

<b>Project Name:</b>		
OSW11-205 Adaptive Queue Planning		
<b>Business objective served by this project</b>		
Improve queue completion percentage by creating and enhancing tools that aid in identification and selection of timely targets.		
<b>Project Manager/Leader:</b>	<b>Project Sponsor:</b>	<b>PDS Version/Date:</b>
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## Project Description

### Issue Statement:

Manually creating queue plans for the dozen or more plan variants scheduled daily is a time consuming task. Even with the excellent interface of the QPT (Queue Planning Tool) the queue coordinators spend several hours a day updating or creating the queue plans for the coming night. Unfortunately, since the plans are static weather change, technical problems ,or rapid TOO (target of opportunity) triggers during can make the work obsolete and require the observers to improvise. Therefore, software algorithms are needed to automatically create the initial plans that can then be quickly fine-tuned with the current QPT interface. Testing of a simple prototype scheduling tool indicates that a full set of variants can be created from scratch in between 5 and 30 minutes depending on the manual changes that need to be made. This would save between 1 and 3 hours of QC time per day, or between 0.3 and 0.5 FTE per site. Also, should the prepared plans be interrupted at night then this tool can also be run in real-time to quickly update the plans and optimize the remaining observing. This project should significantly reduce the effort needed to make the nightly plans, make the planning process more flexible, and aid long-term queue planning.

### Project Objective Statement (POS):

- Construct a detailed plan estimating and assigning resources to build this tool.
  - Implementation of assisted queue planning. This involves using algorithms from the prototype tool to more rapidly assemble queue plans.
  - Incorporate the use of site monitoring information for more dynamic real-time use.
  - Work on advanced scheduling algorithms using constrained logic programming to minimize the need for manual manipulation of the plans.

### Project Flexibility:

Flexibility Matrix	Least Flexible	Moderately Flexible	Most Flexible
Scope			<b>X</b>
Schedule		<b>X</b>	
Resources	<b>X</b>		

### Major Deliverables:

- A plan to construct the tool.
- A requirements document.

### Assumptions:

- We will not be able to finish planning this project in what remains of 2010.

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## IS and IS NOT:

Describe what the project **is** and what the project **is not**, you can have as many **is** or **is not** as you want.

- **IS:** A “plan to plan”.
- **IS NOT:** A plan to implement the tool.

## Strategy and Resources

### Milestones and Stages:

Define and describe a set of milestones for the project, also define stages that can be used later as off ramp points.

- User Requirements Gathering
  - Define Business Case
  - User Requirements Baseline Document
- Evaluation Phase
  - Conceptual Definition Stage
- Elaboration Phase
  - Identify products
  - Produce high level design / architecture
  - Features list
  - Generate Plan

### Estimated Costs:

- Supplies and materials
- Equipment
- Resources
- Spares
- Contracts

### Core Team Members(see Guidelines for Developing New Projects document):

- Project Manager – Devin Dawson
- Project Scientist – Bryan Miller
- Systems Engineer - TBD

### Extended Core Team Members:

- People that will execute the tasks
  - Devin Dawson – 96 hours
  - Bryan Miller – 80 hours
  - Larry O'Brien – 78 hours
  - Andy Stephens – 24 hours
  - Shane Walker – 22 hours
  - Arturo Nunez – 18 hours
  - Brian Walls – 10 hours
  - Gelys Trancho – 10 hours
  - Manuel Lazo – 10 hours

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**Dependencies that require coordination:**

- Any type of dependency that can be identified before hands must be entered here

**Risks and Issues:**

- Any risk or issue associated to the project
  - People risk: Planning project must contend with ongoing development work amidst deadlines.

**Supplemental Resources:**

- Other resources required by the project.