



# SiteLog Manager 2.0

International GNSS Service (IGS)

IGS Workshop 2022 – Splinter Session

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29 June 2022

# What is the SiteLog Manager?

- The SiteLog Manager (SLM) is a software ecosystem that was developed to assist the station operators update their station specific ASCII sitelogs at their convenience.
- SLM systematically parsed an uploaded ASCII sitelogs and detected any errors.
  - Prompted the users to correct without Network Coordinator's intervention
- Allowed users to save partial information and submit when data was confirmed.
- Upon succession, the metadata was saved in SQL database.
- Station operators no longer have to be main keepers of IGS sitelogs
- SQL Database eases the use of generating products, e.g., IGS.SNX, IGSNetwork.json, rcvr\_ant.json, downloadable high resolution images of the network, etc.

## Example of ASCII SiteLog – ABPO00MDG

```

3.9 Receiver Type           : SEPT POLARX5           4.2 Antenna Type           : ASH701945G_M   SCIT
   Satellite System        : GPS+GLO+GAL+BDS+QZSS       Serial Number          : CR6200342009
   Serial Number           : 3013358                Antenna Reference Point : BPA
   Firmware Version        : 5.4.0                  Marker->ARP Up Ecc. (m) : 0.0083
   Elevation Cutoff Setting : 0 deg                  Marker->ARP North Ecc(m) : 0.0000
   Date Installed          : 2021-01-29T21:25Z       Marker->ARP East Ecc(m) : 0.0000
   Date Removed           : CCYY-MM-DDThh:mmZ       Alignment from True N  : 0 deg
   Temperature Stabiliz.  : none                    Antenna Radome Type    : SCIT
   Additional Information  :                        Radome Serial Number   :
   Antenna Cable Type      : Hutton LMR400          Antenna Cable Type     : Hutton LMR400
   Antenna Cable Length    : 50 m                   Antenna Cable Length   : 50 m
   Date Installed          : 2018-05-15T07:30Z       Date Installed         : 2018-05-15T07:30Z
   Date Removed           : CCYY-MM-DDThh:mmZ       Date Removed           : CCYY-MM-DDThh:mmZ
   Additional Information  : Antenna aligned to
true North

```

<https://files.igs.org/pub/station/log>

# SiteLog Manager Stats

148 Registered Agencies

750+ Stations

Active, Former, Proposed

**Operating Systems (Top 10)** - [Full list/Versions](#) - [Unknown](#)

Operating Systems	Pages	Percent	Hits	Percent
<b>Android</b>	1,496	37.7 %	13,031	39.9 %
<b>Windows</b>	1,399	35.3 %	12,624	38.6 %
<b>Macintosh</b>	846	21.3 %	1,639	5 %
<b>iOS</b>	94	2.3 %	4,702	14.4 %
<b>Linux</b>	70	1.7 %	581	1.7 %
<b>Unknown</b>	56	1.4 %	56	0.1 %
<b>Unknown Unix system</b>	1	0 %	1	0 %

**Visitors domains/countries (Top 10)** - [Full list](#)

Domains/Countries	Pages	Hits	Bandwidth
<b>Unknown</b> ip	4,251	16,482	253.69 MB
<b>Non-Profit Organizations</b> org	1,560	1,591	32.19 MB
<b>USA Military</b> mil	924	1,083	3.10 MB
<b>Commercial</b> com	735	2,582	31.50 MB
<b>New Zealand</b> nz	345	410	1.60 MB
<b>Network</b> net	343	2,939	47.63 MB
<b>India</b> in	51	787	11.80 MB
<b>Japan</b> jp	29	123	1.54 MB
<b>Germany</b> de	15	118	1.72 MB
<b>British Indian Ocean Territory</b> io	8	8	14.84 KB
<b>Others</b>	61	1013	16.62 MB

**Browsers (Top 10)** - [Full list/Versions](#) - [Unknown](#)

Browsers	Grabber	Pages	Percent	Hits	Percent
<b>Google Chrome</b>	No	3,555	89.7 %	26,014	79.7 %
<b>Firefox</b>	No	176	4.4 %	1,409	4.3 %
<b>Safari</b>	No	154	3.8 %	4,978	15.2 %
<b>Netscape</b>	No	52	1.3 %	52	0.1 %
<b>MS Internet Explorer</b>	No	14	0.3 %	118	0.3 %
<b>Edge</b>	No	5	0.1 %	51	0.1 %
<b>Unknown</b>	?	4	0.1 %	4	0 %
<b>iPhone (PDA/Phone browser)</b>	No	1	0 %	7	0 %
<b>Mozilla</b>	No	1	0 %	1	0 %

## Welcome

Please sign in with your IGS Member login information. For registration inquiries, please [contact us](#).

