

CCPS Project Plan

Qualification Plan

16. Introduction

This plan defines the activities and schedule for the qualification of the CCPS hardware, where “qualification” includes such testing as:

- UL Approval
- FCC (EMI) certification
- Environmental testing
- BellCore approval

16.1 Assumptions

Current ATCO plans call for installation of CCPS only in the continental US, so that qualification requirements are limited to UL and FCC (EMI/EMC) standards. There is a possibility that installation of CCPS may occur in other countries, causing other standards to apply. ATCO’s view is that the highest market potential is in countries of the European Union (EU), so that EU standards would apply. There is no strategy in place to guide us in selecting which standards. Specifications to the vendor, BoardTech, will include the known US standards, as well as all reasonably probable EU countries. The plans shown below cover only the US standards.

16.2 Roles

All qualification testing will be conducted by external organizations. Therefore, the role of the CCPS project will be limited to provision of hardware, scheduling and monitoring the external tests, and funding thereof.

16.3 Constraints

It should be noted that this plan applies only to CCPS hardware, which contains the custom X.25 circuit pack. Vendor testing procedures already covers systems without this.

16.4 Qualification Activities

16.4.1 UL/FCC

Qualification activities are shown in the table below.

TABLE 16.4.1 - ACTIVITIES		
Activity	Responsibility	Schedule and Comments
Schedule testing with external organization	Paul. C. Pack	UL: XX/XX/XX FCC: XX/XX/XX
Provide hardware for testing	Paul C. Pack, BoardTech	UL: XX/XX/XX FCC: XX/XX/XX
Monitor qualification	Paul C. Pack	UL: XX/XX/XX - XX/XX/XX

CCPS Project Plan Qualification Plan

activity		FCC: XX/XX/XX - XX/XX/XX Prior to Beta installation. UL: 2 wk. FCC: 1 wk.
<i>Receive certification</i>	<i>Paul C. Pack</i>	<i>UL: XX/XX/XX</i> <i>FCC: XX/XX/XX</i>
<i>Inform ATCO of certification</i>	<i>Paul C. Pack</i>	<i>One week after receipt of certification</i>

16.4.2 Environmental

Not Applicable.

16.5 Issues

The strategy identified above, i.e., testing only for US standards, increases risk should the ATCO expansion occur. The provision of EU requirements to BoardTech will mitigate that to some extent, but is not a guarantee. Given that the expansion is “iffy,” and that no strategic plan exists for ATCO, the CCPS project approach is reasonable. Attempting more would incur additional resources and delays.

The amount of hardware required is unknown at this time, but can be no more than two complete systems, i.e., one each for UL and FCC testing. The schedule is determined by the limits imposed by desired installation date, actual testing schedule, and BoardTech’s delivery capability. These multiple constraints could create a problem, but cannot be evaluated at this time, as we have no information on schedule of testing. Our opinion is, however, that this situation will not become critical.

16.6 Budget and Resources

The primary resources are hardware and funding for testing. The estimate for the cost of the testing is \$15,000. The hardware required can be no more than two complete systems. These two systems will be delivered, and will have been acquired for the contract, so their provision incurs no additional cost.