

IGS Site Log Manager – August 2014

Overview:

URL: slm.igs.org

The IGS Site Log Manager (SLM) is a web based online application designed for the purpose of managing the Meta Data of IGS GNSS Ground based sites. The SLM utilizes a MySQL Database with a web based User Interface that allows for uploading of the traditional IGS ASCII Logs and/or Manual Data Entry. The SLM Validates the data against a set of criteria defined at:

ftp://igscb.jpl.nasa.gov/pub/station/general/sitelog_instr.txt

Existing Sites

All current and former IGS sites have already been loaded into the SLM and are available for viewing/adding/editing data. Any existing IGS Member Sites will already be populated with the latest version of the site's data that IGS currently has.

New Sites

New sites may be proposed and a set of that site's data may be submitted via a link in the SLM. Once approved, the new site will be set up and added to the SLM and made available to the member Agency.

Data Upload/Entry

Uploaded/Entered data is stored in a temporary set of tables that may be modified and "scrubbed" for any errors or missing data. Any errors or missing required data is indicated with an "Error" badge system that shows which sites have errors and how many and which fields as well as the nature of the error. The "Error Badge" feature also indicates "Preferred/Optional" data fields that are empty or have errors. It also indicates which fields differ from the data currently held in IGS's main database.

Data Sections

The Data is broken down into a number of "Sections", 0-13 with several "Sub-Sections". Some of the sections are Required in order to provide a minimum set of Site Meta Data. A number of sections are "Optional" depending on the installed features, equipment and capabilities of the site that need only be filled in if they applied to the specific site.

View/Diff

A View/Diff of the newly uploaded/entered data helps with quickly browsing through a site's data and reviewing changes and identifying potential problems.

Submitting to IGS

Once the data is complete and accurate it may be "Submitted" to IGS for Validation and for posting to IGS's main database where it will be made available to members for use. Once the changes are validated by IGS the yellow badges, indicating "edited" fields, will be cleared and any remaining red Error Badges will still be visible as well as any optional "Preferred" field badges.

Note: Your changes are not visible through IGS's web site until the changes have been submitted to IGS for Validation and have been approved and the changes posted to the main IGS tables.

Download IGS ASCII Site Log

The completed data set may also be downloaded into an IGS ASCII Log that is compliant with the IGS defined standards which can then be used as the new basis for the next data upload or for importing into other IGS ASCII Log compatible systems or stored as an archive.

SLM Ongoing Development

In order to best meet the needs of IGS Member Agencies and to make the management of the data as easy and accurate and complete as possible the IGS SLM is continuing to be developed and improved including adding additional data import/export/exchange features, such as XML, with the collaboration of IGS Member Agencies. We welcome any comments or suggestions regarding your use of the system.

IGS/UNAVCO Site Log Manager Team

Register/Login

New Users

New Users must register via the Register Now link on the main. A minimal amount of information is needed to register:

Name, First/Last
Agency
Email Address (login ID)
Password

After registering you should receive an email to confirm your email address with a link to complete the registration process. After clicking the link the system will validate your information and display a message that the registration process was completed. An email alert will then be sent to IGS SLM Administrators that you have successfully registered.

At this point you can login in but will not be able to actually access any of your Agency's site/data until an IGS Admin has "Activated" your account and set your record to the appropriate agency affiliation.

Once the IGS Admin has "Activated" your account you will receive an email alert and then will be able to access the features of the SLM.

Login

Login using your email address that you registered with and your password.

Forgot Password

If you forget your password use the Forgot Password link on the login page. This will require your login id (email address) and it will send you a link via email by which you may enter a new password. Whenever your password is changed whether via the Forgot Password link or via the Change Password link in the system it will send you an email alert stating that it has been changed. If you did not change the password or if it wasn't your intention to do so please contact the IGS SLM Admin for help.

SLM Layout and Menu System

The SLM is comprised of a single page/palette that is divided into three main columns:

Col 1: Site List

Col 2: Site Forms Menu

Col 3: Form Palette.

