1. Introduction

This document describes APT’s contractual agreement for system engineering support. This document is written based on support starting in April 2001. It is a living document that can be updated as needed.

2. System Engineering FTE support

We believe that APT will need 0.5 FTE of support from a single system engineer.

3. Project Spin-Up Task

APT will provide project training and help the system engineer spin-up on HST and the APT project. Project spin-up will take about 3 weeks of time. Training will include:

- Understanding Phase 1 and Phase 2 Process
- Review the current Phase 1 forms (archive and PI)
- Reading the HST primer
- Review the current Phase 2 RPS2 form.
- Read APT OpsCon
- Read the APT System requirements document
- Read APT architecture document
- Reviewing APT overview presentation
- Get a demo and use the Starview 2 tool
- Get a demo and use the released APT toolsuite.
- Project info -> meeting schedule, web page location, etc.
- Reading Phase 1 Call for Proposals
- Reading Phase 2 Manual
- Get a demo and develop a proposal in RPS2

It is expected that the system engineer will have to revisit these documents, as they get more involved in the project.

4. Support for the Moving Target Component Requirements Phase Task

Goal

Develop an operations concept and requirements for adding moving target support to APT concentrating on the integration of MOSS into APT. This task will not involve a thorough understanding of APT. It is a fairly independent module, so it is a good first task.
Group Reporting

1) Maintain APT-Moving-Target Web Page off of APT page
2) Create Group email apt-moving-target for group communication

Group Members

The following is an initial cut at the membership. Other members may be included.

<table>
<thead>
<tr>
<th>Group Members</th>
<th>Division</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andy Lubenow</td>
<td>Operations</td>
<td>Requirements</td>
</tr>
<tr>
<td>Tony Roman</td>
<td>Operations</td>
<td>Requirements</td>
</tr>
<tr>
<td>Sys Engineer</td>
<td>SET/ESS</td>
<td>Coordinate Effort</td>
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</tr>
<tr>
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<td>APT Science Support</td>
</tr>
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System Engineer can lead the group. They will coordinate the group meetings, follow up on action items, update the web for relevant information.

Meetings and Effort

Meeting schedule to be determined by the working group. Scientist and operations input may be limited to 2-4 hours per week. This will need to be worked out.

Schedule

Working Group completed by June 1, 2001. This would mean the presentation and document is completed by before June 1, 2001.

Deliverables

- Presentation on the groups requirements and recommendations. The system engineer is responsible for coordinating this presentation. The team will pick a person(s) to present.

- An APT Moving Target Requirements Document should have the following sections. This document is probably 5-10 pages. APT project has some example documents that you can follow in MS Word. The system engineer is responsible for coordinating the generation of this document.
  I) Background & Goals
  II) Concept of operations Section should answer the following questions
      1) Why we are building this system (motivation/goals)
      2) Who is going to use this system (PI, PC, CS, etc)
      3) Where is this system going to be used
      4) When is the system going to be used
      5) What is the system going to do and what functions does this provide to the user.(this is not detailed requirements but a description of major features. For example the Visual Target Tuner will allow user to display FOV and overlay apertures. We wouldn't talk about the details of the GUI or Apply/reset models, etc)
      6) How is the user going to use this system (this could be use case type info)
  III) Use Case Section if necessary
Describe scenarios of how a user might actually use help. Probably 1 or 2 scenarios.

IV) System Requirements
- System Constraints & Assumptions
- APT Requirements
- STScI documentation Requirements
- Performance Requirements
- Internet Connection Requirements
- Hardware Software Requirements
- Security Requirements

V) Data Process Flow
- describes the data flow between STScI and APT.

VI) Deployment Schedule
- Recommendations on when to deploy

VII) Resource Estimates
- How much FTE’s to do this work.

5. External ICD Document

Goal

Develop an ICD document that defines APT external system interfaces and software products used by APT.

Schedule

Work can start ASAP. This is needed by August 1, 2001.

Deliverables

An ICD which will have the following sections. This is not intended as a detailed ICD listing fields and values. This is a document to help with the CM process and keeping APT up to date with its external systems. There will be pointers to detailed ICDs if they exist. The system engineer will work with the APT project to define what is needed in this document. The following is a proposed outline for the document.

1) External STScI Interfaces
   a. System Name
   b. Point of contact for system
   c. Pointer to document describing interface (if available)
   d. Information on how to find out about releases

2) External STScI Interfaces
   a. System Name
   b. Point of contact for system
   c. Pointer to document describing interface
   d. Information on how to find out about releases

3) APT Software Product Dependencies
   a. Product Name
   b. Point of contact for the product
   c. Pointer to document describing interface
   d. Information on how to find out about releases.
6. Support for the Batch Check Component Requirements Phase Task

Goal

Develop an operations concept and requirements for adding a batch checking tool to APT. This task will require a good understanding of all aspects of APT.

Group Reporting

1) Maintain APT-batch-check Web Page off of APT page
2) Create Group email apt-batch-check for group communication

Group Members

The following is an initial cut at the membership. Other members may be included.

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System Engineer can lead the group. They will coordinate the group meetings, follow up on action items, update the web for relevant information.

Meetings and Effort

Meeting schedule to be determined by the working group. Scientist and operations input may be limited to 2-4 hours per week. This will need to be worked out.

Schedule

Working Group can start ASAP. Team needs to be completed by August, 2001. This would mean the presentation and document is completed by August 1, 2001.

Deliverables

- Presentation on the groups requirements and recommendations. The system engineer is responsible for coordinating this presentation. The team will pick a person(s) to present.

- An APT Batch Check Requirements Document should have the following sections. APT project has some example documents that you can follow in MS Word. The system engineer is responsible for coordinating the generation of this document.
  I) Background & Goals
  II) Concept of operations Section should answer the following questions
      1) Why we are building this system (motivation/goals)
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   - Hardware Software Requirements
   - Security Requirements

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   - Recommendations on when to deploy

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   - How much FTE’s to do this work.