

THE ILRS WEBSITE'S SITE LOG VIEWER APPLICATION

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Abstract

The CDDIS has developed the Site Log Viewer application to allow users to query the site description/configuration logs for services within the International Association of Geodesy (IAG). As part of their ILRS operational compliance, stations in the ILRS network complete and update official site logs that describe the system's configuration, environment, and contact information. These logs are also accessible on the individual station pages and now through the new web application, the SiteLogViewer (SLV). The SLV provides for an enhanced display and comparison of the contents of the ILRS site logs. Through the SLV application, users can display and browse through a complete site log section by section, display contents of one section for all site logs, or search the contents of one section of a site log for a specified parameter value. An ILRS version of the SLV is available through the ILRS website, providing access to ILRS logs only. Through an expanded version of the application on the CDDIS website, users can browse logs from stations in the networks of the ILRS, the International DORIS Service (IDS) and the International GNSS Service (IGS); logs from sites in the International VLBI Service for Geodesy and Astrometry (IVS) will be accessible through the application in the future.

Background

Site logs are accurate, consistent information about the stations in the ILRS network and are vital for data analysis. Each station's ILRS Site Log is a formatted ASCII text description of the laser station's location, environment, equipment, co-located instrumentation, and organization/contact information. Station personnel report changes in the system's configuration, etc. by adding/updating information in the log. Thus, the form serves as a historical collection of major changes during the lifetime of a system's installation. Each station's site log form is a key source for understanding how the station's configuration has changed over time.

The CDDIS has developed an application for the enhanced display and comparison of the contents of the ILRS site logs. The ILRS version of the Site Log Viewer application is accessible at: <http://ilrs.gsfc.nasa.gov/SiteLogViewer>.

Use Cases

The CDDIS staff considered various scenarios when designing the ILRS Site Log Viewer. For example, a user needs to query the logs for a particular system to understand the station's con-

figuration. Alternatively, a user would like to determine which sites have equipment with a particular configuration.

The CDDIS developed the Site Log Viewer application for the display and comparison of the contents of these site logs. An ILRS only version is available through the ILRS website. An enhanced version that displays site log contents for IGS, IDS, and IVS logs, in addition to the ILRS logs, is available through the CDDIS website. Through the Site Log Viewer application, users can:

- Display a complete site log, section by section
- Display contents of all site logs for a specified topic (site log section)
- Search the contents of all site logs for a specified parameter value

Examples

The initial page of the Site Log Viewer application (Figure 1a) displays the two selection options: view one complete site log or view one site log section for all site logs. Here the user next selects to view a particular section (“Time and Frequency Standard”) from all site logs. The resulting page, shown in Figure 1b lists the “Time and Frequency Standards” section from all site logs in a scrollable display. The display scrolls vertically for all sites and horizontally for fields within the “Time and Frequency Standards” section of the site log.

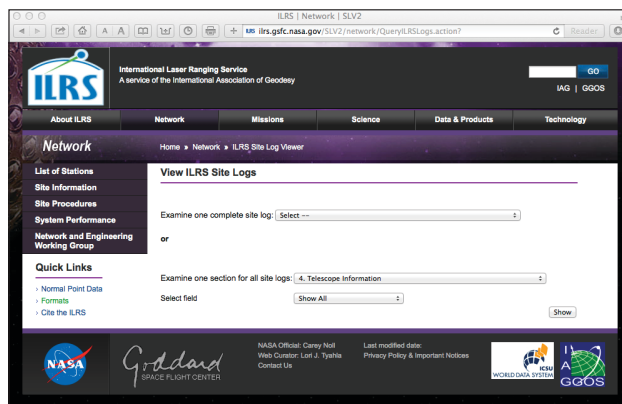


Figure 1a. The Site Log Viewer home page.

