# PALM BEACH COUNTY
# BOARD OF COUNTY COMMISSIONERS

## AGENDA ITEM SUMMARY

===================================================================

**Meeting Date:** September 15, 2009

[X] Consent     [ ] Regular
[ ] Workshop     [ ] Public Hearing

**Department:**

**Submitted By:** Department of Airports

**Submitted For:**

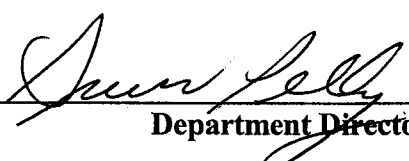===================================================================

## I. EXECUTIVE BRIEF

**Motion and Title: Staff recommends motion to approve:** a Memorandum of Agreement with the Federal Aviation Administration (FAA); establishing procedures to allow West Palm Beach Air Traffic Facility's ASR-11 Automated Data to be used in support of Palm Beach International Airports (PBIA) Noise and Operations Monitoring System.

**Summary:** This Memorandum of Agreement provides the conditions under which PBIA can access and utilize the FAA ASR-11 Automated Data in a more effective and time efficient manner. The terms of the agreement are standard to the industry and allow a fifteen (15) minute delay in transference of data. The agreement will remain in force until terminated by either party and may be terminated with or without cause. **Countywide ( AH )**

**Background and Justification:** This Agreement will provide technology that is a WEB based interface creating a more secure and efficient access to flight track data collected by the ASR – 11 Antenna owned by the FAA and located at PBIA. This configuration will allow the transference of data to be completed after fifteen minutes. Currently the minimal time for a download is twenty four to thirty six hours.

**Attachments:**
1. Memorandum of Agreement (3 Originals)

===================================================================

**Recommended By:** _____    8/25/09
                        Department Director               Date

**Approved By:** _____    9/5/09
               County Administrator               Date

## II. FISCAL IMPACT ANALYSIS

**A. Five Year Summary of Fiscal Impact:**

| Fiscal Years | 2009 | 2010 | 2011 | 2012 | 2013 |
|---|---|---|---|---|---|
| Capital Expenditures | | | | | |
| Operating Costs | | | | | |
| External Revenues (Grants) | | | | | |
| Program Income (County) | | | | | |
| In-Kind Match (County) | | | | | |
| NET FISCAL IMPACT | *See below* | | | | |
| # ADDITIONAL FTE POSITIONS (Cumulative) | | | | | |

Is Item Included in Current Budget?     Yes _____ No _____

Budget Account No:     Fund _____ Department _____ Unit _____ Object _____

Reporting Category _____

**B. Recommended Sources of Funds/Summary of Fiscal Impact:**
*There is no fiscal Impact for this item.

**C. Departmental Fiscal Review:** _____

### III. REVIEW COMMENTS

**A. OFMB Fiscal and/or Contract Development and Control Comments:**

_____ 9/1/09        _____ 9/3/09
**OFMB**                    **Contract Dev and Control**

*This Memorandum of Agreement complies with our review requirements.*

**B. Legal Sufficiency:**

Anne _____ 9/4/09
**Assistant County Attorney**

**C. Other Department Review:**

_____
**Department Director**

REVISED 9/03
ADM FORM 01
(THIS SUMMARY IS NOT TO BE USED AS A BASIS FOR PAYMENT)

# NAS Data Release Request

| 1. Business/Organization Name | 2. Business Phone Number |
|---|---|
| **Palm Beach County Department of Airports – Palm Beach International Airport** | **561-471-7468** |

3. Address *(Street, City, State, ZIP Code)*
**Palm Beach International Airport, BLDG. 846, West Palm Beach, FL 33406**

| 4. Point of Contact (POC) Name | 5. Phone Number | 6. Full E-mail Address |
|---|---|---|
| Casandra R. Davis | **561-471-7468** | **cdavis@pbia.org** |

7. Are you currently receiving NAS data?  ☐ Yes  ☒ No *(If no, skip to #10)*

8. Indicate your authority to access NAS data:  ☒ Memorandum of Agreement  ☐ Government Contract
    *(Attach Documentation)*  ☐ Other *(Explain)*

9. Indicate if you have an approved NCP(s) on file:  ☒ Yes  ☐ No  If yes, list the case file number(s):

10a. Type of data you are requesting: ☒ Delayed ☐ Recorded    10b. Describe the data requested: *(Attach additional sheets)*
**Install Customer Provided Equipment (CPE) in the West Palm Beach AT Facility and connect to the existing ASR-11 interface used for Boca Raton Airport. Receive aircraft flight track data.**

11. Describe your proposed method for acquiring data: *(Attach additional sheets)*
**The system that will be used has been developed by Lochard Corporation and the FAA and consists of a Lochard Secured Gateway filtering system that includes rack-mounted PC/Linux computers. System configuration, monitoring, and manual release of data are provided using a WEB interface from a standard browser and PC. Lochard Corporation maintains the system, and monitors and transfers data to PBI's noise monitoring system.**

**Refer to Diagrams 1&2 at the end of this document for block diagram and network schematic.**

**All access to the system is password protected. User actions involving changes to the filtering or aging configuration are logged. All traffic to and from the SRG filtering system is restricted by packet filtering software and firewall hardware. Only services that are directly required for the data filtering processing are enabled on the computer. When the 15 minute delay period has passed, the held data is filtered and released via dual firewall protected by dual iDSL circuits to a data transfer system at Lochard Corporation where it is directly release to the noise monitoring system by either a modem connection or a firewall protected Virtual Private Network.**

**Lochard has similar systems operating at the NCT and SCT TRACONs.**

12. Describe the nature of your organization/business and the purpose for this request. *(Attach additional sheets)*
**Palm Beach International Airport, Palm Beach County Department of Airports**
**Purpose: To access flight track data as part of PBI's Noise Management Program for noise modeling, noise analysis and to respond to community concerns about aircraft operations. Information from the data will be incorporated into reports and used as reference to explain flight operations.**