Sign in to proceed

**(This site is ONLY for Authorized Users to Edit and Maintain IGS Site Log Data. If you need to view Site Log Data go to IGS.ORG)**

IGS ID: (email)

Password:

[Forgot Password?](#)

Remember IGS ID

[Privacy](#)

<https://slm.igs.org>

Users authorized by  
Network Coordinator

Station List

Section Headers

Metadata

Error  
Preferred  
-Empty-  
Modified  
yet to be submitted

?
Station: ABPO00MDG

+ New
⬆ Upload
👁 View / Diff
⬇ Download
✓ Submit
> Moderator
✉ Test Email
Robert ⚙

760 Stations <span style="float: right;">+ ↻ A-Z</span>	0. Site Form
AAA200USA <span style="float: right;">26 1</span>	1. Site Identification >>>
AAA300USA <span style="float: right;">4 37 1</span>	2. Site Location <span style="float: right;">1</span>
AAA400USA <span style="float: right;">1 35</span>	3. GNSS Receiver
AAAA00USA <span style="float: right;">1 24</span>	4. GNSS Antennas <span style="float: right;">1</span>
ABMF00GLP <span style="float: right;">13 41</span>	5. Surveyed Local Ties
ABPO00MDG <span style="float: right;">14 6</span>	6. Frequency Standard <span style="float: right;">1</span>
AC2300USA <span style="float: right;">37</span>	7. Collocation Information
AC2400USA <span style="float: right;">37</span>	8. Meteorological Instr. >>>
ACRG00GHA <span style="float: right;">29</span>	9. Local Ongoing Cond. >>>
ACSO00USA <span style="float: right;">38</span>	10. Local Episodic Effects
ADE100AUS <span style="float: right;">9 54</span>	11. On-Site, Point of Contact <span style="float: right;">6</span>
ADE200AUS <span style="float: right;">9 54</span>	12. Responsible Agency Info <span style="float: right;">3 6</span>
ADIS00ETH <span style="float: right;">27</span>	13. More Information >>> <span style="float: right;">2</span>
AGGO00ARG <span style="float: right;">17</span>	Site Images >>>
AIRA00JPN <span style="float: right;">32</span>	Options >>>
AJAC00FRA <span style="float: right;">1 27</span>	<div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px; text-align: center;">Submit Site to IGS for Validation</div> <ul style="list-style-type: none"> <li>Propose New Site - Online Form</li> <li>Domes Request Form</li> <li>Upload IGS ASCII Sitelog File</li> <li>View Entire Sitelog with Diffs</li> <li>Download IGS ASCII Sitelog File</li> <li>Download XML Site Log (beta)</li> <li>Remove Defaults from Selected Site</li> <li>Cancel IGS Site Validation Submission</li> </ul>
ALBH00CAN <span style="float: right;">23</span>	
ALGA00CAN <span style="float: right;">5 45</span>	
ALGO00CAN <span style="float: right;">28</span>	
ALIC00AUS <span style="float: right;">1 27</span>	
ALRT00CAN <span style="float: right;">21</span>	

ABPO00MDG
3.9 - GNSS Information - Receiver/s
+ Add New Section

Training Video: [How to Edit / Add a Section Record](#)