Button Bar

The “Button Bar” at the top of the main page is used for most needed operations:

- **New** – Propose a new site if it isn’t already affiliated with IGS. This allows submittal of a form with an overview of the proposed site and allows attachment of a zip file containing pictures and an ASCII Site Log.
- **Upload** – Select and upload a full and complete IGS ASCII Site Log with all of the needed changes. After uploading the site log your changes will be indicated on the site by yellow “Badges”. Further modifications and corrections may then be made via the section forms.
- **View/Diff** – Allows viewing of the entire site log and indicates any differences between your currently modified data and IGS’s current data for that site.
- **Download** – Download an IGS ASCII Site Log file with the current SLM data set. This is the data currently in the SLM not the data that IGS has in its main system. Although, if there are no yellow “Modified Data” badges showing then the two sets of data are identical.
- **Submit** – Submit the current SLM data and modifications to IGS for approval and to be posted to the IGS’s main database for access via IGS’s web site .

Drop Down Menu

Next to your name in the top right corner of the SLM’s main page is a “gear” icon link to a drop down menu where you may access the following links:

- **Propose New Site** – same as the “New” button on the button bar
- **Domes Request Form** – provided as a convenient link to make a request for a Domes number for a new site
- **Display “Startup Tips” Page** – open a separate window of the “startup tips” that originally show in the main window “palette” area.
- **Personal Profile** – edit personal profile and login id/email address
- **Change Personal Password** – change your personal password
- **Logout**

- **Change Log** – Report of system changes
- **Toggle Legend at Bottom of Page** – displays/hides the error badge legend at the bottom of the browser window.

Managing Data

All current site log metadata for your Agency's sites should already be in the SLM. If it isn't please contact IGS for help. For sites that are new to IGS you may use the Propose New Site button on the top of the main page.

Making Changes

There are two options to make changes to the current Site's data:

- 1) Upload an **IGS ASCII Site Log** file that contains the appropriate changes.
- 2) Edit the existing site data in the SLM via the **Section Forms Menu**.

1) IGS ASCII Site Log file (optional)

If you will not be uploading an ASCII Site Log skip this section.

It is **NOT** necessary to upload an **IGS ASCII Site Log** file to make changes. This option is available for legacy purposes and for agencies that maintain their own databases of their site log meta data and are able to export an appropriate and complete IGS ASCII Site Log file.

Before uploading a site log file be sure it is complete and accurate and complies with IGS's specifications at:

ftp://igs.cb.jpl.nasa.gov/pub/station/general/sitelog_instr.txt

To upload an ASCII log:

- 1) **Select Site** - Select the site to which you will be uploading the file by clicking the site at the left on the Site List. The selected site id should show at the top of the page and the col 2 Section Forms menu should appear in col 2.
- 2) **Upload Button** - Click the **Upload** button.
- 3) **File Selector Button** - click on the file selector button and select the appropriate ASCII log file for the selected site.
- 4) **Upload Sitelog File** - click on the Upload Sitelog File button to begin the upload process. This uploads the file and imports it into the SLM tables for the selected file.

After the file is uploaded the Site log import information will be displayed on the page. There are several processes that take place during the import:

- **Data Encoding** - Data is checked for “Data Encoding” and converted to UTF-8 if needed. (Although it is an ASCII file we store it in a UTF-8 format, utilizing only the ASCII code section from char code 255 and below for international character compatibility).
- **Control Character Removal** - Any “non-printable” or “control” characters are attempted to be removed. (The ASCII log file should be pure ASCII characters, however, in today’s IT environment there are many different systems that may make that a problem without the user even knowing it).
- **Data scrubbing and validating** – the data is scrubbed for other problems and checked against the IGS ASCII log specification and for file format problems and for missing data or sections.
- **Default/Template Data Removal** – the default and template data is removed so that they don’t get imported into the SLM (ie: date defaults “(yyyy-mm-dd)” and section “templates”, which contain not actual data but act as a template for the respective section).
- **Removal of Units** – Unit abbreviations that follow data, such as “m” for meters, are removed to prevent them from being imported into the SLM tables. These are added back to the data when a site log is exported back to an IGS ASCII log.

In addition to other import information that is displayed after a log is uploaded:

Data Encoding - Log file’s original Data Encoding and the file encoding when the upload took place.

Defaults Removed – displays the number of defaults that were removed as a positive indication that the removal process was successful. If this is zero there was a problem with the import process due to a problem with the log file’s data or format.