13. Describe your sensitive data filtering process. *(Attach additional sheets)*
**The Lochard system allows for both inclusive and exclusive filtering based on Aircraft ID and IFF code (squawk). The filters were established by the FAA and are editable at any time by the FAA.**

**Flight data will be restricted to the following beacon code subsets per FAA Order 7110.66 National Beacon Code Allocation Plan (NBCAP):**

| | | | |
|---|---|---|---|
| 0000-1206 | 4500-4700 | 5500-6099 | 6500-7000 |
| 1300-4300 | 5100-5300 | 6200-6399 | 7200-7400 |

14. List any non-U.S. citizen personnel you will employ for this data request. Explain his/her duties in relation to this data request.
    *(Attach additional sheets)*

**None**

FOR OFFICE USE ONLY: Request Date: _____ / _____ / _____    Package Date: _____ / _____ / _____

Issue Date: _____ / _____ / _____    Review Date: _____ / _____ / _____

# LOCHARD SYSTEMS ASR-11 Interface
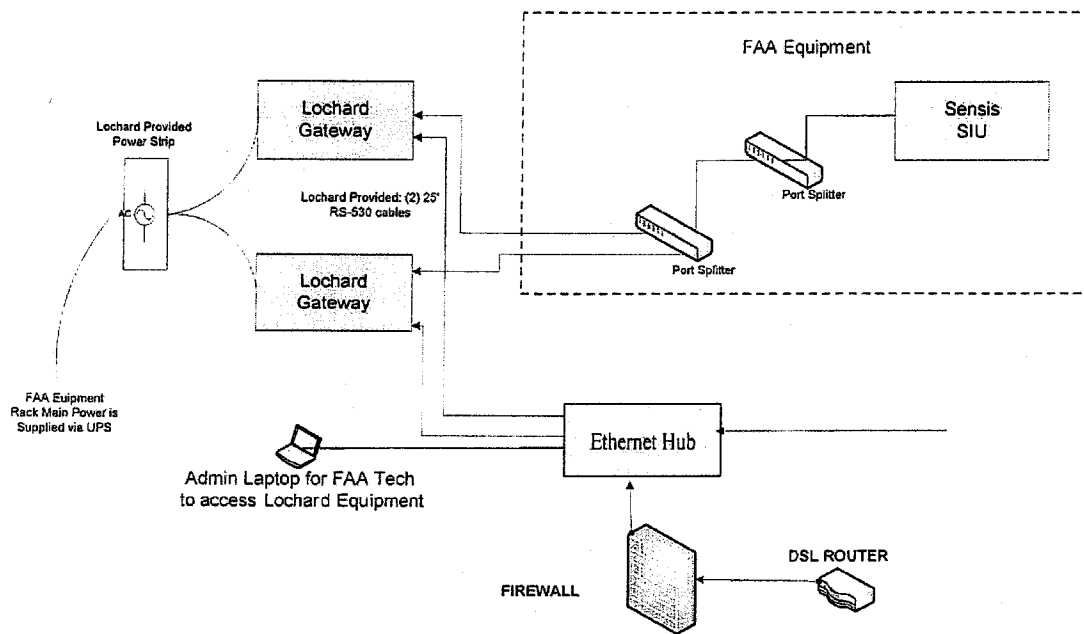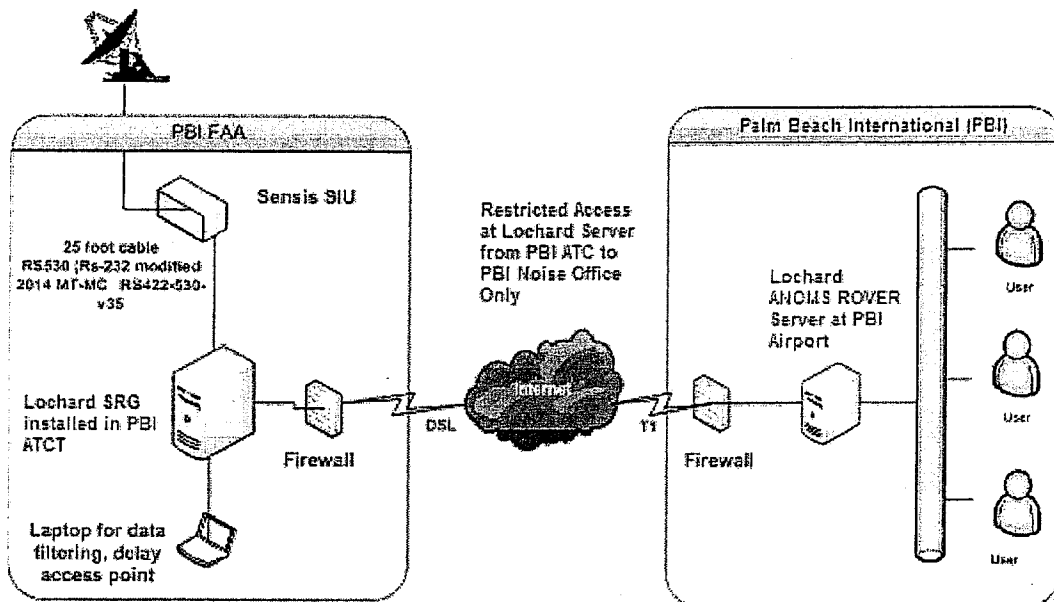## Hardware Block Diagram

Version 2
April 17, 2006



Diagram 1



Diagram 2

PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS
Jeff Koons, Chairman
Burt Aaronson, Vice Chairman
Karen T. Marcus
Shelley Vana
Steven L. Abrams
Jess R. Santamaria
Priscilla A. Taylor