Receiver Type\* SEPT POLARX5

Satellite System\* 5 selected

Serial Number\* 3013358

Firmware Version\* 5.4.0

Elevation Cutoff Setting\* 0 deg

Date Installed\* 2021-01-29T21:25Z Clear

Date Removed (CCYY-MM-DDThh:mmZ) Clear

Temperature Stabiliz.\* none

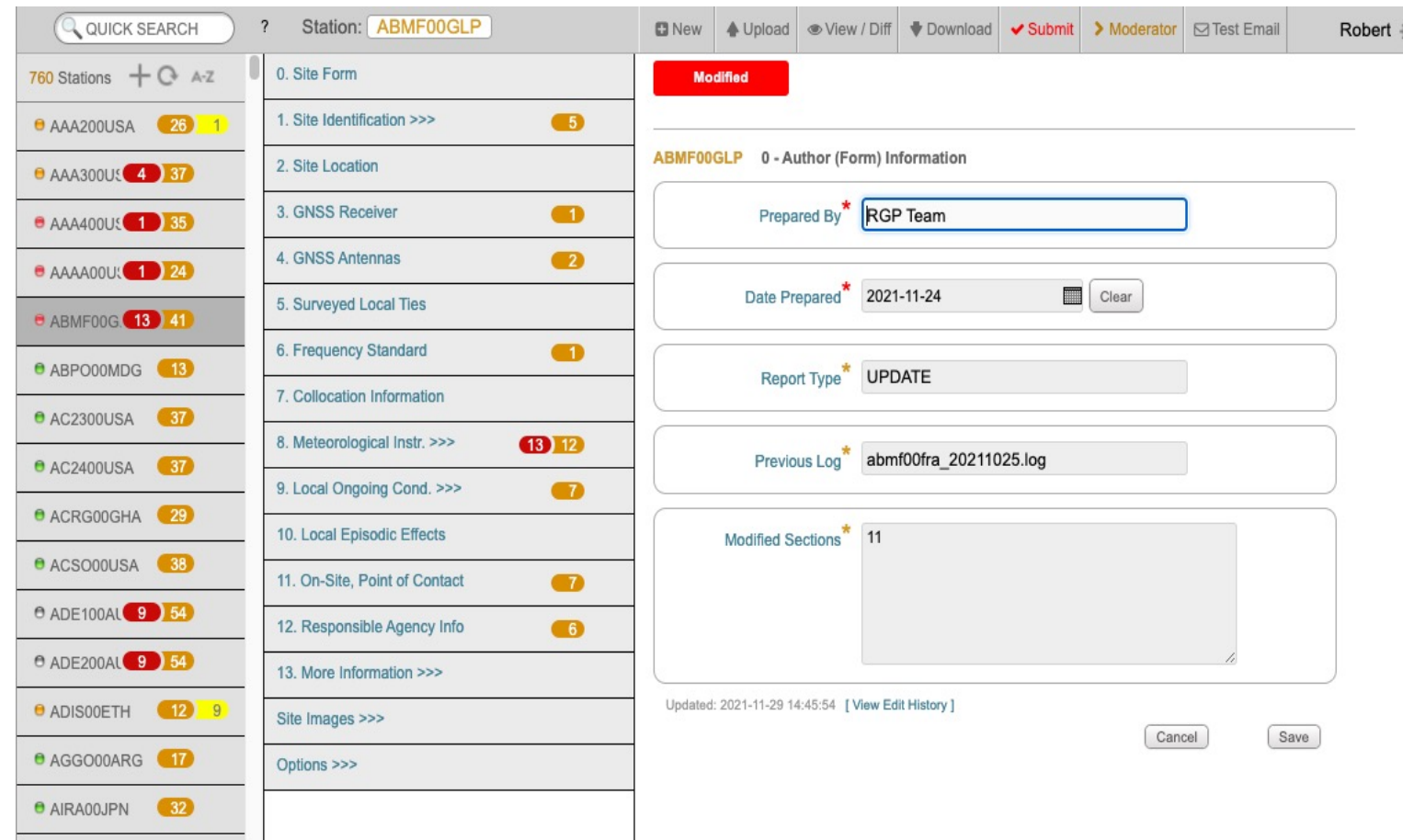
Additional Information (multiple lines)

Updated: 2021-02-01 15:46:09
[\[ View Edit History \]](#)
[\[ delete \]](#)

Cancel
Save

# SiteLog Manager 1.0 - Issues

- Custom build for PHP 5.0
- PHP5 End-Of-Life – 1<sup>st</sup> January, 2019
- PHP5 functions/calls no longer supported in PHP versions 7 or 8.
- Original developer no longer available
- CB patched some vulnerable functions, however, extremely inefficient to patch all deficiencies.
- No support for interoperability.
- No support GeodesyML (or JSON)
- No command line API

