

MAINTENANCE & TECHNICAL SUPPORT

The maintenance and technical support to be provided, mandates the customer has an appropriately sized UPS (provided by SpaceBridge or the Customer) connected to the hub equipment. Failure to comply may void the standard warranty.

Also to enable efficient and effective technical assistance to the Customer, SpaceBridge insists remote access be provided to the hub to facilitate our ability to diagnose problems.

TABLE 1 - MAINTENANCE AND SUPPORT LEVELS

Services	Standard	Advanced	Premium
Remote Support (During business hours)	✓	✓	✓
Phone & E-mail Support (During business hours)	✓	✓	✓
Web Interface Support	✓	✓	✓
Software Support & Updates*	-	✓	✓
4H x 5D X 365D Phone Support via Call Center	-	✓	✓
4H x 7D X 365D Phone Support via Call Center	-	-	✓
On-Site assistance and System Checkup**	-	✓	✓
System Auditing Analysis Report	-	-	✓
Technical Account Manager***	-	-	✓
RMA Status Updates	✓	✓	✓
RMA Response - 30BD****	✓	✓	✓
Back up and restoration of SW*****	-	✓	✓

* ADWL provides periodically software maintenance releases addressing bugs in the SW. New features are provided at additional cost.

** Checkup for preventive maintenance or critical system failure one per year or System Auditing Analysis Report at additional cost as per contract and as mutually agreed schedule / process.

*** Dedicated CS Engineer for ongoing technical support.

**** 30 Business Days for ADWL Equipment-typical response time.

***** ADWL will save the original configurations, as shipped, and will restore of accidentally deleted or corrupted software as necessary.

SpaceBridge provides periodic Hub/RLSS/SIT minor software maintenance releases, and/or restoration of accidentally deleted or corrupted software as necessary. These minor releases are software patches or new versions of software intended to solve known problems. Customers are encouraged to implement and validate new software releases as they become available. None of these softwares are intended to affect applications or 3rd party equipment interoperability, should that occur, SpaceBridge cannot be held liable.

TOOLS

SpaceBridge provides regularly updated documentation for troubleshooting of Hub/RLSS/SIT problems, including FAQs. This documentation is intended to provide each customer with technical references to facilitate in-depth analysis and diagnosis of potential malfunctions.

TECHNICAL ASSISTANCE

SpaceBridge technical assistance is available during SpaceBridge standard business hours. SpaceBridge standard business hours are 8:00 AM to 4:30 PM EST (13:00 PM to 9:30 PM GST), Monday to Friday, except for Canadian statutory and company holidays.

SpaceBridge shall accept technical assistance calls from customer's designated point of contact. Customer must provide SpaceBridge with a list of designated points of contact. Technical assistance calls received by any other person within the customer organization shall be re-directed to customer's designated point of contract.

This service provides best effort resolution of critical Hub/RLSS/SIT problems; non-critical problems shall be resolved per a mutually agreed schedule/process.

Note that critical problems are defined as problems with the following characteristics: Total loss of system traffic due to a Hub/RLSS/SIT problem.

No Terminals can access the system Loss of a basic feature/function of the customer's service due to a Hub/RLSS/SIT problem.

HOTLINE

SpaceBridge Hotline service is available to customers with technical support contracts. It is available 24x7, 365 days a year. Call response is provided within 30 minutes by a technical specialist.

For customers with a Redundant Hub/RLSS, SpaceBridge will provide a work-around for critical Hub/RLSS problems in less than 4 hours.

For customers with a Non-redundant Hub/RLSS/SIT, SpaceBridge will provide best effort resolution of critical Hub/RLSS/SIT problems.

All non-critical problems shall be addressed during business hours and resolved per a mutually agreed schedule/process.

SpaceBridge shall accept Hotline calls from the customer's designated point of contact ONLY. Hotline calls received by any other person within the customer organization shall be re-directed to customer's designated point of contract. The intent of this constraint is to ensure that customer performs first (and second, where appropriate) level support appropriately before escalating to SpaceBridge.