If you encounter a problem uploading a site log first review the file for mistakes. If you cannot find the problem email the log to the IGS Admin and we will help with it. Also, Site logs may be uploaded repeatedly, if needed, without any repercussions. However, grossly mis-formatted site logs or corrupted or damaged data may temporarily render the site data inaccessible requiring IGS Admin intervention to clean out the problem data. In such rare cases the current data in the IGS main tables will remain untouched and fully usable.

Once the site log is successfully uploaded the changes will appear in the SLM forms for that site and will be indicated by yellow “Modified Data” badges.

View/Diff Review

Select “View/Diff” to review the changes and to compare the changes to the current IGS database for that site.

Edit and Correct

The data can be further edited and corrected if needed using the site Section Forms.

Submit for IGS Validation and Approval

Once the changes have been reviewed and you are comfortable with them “submit” the site for IGS Validation and Approval where upon the changes will be posted to IGS’s database and then will be available via IGS’s web site .

2) Section Edit Forms

Whether changes were previously uploaded via the Upload feature or the changes will be made directly in the system the edit process is the same.

Direct Edit

To direct edit the site's data:

- **Select Site** – click on site at left of main page. Site id for the currently selected site should show at the top of the page.
- **Select Section form** – Once a site is selected the col 2 Section Forms menu will appear.
- **Edit Data and Save** – Select the appropriate section(s) and edit the data as need, then save.
- **View/Diff** – Once all changes have been made View/Diff the data to be sure it is complete and accurate.
- **Download (optional)** – Download a copy of the site log with the current changes if needed.
- **Submit** – Click “Submit” to submit the site log with its changes to IGS for Validation and Approval. Whereupon you will receive an email alert when that is completed by IGS.

Sections

Not all sections are required depending on the configuration of the site and its installed equipment and capabilities.

Details on each section can be found at:

ftp://igscb.jpl.nasa.gov/pub/station/general/sitelog_instr.txt

The following sections are included:

0. Site Form
1. Site Identification
 - a. Overview
 - b. Monument
 - c. Geologic Characteristics

2. Site Location
3. GNSS Receiver
4. GNSS Antennas
5. Surveyed Local Ties
6. Frequency Standard
7. Collocation Information
8. Meteorological Instrumentation
 - a. 8.1 Humidity Sensor
 - b. 8.2 Pressure Sensor
 - c. 8.3 Temperature Sensor
 - d. 8.4 Water Vapor Radiometer
 - e. 8.5 Other Instrumentation
9. Local Ongoing Conditions
 - a. 9.1 Radio Interference
 - b. 9.2 Multi-path
 - c. 9.3 Signal
10. Local Episodic Effects
11. On-Site, Point of Contact
12. Responsible Agency Information
13. More Information
 - a. 13.0 Details
 - b. 13.1 Antenna Graphics

Other Menu Items:

- Site Images
- Options
 - Submit to IGS for Validation
 - Domes Request Form
 - Upload IGS ASCII Sitelog File
 - View Entire Sitelog with Diffs.
 - Download IGS ASCII Sitelog File
 - Download XLM Sitelog
 - Remove Defaults form Selected Site
 - Cancel IGS Site Validation Submission

“Direct Edit” Site Log Workflow – Simple 4 Step Process

1) Select Site

Select the site to be edited by clicking the site listed on the left of the SLM main page. Clicking this should display the column 2 “Sections Menu” that lists every section that is defined in the IGS ASCII Site Log documentation.

It is always required to select a site before any of the site related operations can be performed.

Once the site is selected it should display the four character site id of the current site at the top of the page. Any of the options that are selected will be performed on this currently selected site.

2) Edit Site as needed

Select the section to be edited and make changes as needed then click “save”. If you forget to save your changes and click a different site or a different section it will auto save your changes.

Required fields are marked with a red asterisk “*” and optional but “Preferred” fields are marked with an amber asterisk “*”.

Not every section is “required” to be filled in. Some of the sections are optional depending on the configuration of the site and which equipment and features are installed.

Each field is validated each time it is modified and will display an error message if it isn't correct.

Field format/content help: Clicking the field's “Label Text” expands the field container and displays field help below the field. Clicking the field label text again will toggle it back off.