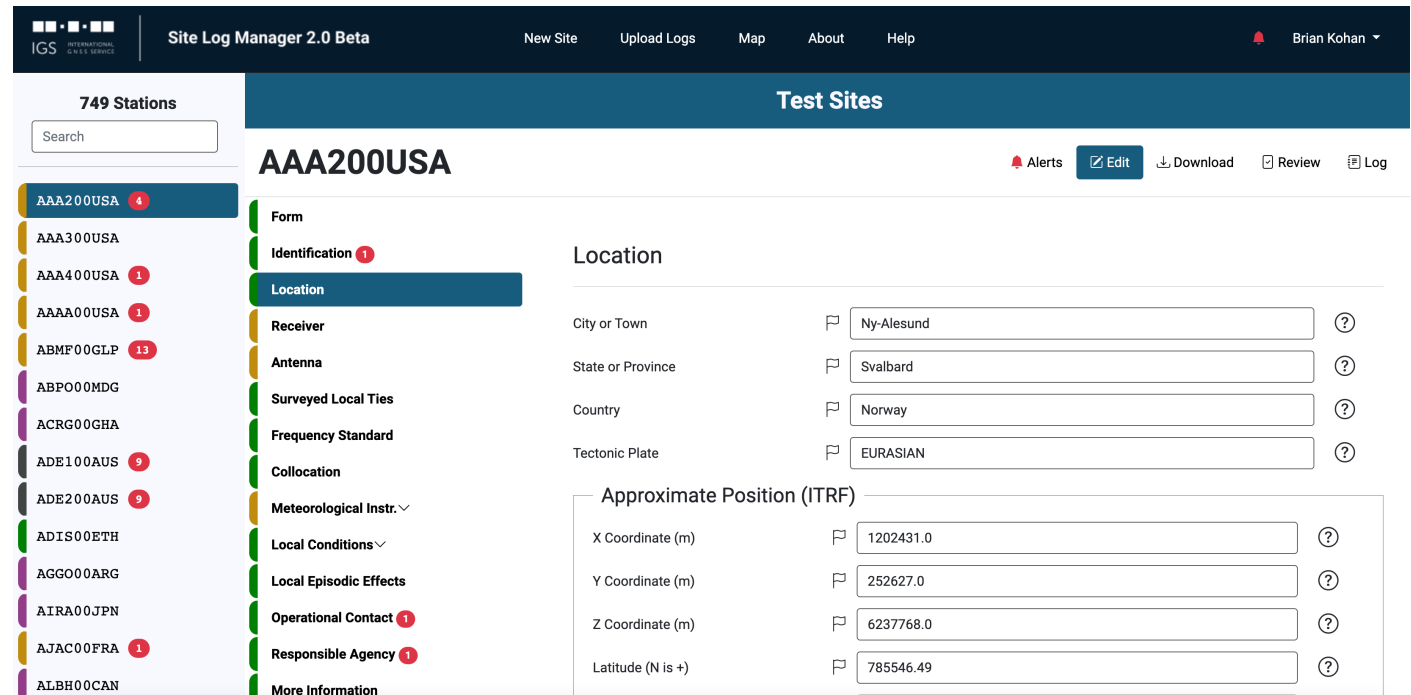


The screenshot displays the SiteLog Manager 1.0 web interface. On the left, a list of 760 stations is shown, with the station ABMF00G highlighted. The main content area shows the form for station ABMF00GLP, which is in a 'Modified' state. The form includes fields for 'Prepared By' (RGP Team), 'Date Prepared' (2021-11-24), 'Report Type' (UPDATE), and 'Previous Log' (abmf00fra\_20211025.log). The 'Modified Sections' section shows 11 sections that have been modified. The interface also includes a navigation bar with options like 'New', 'Upload', 'View / Diff', 'Download', 'Submit', 'Moderator', 'Test Email', and a user profile for 'Robert'.

Station	Issues	Warnings
AAA200USA	26	1
AAA300US	4	37
AAA400US	1	35
AAAA00US	1	24
ABMF00G	13	41
ABPO00MDG	13	
AC2300USA	37	
AC2400USA	37	
ACRG00GHA	29	
ACSO00USA	38	
ADE100AT	9	54
ADE200AT	9	54
ADIS00ETH	12	9
AGGO00ARG	17	
AIRA00JPN	32	

# Introducing SLM 2.0

- Primary Goal
  - Maximize the **reliability, accuracy and searchability** of site log meta information.
- How to get there?
  - Easy Moderation & Review
  - Automation
    - Validation
    - Usage (Structured APIs)
  - Structured Data:
    - Self validating interchange formats (GeodesyML)
    - Easy to use renderings (JSON)
  - Broad Adoption
    - Open Source
    - Extendable



The screenshot displays the 'Site Log Manager 2.0 Beta' web interface. The top navigation bar includes 'New Site', 'Upload Logs', 'Map', 'About', 'Help', and a user profile for 'Brian Kohan'. The main content area is titled 'Test Sites' and shows a list of 749 stations on the left. The selected station, 'AAA200USA', is displayed in detail on the right. The station details are organized into sections: Form, Identification (1), Location (highlighted), Receiver, Antenna, Surveyed Local Ties, Frequency Standard, Collocation, Meteorological Instr., Local Conditions, Local Episodic Effects, Operational Contact (1), Responsible Agency (1), and More Information. The 'Location' section includes fields for City or Town (Ny-Alesund), State or Province (Svalbard), Country (Norway), and Tectonic Plate (EURASIAN). The 'Approximate Position (ITRF)' section includes fields for X, Y, and Z Coordinates (in meters) and Latitude (N is +).