Note that critical problems are defined as anomalies with the following characteristics:

- Total loss of system traffic due to a Hub/RLSS/SIT problem
- No Terminals can access the system
- Loss of a basic feature/function of the customer's service due to a Hub/RLSS/SIT problem

ON-SITE SUPPORT

This service offers to send SpaceBridge staff on-site to perform a maintenance activity, and if possible, to find a work-around or resolution for a problem. The on-site assistance shall be mutually agreed after SpaceBridge remote diagnostic support is not able to resolve the issue. SpaceBridge will require that SpaceBridge ' customer have a qualified technical representative on-site during SpaceBridge's on-site assistance.

Each on-site intervention shall be concluded by a report, including as much evidence as reasonably possible to identify the origin of the problem. Travel, Travel time, Boarding and Lodging and labour for on-site assistance shall be borne by the customer and shall be charged at a rate of cost plus 15% and be consistent with SpaceBridge business travel policies.

HUB INSTALLATION

SpaceBridge offers the installation of the satellite Hub by technical specialists at the customer facilities, considering:

1. SpaceBridge will locate all the equipment in the rack.
2. SpaceBridge will interconnect the equipment with the labelled cables.
3. The Customer is responsible for any civil works, including but not limited to hub building.
4. The hub building shall be air conditioned and equipped with suitable AC power distribution and UPS.
5. The Customer shall provide access to the hub facility to the SpaceBridge installation and commissioning
6. Team during normal working hours.
7. The Customer shall run all connections (AC, Data and IF) up to the hubs.
8. The Customer shall provision the RF section (Teleport).

ON-SITE TRAINING

SpaceBridge offers customers an on-site training course. The course is for a 3 day session on the customer's equipment, at the customer's designated site, for up to 8 people, in the English language. The training is on the day-to-day operational aspects of the system (Hub and Terminals), i.e. all aspects that relate to installation and configuration parameters in the system. The training covers the following topics:

1. SYSTEM OVERVIEW

- a. System: Broadcast, interaction, forward and return path
- b. Network: Hub, gateway
- c. Hub Installation.

2. OPERATIONS AND MANAGEMENT OVERVIEW

- a. CMS
- b. NetManager
- c. RLSS
- d. FLSS
- e. IPSS

3. SYSTEM AND TRAFFIC MONITORING

- a. CMS Overview
- b. Witness SIT
- c. NetManager Monitoring
- d. RLSS Monitoring
- e. FLSS Monitoring
- f. IPSS Monitoring
- g. SIT Monitoring

4. NORMAL OPERATIONS

- a. System start-up and shutdown

5. SIT MANAGEMENT

- a. SIT monitoring and control
- b. Adding new terminals
- c. Modifying existing resources
- d. SIT Group Management

6. SIT TRAINING

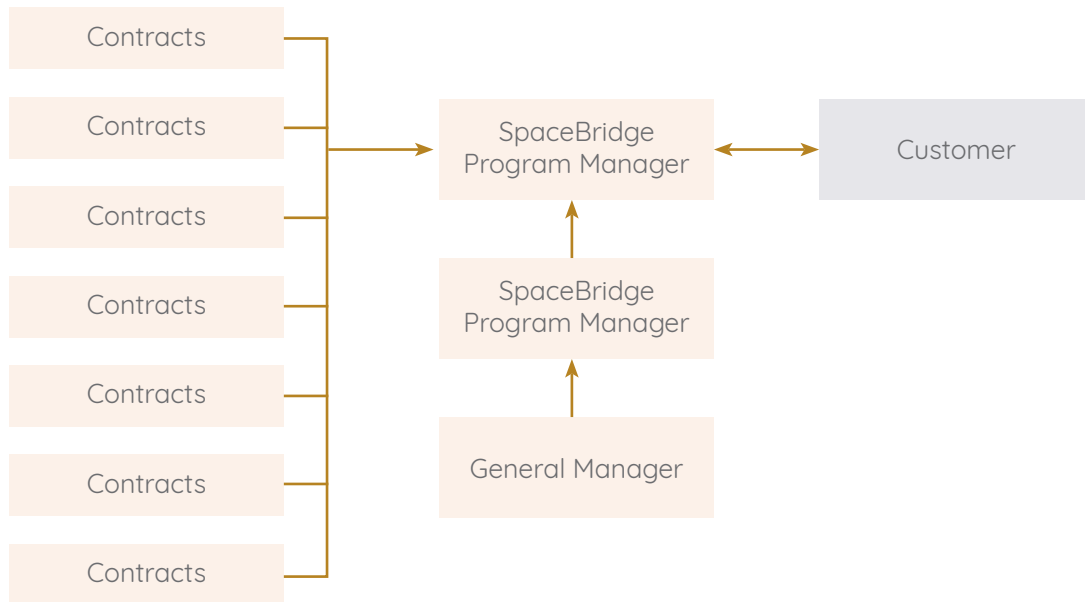
- a. Overview
- b. Installation
- c. Configuration