COUNTY ADMINISTRATOR
Robert Weisman

DEPARTMENT OF AIRPORTS

Palm Beach International Airport
GATEWAY TO
*the Best of Everything!*

## Memorandum of Agreement
### Federal Aviation Administration
### West Palm Beach, Florida – Air Traffic Facilities
### and the
### Palm Beach County Department of Airports
### For
### Palm Beach International Airport

The Palm Beach County Department of Airports and the Lochard Corporation, a Delaware Corporation has requested that the Federal Aviation Administration (FAA) provide access to certain flight track data to support the data requirements for the Palm Beach International Airport (PBI) Noise Monitoring Center. The FAA agrees to provide and allow PBI to use certain data, as set forth in this Agreement. The FAA enters this memorandum of agreement pursuant to 49 United States Code (USC), section 106 (m). Therefore, the FAA and PBI agree to the following procedures, restrictions and responsibilities:

## I. DESCRIPTION

A. PBI requires access to West Palm Beach AT Facility's ASR-11 Data ("Data") to be used as part of PBI's Noise Management Program to respond to community concerns about aircraft operations. Information from the Data will be incorporated into reports and used as a reference to explain flight operations. The automated radar Data is one component of the Airport's Noise and Operations Monitoring System.

B. The System that will be used has been developed by Lochard Corporation and consists of Lochard Secure Radar Gateway (SRG) filtering system that includes rack-mounted PC/Linux computers. System configuration, monitoring, and manual release of Data are provided using a WEB interface from a standard browser and PC. Lochard Corporation maintains the system, and monitors and transfers ASR-11 Data to PBI's monitoring system. Refer to Diagrams 1 & 2 at the end of this document for network schematic and block diagram.

C. All access to the System is password protected. User actions involving changes to the filtering or aging configuration are logged. All traffic to and from the SRG Filtering system is restricted by packet filtering software and firewall hardware. Only services that are directly required for the Data filtering processing are enabled on the computer. When the 15 minute delay period has passed, the held Data is filtered and released via dual firewall protected by duel iDSL circuits to a Data transfer system at Lochard Corporation where it is directly released to the noise monitoring system by either a modem connection or a firewall protected Virtual Private Network.

PALM BEACH COUNTY DEPARTMENT OF AIRPORTS
846 Palm Beach International Airport
West Palm Beach, FL 33406-1470
(561) 471-7412  FAX: (561) 471-7427
www.pbia.org

PALM BEACH COUNTY GLADES AIRPORT
Pahokee

PALM BEACH COUNTY PARK AIRPORT
Lantana

NORTH COUNTY GENERAL AVIATION AIRPORT
Palm Beach Gardens

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D. This Memorandum of Agreement covers the requirements for (i) provision of the Data; (ii) use of the Data; (iii) installation, use and maintenance of the System.

## II. FAA RESPONSIBILITIES

A. All computer programs and equipment comprising the System to be installed and operated at West Palm Beach AT Facility must conform to established FAA criteria and performance demonstration standards, as discussed and provided to PBI by the FAA. The FAA will provide a list of system requirements and will have representatives present during the installation, testing, demonstration, servicing; and upon termination of this Agreement, removal of installed hardware and software. FAA will monitor the security of sensitive Data.

B. The FAA shall promptly notify the designated PBI representative of any known software, hardware, and telecommunications problems. The FAA shall provide access to West Palm Beach AT Facilities to PBI's designated service personnel for the purpose of repairing, removing, or returning computer equipment. Major maintenance of the system shall be performed by PBI or PBI's contractor off site.

C. PBI's contractor, Lochard Corporation shall familiarize FAA personnel with the installation and removal of the System. Such FAA personnel must be proficient in the removal of all connecting hardware in the event of equipment problems and/or failure.

D. The West Palm Beach AT Facility Air Traffic Manager, the West Palm Beach AT Facility Airway Facilities Manager, or their designated representative, shall have the authority, in emergency conditions, to disconnect temporarily all System devices for operational purposes without prior coordination with PBI. However, the FAA shall make reasonable attempts to notify PBI representatives before the disconnection or interruption in service. Should a disconnection occur without prior coordination, the FAA will notify PBI representatives within (4) hours of the disruption of the Data flow or, if outside regular business hours, by 9:00 a.m., the following business day. West Palm Beach AT Facility shall not be held responsible or retain any legal obligation as to the accuracy, validity or continued availability of the Data.

E. The FAA and all of its employees shall abide by all software licensing agreements, which apply to any software installed in the System.

## III. CITY RESPONSIBILITIES, USE OF FLIGHT PROGRESS DATA

A. The computer Data provided to PBI and Lochard Corporation hereunder is confidential Data of the FAA. Unless authorized for release by the FAA as set forth herein, or required to be released by law or order of a court of competent jurisdiction, disclosure of such Data to third parties is prohibited.

B. Lochard Corporation shall transfer Data only to PBI. Lochard Corporation shall not directly release Data to any Third Party.

C. PBI is planning to provision a Noise and Flight Track Monitoring web site. PBI will display processed flight track and plan Data on its public Noise and Flight Track Monitoring web site according to the delay and filtering requirements set forth in this agreement. PBI will remove

all flight tracks or individual tracks for specified beacons from public display for any period specified by the FAA. In line with agreed privacy arrangements, tail number information for private aircraft and corporate operations will not be displayed for operators and owners who have notified the NBAA that they do not want this information displayed to the public.

D. If PBI is required by law or order of a court of competent jurisdiction to release certain Data, it shall notify the FAA before doing so. This notification must be provided promptly upon PBI's receipt of such request for the Data, so that the FAA has sufficient opportunity to take whatever action it deems appropriate. The FAA agrees to advise PBI of any federal exemption that may be in effect with respect to any specific public records request.