Yellow field background and Yellow Badges: As the data is modified it is compared to the existing IGS database and will change the field background to yellow to indicate that that field has been modified and now differs from the existing database that IGS has on file for that site. A “Modified” badge also appears next to the Site ID in the site list as well. (once the site changes are submitted to IGS for approval and are approved

and posted to IGS's database the yellow field background and the yellow badges will be cleared).

“Restore” Button: To restore the field data back to the original content that matches the IGS database click the “Restore” button next to the field. This will revert that field's data back to the original value before the editing began. This “Restore” button will only appear on fields that are indeed modified. Once a change has been “reverted” the “Restore” button will be hidden.

“View Edit History” link at the bottom of each section form shows the history of changes made to that site in that section.

Try to eliminate the Error Badges as much as possible. Please contact IGS for help with this if needed.

2b) Equipment Sections/Repeating Sections

Sections that are related to installed equipment or repeating events are handled in a special way. In order to maintain a comprehensive history/archive of all equipment or event changes a new record should be created for each change.

This applies to the following sections:

- 3) GNSS Receiver
- 4) GNSS Antennas
- 5) Surveyed Local Ties
- 6) Frequency Standard
- 7) Collocation Information
- 8) Meteorological Instrumentation (8.1 -8.5)
- 9) Local Ongoing Conditions (9.1 – 9.3)
- 10) Local Episodic Events

IMPORTANT: When making a change to any of the above sections you should click the “+ Add New Section” link at the top right corner of the section. This will give you a new empty form for the new section data and will automatically archive the previous record.

Even if the section only needs a minor change such as a serial number or a firmware version click the “+ Add New Section” link to get a new empty section record. The rest of the data may still be the same as before but this will archive the old information so that users may refer to it.

“Restore” Button: Data that has NOT changed may be auto-filled from the existing data by clicking the “Restore” button next to each field that is NOT changing. i.e.:

- 1) Fill in the “Effective End Date” if needed on the selected section. This is needed before you can add a new section record.
- 2) Click the “+ Add New Section” link to get a new empty section form
- 3) Click the “Restore” buttons as needed to quickly and easily carry forward any existing data that remains unchanged.
- 4) Change the affected field(s) as needed.
- 5) Be sure the Effective Start Date/Time is filled in on the new section form to indicate the Date/Time that the changes occurred or are effective.
- 6) Save the record. This will increment the section number at the top of the section. The previous section record will automatically be archived and the new record added as the most recent version of this section.

The new section will appear in the “View/Diff” of the site log and the previous section will show as an archived section.

Already Empty Forms: If form is already empty indicating it has never had any data then the “+ Add New Section” link won’t appear. In this case you should just enter the data and save the record as it is the first record for this section. After that the “+ Add New Section” will link appear for the next time changes are added to this section.

Data Corrections: If the change is only a correction and NOT an actual change to the site it is NOT necessary to click “+ Add New Section”. Just change and save as needed in this case.

3) Review Changes

To review any changes to the selected site and to see a Diff of the changes compared to the current IGS database click the “View/Diff” button at the top of the page. This will display the two sets of data side by side and any changes will be indicated in color highlights.

Make any additional changes as needed and review again.

4) Submit Changes to IGS for Approval

Once you are satisfied with your changes click the “Submit” button at the top of the page. This will submit it to IGS for review and approval and the changes will be posted to IGS’s database and will flow through to the IGS web site.

Email Alerts: The IGS Team is alerted via email that a site has been submitted for approval and every attempt is made to approve it as quickly as possible.

Once a site's changes have been approved you will receive an email alert as well. This does NOT mean that the changes have already been propagated throughout the IGS network. This still involves a manual step so there may be a short delay for this to take place.

This process currently involves a manual step as we refine the SLM so there will be a delay in your changes being propagated throughout the IGS network. This delay will depend on the time of day the changes are submitted (which time zone you are in and whether it is a week day or a weekend or a U.S. National Holiday). We review changes each morning and try to get them approved and posted in a timely manner. In the near future this process will be completely automated.

5) Download IGS ASCII Site Log (optional)

Once you are finished with your changes you may download a fresh IGS ASCII Site Log file for your use by clicking on the "Download" button at the top of the page. You don't need to wait for the changes to be approved to do this. The current changes will be included in the download.