PROJECT MANAGEMENT

Program Management is set of principles, methods and techniques for the effective planning and control of projects. The following is an overview of the proposed Program Management.

Figure 1 below shows the Project Team Structure that would be adopted. Specific individuals will be assigned to a Program depending on the scope of the program as well as to provide continuity and efficiency in project implementation, reporting, planning, and accountability.

FIGURE 1 – PROJECT TEAM STRUCTURE



The Program Manager is the top-level executive involved in the execution of the project.

RESPONSIBILITY ASSIGNMENT MATRIX

The principal responsibilities of key members of the program team are described below.

Program Manager Responsible for:

- General program direction
- Planning and budgeting
- Technical, schedule and cost performance
- Internal reporting
- Identification and negotiation of changes
- Status maintenance
- Review coordination
- Resource utilization monitoring
- Control of management charge numbers.

Lead Systems Engineer Responsible for:

- Overseeing design activities
- Generation of Bill of Materials (BOM)
- Preparation of technical documentation
- Engineering drawings and reports
- Preparation of Training packages
- Preparation of Acceptance Test Procedures (ATP)

Lead Electronics Design Engineer Responsible for:

- Overseeing detailed design activities
- Preparation of detailed technical documentation
- Engineering report

Lead RF Engineer Responsible for:

- Overseeing detailed design activities
- Preparation of technical documentation
- Engineering drawings and reports
- Engineering reports

Lead Mechanical Engineer Responsible for:

- Overseeing detailed design activities
- Preparation of technical documentation
- Engineering drawings and reports
- Engineering reports

Manufacturing Lead Engineer Responsible for:

- Overseeing manufacturing activities within Operations
- Preparation of manufacturing documentation
- Generation of work orders for assembly build and test
- Control of appropriate cost accounts

Program QC Manager Responsible for:

- Implementing and managing the program's product assurance requirements
- Qualification of new parts, materials and processes

Production Control & Planning Responsible for:

- Bill of Material (BOM) monitoring through ERP.
- Initiation and monitoring of Purchase Orders for Project equipment/parts
- Kitting Lists for Manufacturing
- Work Order deployment and control
- Shipping Lists
- Shortage reports
- Accountable to : Project Manager

SCOPE CONTROL

Formal technical/managerial communication with the Customer will be through the SpaceBridge Program Manager to the Customer's Procurement Manager.

All contractual communication with the Customer will be through the SpaceBridge Program Manager to the Customer Contract Manager. Any communication of decisions and changes affecting the original scope, deliverables, or critical assumptions shall be through this line.

Informal communications lines will be through the SpaceBridge lead Systems and Electronics Design engineers. Prior to accepting action items, the lead engineers are instructed to review their content for consistency with the baseline. All out-of-scope actions or questionable scope actions are brought to the attention of the Program Manager, who will then decide how to proceed.

In addition, all correspondence (including faxes, e-mails, minutes of meeting, telecom records, etc.) are reviewed by the Program Manager and examined for scope consistency.