E. PBI shall not release to the public Data in the form originally released to it by the FAA; however, consistent with its ongoing Flight Track Monitoring Program, PBI may publicly release reports and analyses derived from the Data, subject to the provisions of all other paragraphs of this Agreement. At the FAA's request, copies of all reports and analyses shall be provided to the FAA.

F. Unless required to be released, by law or order of a court of competent jurisdiction, PBI shall not knowingly release Data for use by law enforcement agencies or for use in any civil litigation without prior FAA approval. In any event, PBI will provide FAA with copies of Data released for these purposes.

G. PBI may use Data for monitoring or aircraft flight procedures but shall not use it for legal action involving noise abatement regulation enforcement.

H. Unless required to be released by law or order of a court of competent jurisdiction, PBI shall not release Data if it contains an aircraft accident or incident without prior approval of the FAA.

I. PBI shall use criteria set fourth by the FAA and supply the FAA with the System described in paragraph I B. The software program included as part of the System shall have commands available to FAA personnel that will allow temporary interruption of the flow of Data.

J. PBI or its designated contractor shall install and pay for the System including the interface devices. Should it be necessary to install phone lines, PBI or its designated contractor will pay for the installation of the phone line. The System shall at all times remain the property of PBI. Upon termination of this agreement as set forth below, the System will be removed by PBI at no cost to the FAA.

K. PBI agrees that any property of the United States damaged or destroyed by PBI incident to the exercise of the privileges herein granted shall be promptly repaired or replaced by PBI to the condition it was prior to such damage and to the reasonable satisfaction of the FAA, or in lieu of such repairs or replacement PBI shall, if so required by the FAA, pay to the United States money in the amount sufficient to reasonably compensate the United States for such damage or destruction.

L. Indemnification by PBI. PBI agrees, to the extent permitted by applicable law, to indemnify and hold harmless the FAA, its agents, officers, and employees, from and against all claims, demands, damages, liabilities, losses, suits, and judgments (including all costs and expenses incident thereto) which may accrue against, be suffered by, be charged to, or recoverable from the FAA, its agents, officers, and employees, arising out of the FAA providing this Data, and arising out of acts or the omissions of PBI, its agents, contractors, or employees by reason of damage to, destruction of, misappropriation, or loss of property of the FAA, its officers,

employees and agents arising out of the act of omissions of PBI, its employees, and agents under this agreement, whether or not caused or contributed to by negligence on the part of PBI or its agents. In the event PBI hold or obtains insurance in support of this promise, and original or certified copy of a certificate of insurance shall be delivered to the FAA. Nothing herein shall be construed as a waiver by PBI or its sovereign immunity.

M. PBI shall pay the cost, as determined by the FAA contracting officer, of producing and/or supplying any utilities, including telephone lines to the System. The FAA shall be under no obligation to furnish utilities or services.

## IV. INTER-AGENCY COMMUNICATIONS

PBI shall direct communications to:

> Federal Aviation Administration
> Technical Operations
> 3901 Southern Blvd.
> West Palm Beach, FL 33406
> Phone: 561-683-3290
> Fax: 561-688-2369

**Technical Contact**

> Federal Aviation Administration
> Technical Operations
> 3901 Southern Blvd.
> West Palm Beach, FL 33406
> Phone: 561-683-3290
> Fax: 561-688-2369

The FAA shall direct communications to:

> Palm Beach County Department of Airports
> Casandra R. Davis, Manager
> Noise Abatement & Community Affairs
> Palm Beach County Department of Airports
> e-mail: Cdavis@pbia.org
> Phone: 561-471-7467
> Fax: 561-471-7427

**Technical Contact**

> Lochard Corporation
> 1050 Fulton Ave., Suite 213
> Sacramento, CA 95825

> Telephone: (866) 240-8307

## V. TERMINATION OF AGREEMENT

Either party may terminate this Agreement by giving the other party (90) written notification. The duration of this Agreement shall not exceed two years from the date signed by all parties.

## VI. ADDITIONAL PROCEDURES AND RESTRICTIONS

A. All Palm Beach County Department of Airports personnel in FAA spaces shall meet all security requirements and follow all security policies/practices established by the Air Traffic Manager and Airways Facilities Manager of the FAA's West Palm Beach AT Facility.

B. All of the System's computer programs and equipment to be installed and operated in the West Palm Beach AT Facility must be approved by the FAA prior to installation.

C. The Data delay shall be a minimum of 15 minutes to meet the requirements of Order 1200.22C.

D. Lochard Corporation shall maintain the filtering equipment under configuration management requirements of Order 1800.66.

E. Lochard Corporation shall also maintain antivirus software and manage security patch updates on the server equipment installed in the West Palm Beach AT Facility.

## VIII. DATA COVERED BY THIS AGREEMENT

A. Flight progress Data for the West Palm Beach AT Facility twenty-four (24) hours a day, seven (7) days a week for Commercial, General Aviation, and non-sensitive Military aircraft. Data relating to classified operations are not covered by this agreement.

B. Flight Data will be restricted to the following beacon code sub-sets per FAA Order 7110.66, National Beacon Code Allocation Plan (NBCAP):

| | |
|---|---|
| 0000 - 1206 | 5500 - 6099 |
| 1300 - 4300 | 6200 - 6399 |
| 4500 - 4700 | 6500 - 7000 |
| 5100 - 5300 | 7200 - 7400 |

C. Flight data will be filtered by Call Signs as set forth by FAA Order 7110.67, Special Aircraft Operations by Law Enforcement/Military Organizations.

D. Flight data will be filtered by Permanent Beacon Codes and/or local Call Signs assigned to aircraft operated by local law enforcement.