Query Results For: 4. Telescope Information - Show All

Site Name	SiteLogFileName	SubsectionNumber	Receiving Telescope Type	Aperture	Mount
Ajaccio, France (mobile site) (ajaf)	ajaf_20080929.log	4.01	CASSEGRAIN	.13 [m]	AZ-EL
ALTAY (alt)	alt_20090325.log	4.01	CASSEGRAIN	0.6 [m]	AZ-EL
APOLLO (apol)	apol_20090629.log	4.01	FOLDED RITCHE-CHRETIEN	3.5 [m]	AZ-EL
Arequipa (are)	are_20140121.log	4.01	SCHMIDT-CASSEGRAIN CATADIOPTIC	0.28 [m]	AZ-EL
Arkhyz (ark)	ark_20120215.log	4.01	GREGORY	0.25 [m]	AZ-EL
Badary (bad)	bad_20120131.log	4.01	GREGORY	0.25 [m]	AZ-EL
Baikonur (bai)	bai_20120213.log	4.01	MUKSUTOV	0.6 [m]	AZ-EL
Beijing SLR Station (be)	beia_20030821.log	4.01	CASSEGRAIN	0.60 [m]	AZ-EL

Get CSV | New Query

Figure 1b. Field selection from SLV across all ILRS site logs.

The user returns to the main page of the Site Log Viewer application to view a particular entry for one section of the site logs. Here the user selects the “Aircraft Detection” section and lists the possible entries for the “Detection Type” field in that section (Figure 2a). The user then picks “RADAR” to determine what sites in the network use radars for aircraft detection. The query then results in a page, shown in Figure 2b, that lists the fields within the “Aircraft Detection” section of the site log for only those sites specifying a radar as the method for aircraft detection. Pressing the “Get CSV” button will create a file of these results in comma-separated values format for use in other applications (e.g., Excel, etc.).

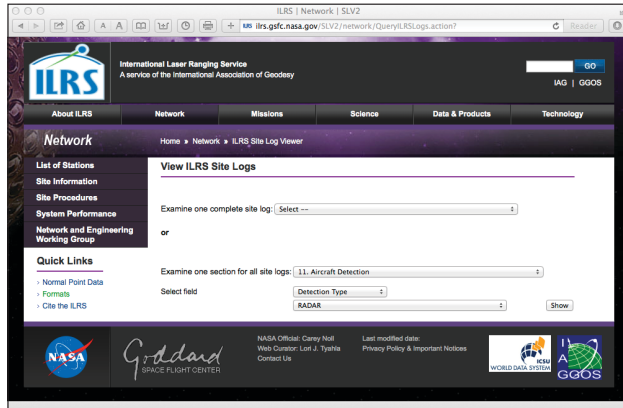


Figure 2a. Select site logs from SLV for a particular field value.

Query Results For: 11. Aircraft Detection - Detection Type - RADAR



Site Name	SiteLogFileName	SubsectionNumber	Detection Type	Date Installed	Date Removed	Additional Information
TIGO-SLR, Concepcion (cont)	cont_20100929.log	11.01	RADAR	1997-01-01		
Daedeok (daek)	daek_20121022.log	11.01	RADAR	2012-09-28	(yyyy-mm-dd)	(multiple lines)
Tanegashima (GUTS) (gmsl)	gmsl_20140424.log	11.01	RADAR	yyyy-mm-dd	(yyyy-mm-dd)	(multiple lines)
NGSLR (go1)	go1_20130603.log	11.01	RADAR	2007-05-31	(yyyy-mm-dd)	(multiple lines)
Goddard Geophysical Astronomical Observatory (godl)	godl_20140116.log	11.01	RADAR	1994-08-31	(yyyy-mm-dd)	(multiple lines)
Hartebeeshoek Radio Astronomy Observatory (hart)	hart_20121011.log	11.01	RADAR	2000-06-09	(yyyy-mm-dd)	(multiple lines)
Herstmonceux (herl)	herl_20140109.log	11.01	RADAR	1984-01-01 Upgraded 2003	(yyyy-mm-dd)	RADAR interfaced to LR control sw and automatically interrupts laser on detection of aircraft

Get CSV | New Query

Figure 2b. Results from SLV selection.

After returning to the Site Log Viewer application's main page, the user opts to view the full site log for GODL (MOBLAS-7 at Greenbelt, MD). The resulting page, shown in Figure 3, presents the location of the selected site on a zoom-able map and a picture of the station. The bottom half of the page lists the sections of the site log on the left and the contents of that section on the right. The user can then select one of the sections to view the contents in a scrollable window. To view another site log or view a section of all logs, the user then presses the "New Query" button.

