical			No Technical risks have been identified for this Task Order.
Risk T2	Technical			
Risk S1	Schedule	1	2	If required input data is not available on schedule, it may cause delays in associated deliverables.
Risk S2	Schedule			

*Note: See page 2 for risk mitigation plan for those risks which are Primary Risk Drivers.