## VIV. SYSTEM REVIEW

The FAA and PBI agree to conduct a review, at the request of either party, to determine whether the system is operating in accordance with the specifications to be provided in accordance with the provisions of this Agreement and to examine the need for modifications to this Agreement or to the operation of the system. The FAA and PBI will coordinate the location, time and agenda of the review session.

The FAA and PBI concur with the provisions of this Agreement as indicated by the signatures of their duly authorized officials.

**FEDERAL AVIATION ADMINISTRATION**

BY _____

_____
Printed Name

TITLE _____

DATE _____

**PALM BEACH COUNTY BY ITS COUNTY BOARD OF COMMISSIONERS**

BY _____

_____
Printed Name

TITLE _____

DATE _____

Sharon R. Bock,
Clerk and Comptroller

BY _____

Approved as to Form and Legal Sufficiency

BY _____
County Attorney

Approved as to terms and Conditions

BY _____
Director, Department of Airports

# LOCHARD SYSTEMS ASR-11 Interface
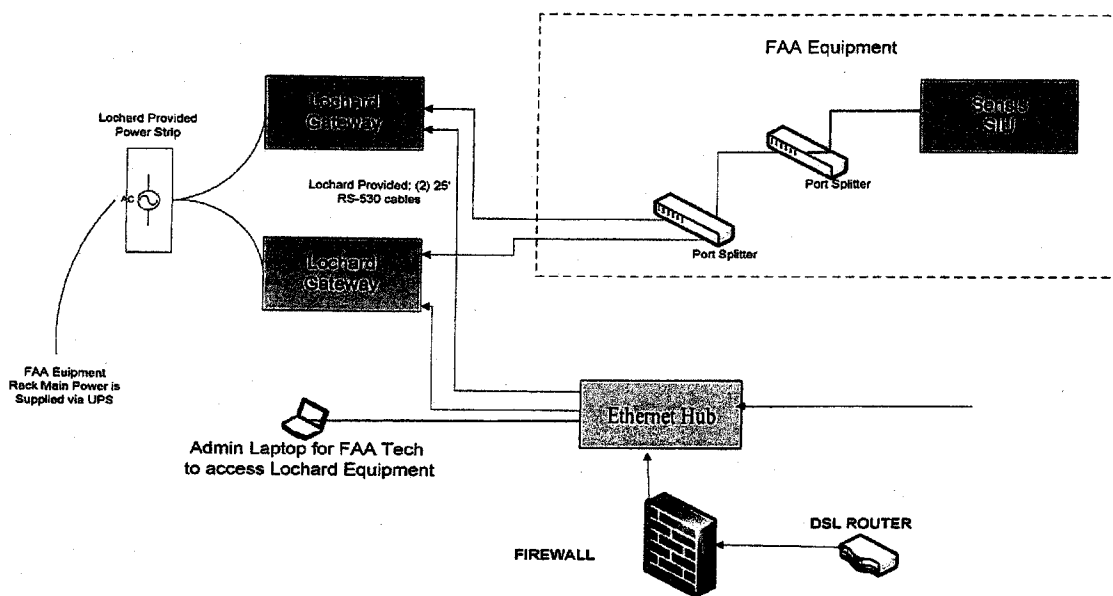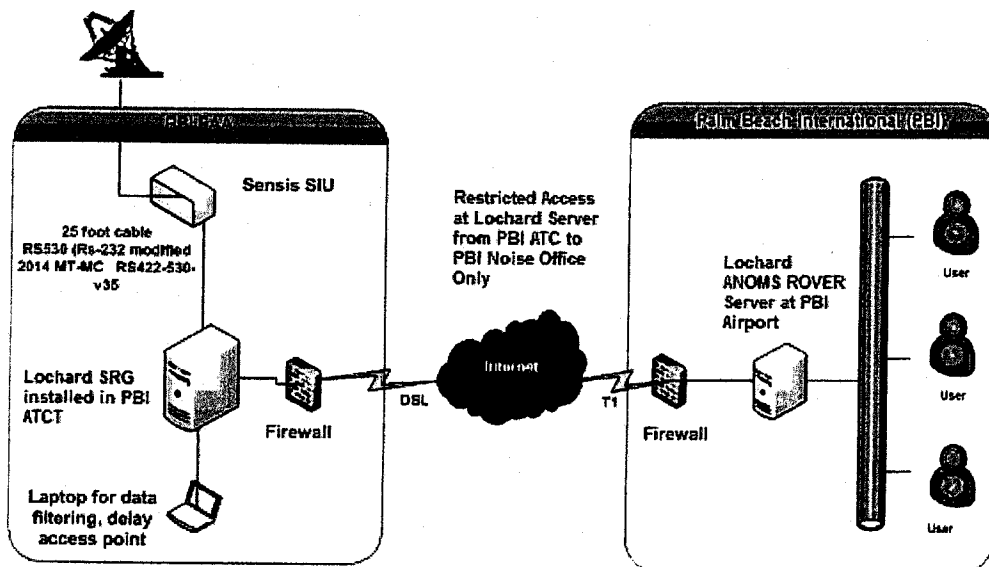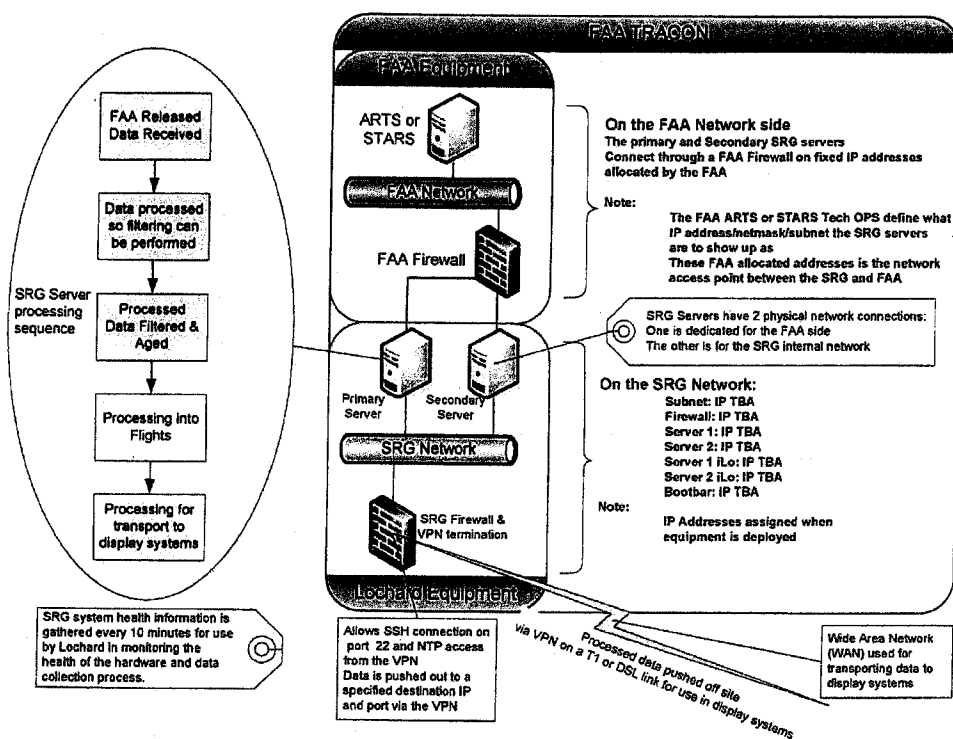## Hardware Block Diagram