Goddard Geophysical Astronomical Observatory (godl)

[Original Text File: View](#)

0. Form	SiteLogFileName	godl_20140116.log
1. Identification of the Ranging System Reference Point (SRP)	SubsectionNumber	4.01
2. Site Location Information	Receiving Telescope Type	CASSEGRAIN
3. General System Information	Aperture	0.762 [m]
4. Telescope Information	Mount	AZ-EL
5. Laser System Information	Xmitting Telescope Type	REFRACTOR
6. Receiver System	Xmitting Aperture	0.163 [m]
7. Tracking Capabilities	Tracking Camera Type	EMCCD
8. Calibration	Model	SI-VGA60-EM
9. Time and Frequency Standards	Manufacturer	SALVADOR IMAGING (FLIR)
10. Preprocessing Information	Field of View	+/-0.100 [deg]
11. Aircraft Detection	Minimum Magnitude	12 [mag]
12. Meteorological Instrumentation	Transmit Receive Path	SEPARATE
13.01 Collocated Permanent Geodetic Systems	Transmit Receive Switch	NONE
13.02 Local Ties from the SRP to Other Monuments or Systems on Site	Max Slew Rate Az	20 [deg/s]
13.03 Eccentricities Between Other Monuments on Site	Max Slew Rate EI	5 [deg/s]
14. Local Events Possibly Affecting Computed Position	Max Used Tracking Rate Az	5
15. On Site Point of Contact Agency Information		
16. Responsible Agency if different from 15		
17. More Information		

[New Query](#)

Figure 3. Results page from selecting to view a particular site log.

An Expanded Site Log Viewer

A general version of the Site Log Viewer available on the CDDIS website (<http://cddis.gsfc.nasa.gov/SiteLogViewer>) allows users to browse IGS, ILRS, and IDS site logs; IVS logs will be added in a future version. Once the user selects the type of site log (IGS, ILRS, or IDS), in this case IDS/DORIS site logs as shown in Figure 4, a map of all DORIS sites is shown. The user selects a particular site (Greenbelt) and can then display the contents of the IDS site log by section.

