10. Introduction

This section and all of its subsections will contain information pertaining to the software deliverables of the project. The subsections will also include the estimation of time for software deliverables and a detailed schedule of the deliverables.

10.1 Special Considerations

The items below have been identified as modules of software that must be addressed during development. The estimation and scheduling process has included their impact.

The organization has no previous experience in Human Performance Engineering, and usability of the interface is a key consideration. We shall require a person skilled in HPE.

We have not previously built a GUI. We shall require training in this area. We do not, however, plan on recruiting a special person.

We have not previously incorporated on-line "Help." We shall take no action beyond that identified above.

10.2 Software Deliverables

The items in the following table are the software deliverables pertaining to the CCPS system:

Deliverable	Supplier	Customer	Accept Criteria	Due Date	CWV	Actual Date
CCPS	MSDS	ATCO		10/18/12		
Billing System	MSDS	ATCO		10/2/12		
Credit System	MSDS	ATCO		10/3/12		
Audit System	MSDS	ATCO		10/3/12		
Delivery System	MSDS	ATCO		10/4/12		

10.3 Development Estimates

10.3.1 Estimation Approach

The estimates represented in the table below were gathered through the use of the Delphi estimation method. We gathered the optimistic, likely, and pessimistic numbers for the size and duration.

10.3.2 Scope of Estimates

TBD

10.3.3 Estimation Results

The table below shows the estimation results for the software deliverables of CCPS. User documentation, project documents, requirements, and software development are treated separately. The data below corresponds to the intervals shown in task lists and Gantt charts.

Deliverable	Size (LOC)	Duration (days)	Effort
CCPS	32787	72.6 days	MSDS
Billing System	8745	65.2 days	MSDS
Credit System	6654	63.9 days	MSDS
Audit System	7429	74.8 days	MSDS
Delivery System	4892	71.2 days	MSDS

10.4 Detailed Scheduling

The table below shows the final results of scheduling and staffing for the software portion of CCPS. The "task" level appears on the project task list.

Deliverables	Supplier/Resp	Duration (days)	Due Date	CWV	Actual Date
CCPS Development		85.61	10/18/12		
Low Level Design	Jake	12.83	8/6/12		
Design Inspection	Nick	15.56	8/21/12		
Code	Jess	21.64	9/12/12		
Code Inspection	Mike	14.85	9/27/12		
Develop Unit Test Cases	Anthony	10.61	9/1/12		
Unit Test	James	12.69	10/10/12		

Fix Unit Test Problems	*Jake*	*8.04*	*10/18/12*		
Billing System Development		*69.7*	*10/2/12*		
Low Level Design	*Nick*	*12.79*	*8/6/12*		
Design Inspection	*Jess*	*13.83*	*8/20/12*		
Code	*Mike*	*16.58*	*9/5/12*		
Code Inspection	*Anthony*	*11.25*	*9/16/12*		
Develop Unit Test Cases	*James*	*8.63*	*8/28/12*		
Unit Test	*Jake*	*9.21*	*9/26/12*		
Fix Unit Test Problems	*Nick*	*6.04*	*10/2/12*		
Credit System Development		*71.36*	*10/3/12*		
Low Level Design	*Jess*	*12.83*	*8/6/12*		
Design Inspection	*Mike*	*14.04*	*8/20/12*		
Code	*Anthony*	*16.04*	*9/5/12*		
Code Inspection	*James*	*11.58*	*9/16/12*		
Develop Unit Test Cases	*Jake*	*8.42*	*8/28/12*		
Unit Test	*Nick*	*9.54*	*9/26/12*		
Fix Unit Test Problems	*Jess*	*7.33*	*10/3/12*		
Audit System Development		*71.34*	*10/3/12*		
Low Level Design	*Mike*	*12.88*	*8/6/12*		
Design Inspection	*Anthony*	*14*	*8/20/12*		

Code	*James*	*16.04*	*9/5/12*		
Code Inspection	*Jake*	*12.25*	*9/17/12*		
Develop Unit Test Cases	*Nick*	*8.96*	*8/29/12*		
Unit Test	*Jess*	*9.92*	*9/27/12*		
Fix Unit Test Problems	*Mike*	*6.25*	*10/3/12*		
Delivery System Development		71.88	10/4/12		
Low Level Design	*Anthony*	14.33	8/7/12		
Design Inspection	*James*	14	8/21/12		
Code	*Jake*	15.92	9/6/12		
Code Inspection	*Nick*	12.25	9/19/12		
Develop Unit Test Cases	*Jess*	8.33	8/30/12		
Unit Test	*Mike*	9.13	9/28/12		
Fix Unit Test Problems	*Anthony*	6.25	10/4/12		