Version 2
April 17, 2006



Diagram 1



Diagram 2

# SRG Security Overview

# SRG - Universal System Diagram



## FAA Controls Access to the ARTS or STARS Network

Access to STARS or ARTS is restricted by the FAA firewall into which the SRG servers are plugged. Typically the FAA locks down access so that the SRG servers are able to connect from a specified IP address to a specified destination IP address and port or are allowed to join to a multicast group.

## SRG Access Restrictions and Use

SRG system access control is restricted using a username and password.
Physical access is governed by FAA policies on access to the room in which the SRG equipment is housed. (The system is housed within a FAA building)

- FAA login account:

    o  Allows Starting and Stopping the data collector,

    o  Allows Configuring filtering of flights

    o  Allows Configuring the delay time for the data.

    o  Viewing the filtered and delayed data stream

    o  Viewing the Audit trail of logins

    o  Access is via the computer console and User Interface (UI) inside the FAA building.

    o  Physical access is governed by FAA policy on entering the relevant server room within the TRACON facility the SRG has been housed within.

    o  The FAA account prohibits peripheral to be attached to the servers

Lochard has these logins:

- An administrator account.

- A data access account.

  - This account is responsible for pushing processed data off site to destination display systems.

These Lochard accounts can be used locally via the console or remotely via SSH from a specified source.
Access to the Lochard account credentials is restricted to a limited set of Lochard employees who are tasked with supporting an installation.

## Access Points

The data and configuration can be accessed in two ways:

1. Physical access in the FAA building via the console.

2. Remote access using SSH or HTTP.

There is a modem available for remote access to the server boot-bar. The boot-bar is not capable of routing data from the modem to the servers and therefore there is no risk of access to FAA data from the modem. As an added precaution, the modem and boot-bar are login and password protected
The modem and boot-bar allow Lochard to remotely power cycle hardware in the case of a hardware lock-up.

## Access Protocols

1. SSH – Secure Shell protocol uses public/private key encryption to provide an authorized and authenticated access to the system shell. Access is controlled by certificates, user name and password.

2. HTTP/HTTPS provide Web browser access to the system configuration and monitoring. Access is user name and password protected.

3. NTP provides time synchronisation from time servers.

SSH → Secure Shell
HTTP → Hyper Text Transfer Protocol
HTTPS → Hyper Text Transfer Protocol Over Secure socket Layer
NTP → Network Time Protocol
Details of these Protocol standards can be obtained by referring to:
SSH → http://tools.ietf.org/html/rfc4251
HTTP → http://tools.ietf.org/html/rfc2616
HTTPS → http://tools.ietf.org/html/rfc2818
NTP → http://tools.ietf.org/html/rfc1305

## Processed Data Distribution

Data released to the SRG from the FAA is processed, filtered and aged on FAA premises prior to being transported to display systems for which a receiving Airport has a MOA with the FAA.
Processed data is transported in a proprietary format via AES-256 encryption to destination systems. The data is routed via site to site VPN connections to display systems relevant for the airport with the MOA.
Airports have an option of either taking up a hosted solution or a deployed solution for the reporting and Analysis display system. In the deployed situation data is delivered to the airports Data Centre, in the hosted situation the data is entirely hosted within the Lochard Data Centre.