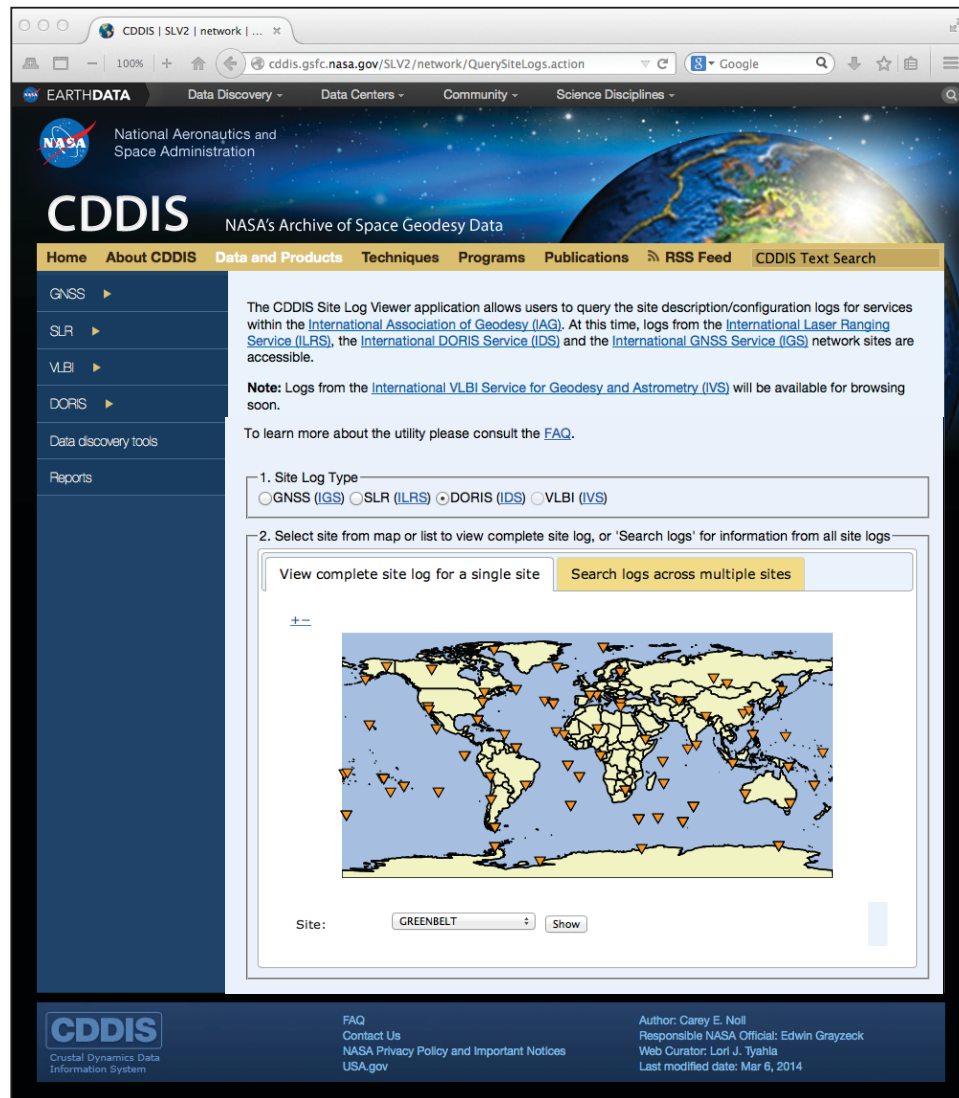


Figure 4. Main page for generalized SLV on CDDIS website.

After displaying the log for a site, a series of tabs (Figures 5a and 5b) allows the user to view an enlarged map showing the site location or any available photos. As with the ILRS version of the SLV, the user can select a particular section of the site log and view contents of that section across all site logs and can specify a value for a parameter in a field to display sites that satisfy that criteria.

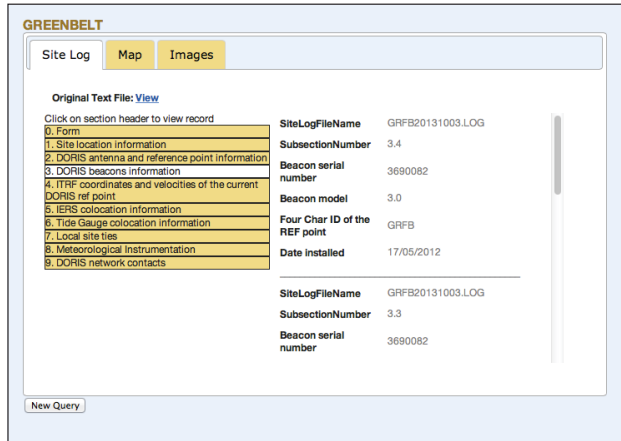


Figure 5a. Results of selecting a site log from DORIS network

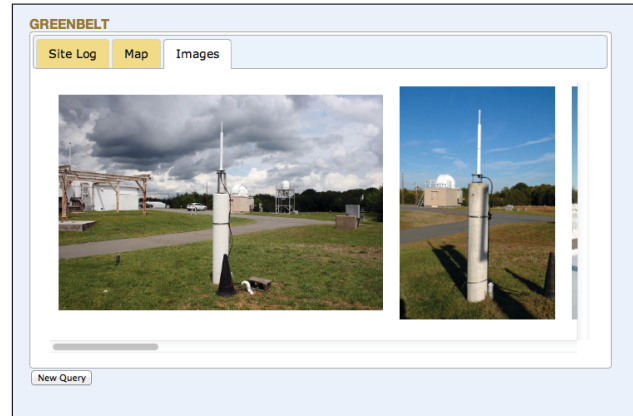


Figure 5b. Images available from SLV for DORIS site selection.

The official responsibility for receipt and maintenance of each service's logs remains with the service (IGS, <http://igs.org> and IDS, <http://ids-doris.org>). The CDDIS regularly ingests the logs into a database developed for the Site Log Viewer application. The application also provides a link to the official site log and service to ensure the user has access to the latest information.

Concluding Remarks

The Site Log Viewer is a web-based tool that allows users to view and compare site log contents in an easy to read display. Users can view selected information across site logs to understand the configuration of stations in the networks. Suggestions on the utility of the application are welcome and should be directed to the authors.