## Universal Data Distribution Diagram

**Hosted System** - Distributed to Lochard Data Centre
**Deployed System** - Distributed to Airport Data Centre
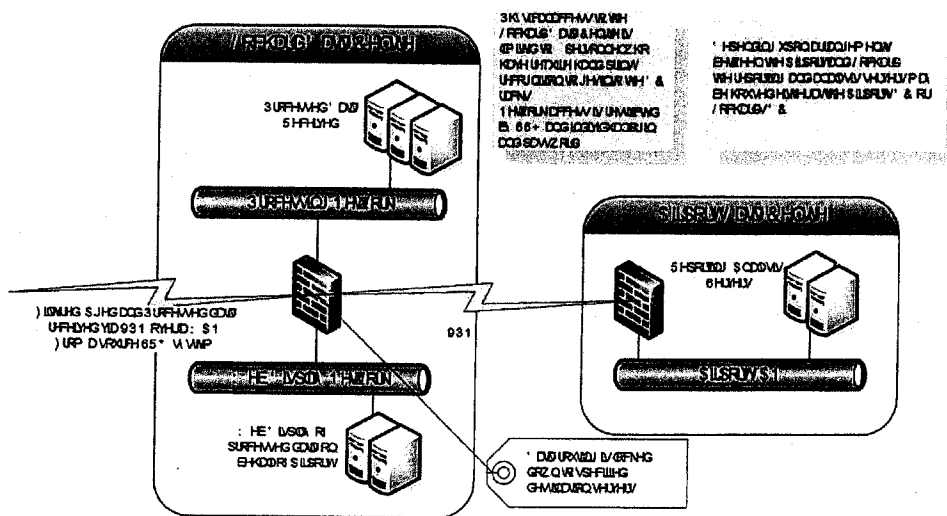
## VPN Connectivity

Virtual Private Network technology provides a secure point to point link over the Internet between the two VPN enabled routers. Authentication and authorization are protected using strong public key encryption and shared secrets.
VPN connectivity is comprised of an Internet Protocol Secure with AES 256 based encryption. The VPN tunnel has access control lists limiting connectivity at both ends.
The access control lists limit both IP and port connectivity into and out of the SRG system.
Ports required to service the following functions in an SRG are enabled:

- SSH

- HTTP and HTTPS

- NTP

- Delayed data feed (outbound TCP on a single port to a destination server)

This is the minimum set of access ports that are required to provide the gateway service.
**NOTE: There is NO INTERNET CONNECTIVITY in or out of the firewall. Only traffic from a designated source can traverse the firewall into an SRG system.**

## Monitoring and Auditing Trail

FAA can view:

- The account login logs via the web interface.

- An audit log is kept of changes that are made

Lochard has access to:

- Account login logs, including failed log attempts.

- Records of what data was downloaded.

- Records of configuration changes.

## Physical and Network Protection

The SRG system will be physically protected by FAA room access controls; allowing only authorized staff and escorted visitors to the area. Control access of the SRG is username and password protected, with network access restricted and controlled by the FAA via use of Network Firewalls.
Detailed Security Protocols:

a.  SRG systems are firewall protected from all traffic except that coming from a designated fixed address.

b.  Access may only be obtained via an authorised login account using SSH private encryption from a specified server which can only be accessed via a separate login and password via SSH and access to that server is further protected by another layer of password protected logins.

c.  Data is processed, filtered and aged before it becomes humanly readable

d.  Encrypted point to point links are used for transporting data out of the facility to designated destination systems.

e.  Filtering of restricted beacon code allocations occurs in volatile memory.

f.  A minimised set of personnel are able to obtain login credentials when it is required.

## VPN ACCESS

The Virtual Private Network (VPN) provides multiple levels of protection:

1.  The firewalls will only allow VPN access

2.  The firewall will only allow VPN access from the other firewall, effectively providing a point to point network

3.  The firewalls use strong industry standard encryption protocols (AES) for all communications

4.  The firewalls have shared private keys

5.  The servers that may access the SRG over the VPN are restricted

Even in the event that someone manages to break the VPN there are a number of other layers of protection before access can be obtained to processed data.

## COMMAND LINE AND HTTP ACCESS

System command access is only enabled for accounts using SSH. There is no other remote mechanism of accessing either server. The SSH access is further restricted to a specific account. Access to this account is protected using public key encryption and passwords. All data passing over the SSH connection is encrypted.
HTTP access is protected using passwords and is restricted to access to data that has been filtered and aged.

## RESTRICTED DATA

The SRG removes restricted data as it is received from the FAA therefore restricted data is never recorded.

Secure Radar Gateway

# User Manual

# Table of Contents

# Revision History

## DOCUMENT HISTORY

| Date ↓ | Revision | Author | Summary of changes |
|---|---|---|---|
| 2006-06-09 | 1.0 | Harold Chu | Initial version. |
| 2006-06-14 | 1.1 | Harold Chu | Added section on how to verify changes. |
| 2006-06-20 | 1.2 | Harold Chu | Updated document to match cosmetic changes made to interface. |
| 2008-07-30 | 1.3 | Doug Ferrier | Reworded a couple of sentences and added a 2 screen snapshots for further clarity. |

Table 0-1 Document history.

# Introduction

This manual will explain how to:

- Log in to the system.
- Turn the system on and off.
- Configure filters to prevent sensitive information from being recorded.
- Configure the delay to control when data is released.
- To test and verify that configuration changes have taken effect.

# Logging In

You can access the configuration screen from the console. Select one of the servers using the KVM and log in as user admin using 'password not defined'[1] as the password.

**:••:SRG**

Secure Radar Gateway

**Username:** [                    ]

**Password:** [                    ]

[ 🔘 Log In ]

Figure 1: SRG Login

You will see the **On/Off** panel after you successfully log in.

**:••:SRG**
Secure Radar Gateway

On/Off  Status  Filter Settings  Delay Settings  Live Data  Log Out

On/Off

Data collection is on.
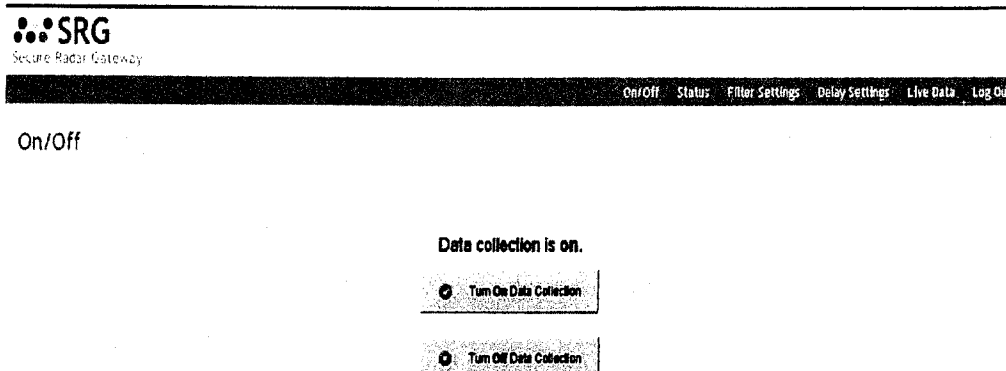
[ 🔘 Turn On Data Collection ]

[ 🔘 Turn Off Data Collection ]

Figure 2: Enabling/Disabling data collection

When you have finished you can log out by clicking on the **Log Out** button in the top right.

---

[1] The actual password will be provided at time of installation

Any changes you make will be mirrored to the other server. So you only need to change the settings on one of the servers. The configuration replication works both ways so you can make the changes on either server.

## Turning the System On and Off

You can start and stop data collection from the **On/Off** panel. When data collection is stopped the system does not save data. Existing data can still be retrieved but new data is not recorded.

To stop data collection:
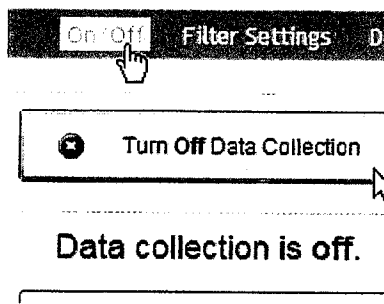


1. Click **On/Off** in the top bar.

2. Click **Turn Off Data Collection**.

3. The panel will indicate that **Data collection is off**.

Note that it may take up to 5 seconds for the system to stop recording.

To turn the system back on click on the **Turn On Data Collection** button.
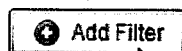
## Filtering Data

The system allows you to specify what data must be dropped, you do this from the **Filter Settings** panel. The panel lets you:

- Review the currently configured filters.
- Add new filters.
- Change existing filters.
- Remove existing filters.

To add a new filter:



1. Click on **Add Filter** in the top right. The **Edit Filter** panel should appear.

**Edit Filter**

**Name** [_____]

**Description** [_____]

| Time | Date (local time) | | Tin |
|------|-------------------|---|-----|
| 00:00:00 | 01/31/2006 | 🗓 and | hr |

1234 ✋

↓

1234 🔄

☑ (Sensor 0/0/0) Test
☑ (Sensor 1/0/1) Harold's test sensor
☐ (Sensor 9/0/0) GATEWAY NUMBER 9 SE

[ ✓ Save ] [ ✗ ]

2. Enter in a **Name** and **Description** for the filter.

   *Example:*
   *Name = Military Aircraft*
   *Description = Filter out military aircraft for all sensors.*

3. Specify the time interval that the filter should apply to.

   If you wish the filter to be valid indefinitely then set the end time to 2038-01-01 00:00:00.

4. If you wish to filter by **SSR** codes then click the 🔄 icon to add a text field and enter in the SSR code. Click the button again to add more text fields and to enter in the other SSRs.

5. Do the same for the **Call Sign**, **Registration** and **Aircraft Types** you want to filter out.

You can enter in wildcard characters for the SSR, call sign, registration and aircraft types. Use a * to match 0 or more characters and a ? to match any single character. For example:

- 12* will match 12, 122, 1237, etc
- 12? will match 122, 124, etc

6. Pick the **Sensors** that the filter should apply to.

7. Click **Save**. The list of filters will appear and you will see the new filter in the list.

The new filter will take effect within five seconds and will apply to new data from the radar.

## Setting the Release Delay

Data is not released until it has aged by a specified time. You can set this time in the **General Settings** panel.

To set the delay time:

[ es  Delay Settings  Liv ]

1. Click on **Delay Settings** in the top right.

| 900 | seconds |
|-----|---------|
Data can not be accessed until it h

2. Enter in the value in to the **Delay Time** field. Note that the time is in seconds.

   *Example: Set it to 900 for a 15 minute delay.*

[ ✓ Save ] [ ✗ ]

3. Click **Save**.

# Verifying the Changes

You many want to confirm that your configuration changes have taken effect and it is doing what you asked. The **Live Data** panel shows the data being recorded by the system, so you can confirm that data is being filtered and delayed correctly.

To check filter changes:
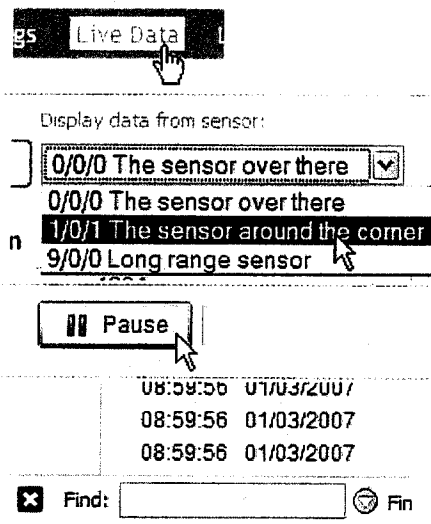
1. Click on **Live Data** in the top right.

2. Select the sensor for the filter. The data for this sensor will appear on the page.

3. Press **Pause**.

4. Press [Ctrl] + [F] to open the find panel. You should see it pop up at the bottom of the screen.

5. Use the find panel to make sure values that should be filtered are no on the page.

Filter changes only take affect on new data as it is received. Therefore you will have to wait until data appears on the page that is after the time at which you applied the new filter to see the result. For example this may take 15 minutes if the ageing delay is 900 seconds.

**Note**