## Under the Hood

- Built on state of the art web tooling
  - No-fork modification - easy to override/extend
  - Can pip install
  - <https://github.com/International-GNSS-Service/>
- Site log meta information is stored in a relational database:
  - Rendering to any format: GeodesyML, JSON, legacy ASCII log format
  - Arbitrarily complex automated validation routines
  - Data model is defined in python code allowing maintainers to avoid any SQL - changes to the data model are easy
- Participates in python dependency management ecosystem using Poetry build tools



# Structured Edit & Public APIs

Api Root / Station Map List	Api Root / Station List List	Api Root
<h2>Station Map List</h2> <p>A view for returning a site list as a geojson set of poin</p> <p>GET /api/public/map/</p>	<h2>Station List List</h2> <p>GET /api/public/stations/</p>	<h2>Api Root</h2> <p>The default basic root view for DefaultRouter</p> <p>GET /api/edit/</p>
<pre> HTTP 200 OK Allow: GET, HEAD, OPTIONS Content-Type: application/json Vary: Accept  {   "type": "FeatureCollection",   "features": [     {       "id": 1,       "type": "Feature",       "geometry": {         "type": "Point",         "coordinates": [           11.515433999999999,           78.554649         ]       },       "properties": {         "name": "AAA200USA"       }     },     {       "id": 5,       "type": "Feature",       "geometry": {         "type": "Point",         "coordinates": [           -61.313911,           16.154429999999998         ]       },       "properties": {         "name": "ABMF00GLP"       }     }   ] } </pre>	<pre> HTTP 200 OK Allow: GET, HEAD, OPTIONS Content-Type: application/json Vary: Accept  {   "data": [     {       "name": "AAA200USA",       "agencies": [         {           "name": "Test Sites",           "country": "NULL"         }       ],       "registered": "2022-06-20 08:08:22",       "last_publish": "2022-06-23T16:37",       "latitude": 785546.49,       "longitude": 115154.34     },     {       "name": "AAA300USA",       "agencies": [         {           "name": "Test Sites",           "country": "NULL"         }       ],       "registered": "2022-06-20 08:08:22",       "last_publish": "2021-07-19T17:30",       "latitude": null,       "longitude": null     },     {       "name": "AAA400USA",       "agencies": [ </pre>	<pre> HTTP 200 OK Allow: GET, HEAD, OPTIONS Content-Type: application/json Vary: Accept  {   "stations": "http://localhost:8080/api/edit/stations/",   "profile": "http://localhost:8080/api/edit/profile/",   "siteform": "http://localhost:8080/api/edit/siteform/",   "siteidentification": "http://localhost:8080/api/edit/siteidentification/",   "sitelocation": "http://localhost:8080/api/edit/sitelocation/",   "sitereceiver": "http://localhost:8080/api/edit/sitereceiver/",   "siteantenna": "http://localhost:8080/api/edit/siteantenna/",   "sitesurveyedlocalties": "http://localhost:8080/api/edit/sitesurveyedlocalties/",   "sitefrequencystandard": "http://localhost:8080/api/edit/sitefrequencystandard/",   "sitecollocation": "http://localhost:8080/api/edit/sitecollocation/",   "sitehumiditysensor": "http://localhost:8080/api/edit/sitehumiditysensor/",   "sitepressuresensor": "http://localhost:8080/api/edit/sitepressuresensor/",   "sitetemperaturesensor": "http://localhost:8080/api/edit/sitetemperaturesensor/",   "sitewatervaporradiometer": "http://localhost:8080/api/edit/sitewatervaporradiometer/",   "siteotherinstrumentation": "http://localhost:8080/api/edit/siteotherinstrumentation/",   "siteradiointerferences": "http://localhost:8080/api/edit/siteradiointerferences/",   "sitemultipathsources": "http://localhost:8080/api/edit/sitemultipathsources/",   "sitesignalobstructions": "http://localhost:8080/api/edit/sitesignalobstructions/",   "sitelocalepisodiceffects": "http://localhost:8080/api/edit/sitelocalepisodiceffects/",   "siteoperationalcontact": "http://localhost:8080/api/edit/siteoperationalcontact/",   "siteresponsibleagency": "http://localhost:8080/api/edit/siteresponsibleagency/",   "sitemoreinformation": "http://localhost:8080/api/edit/sitemoreinformation/",   "logentries": "http://localhost:8080/api/edit/logentries/",   "alerts": "http://localhost:8080/api/edit/alerts/",   "map": "http://localhost:8080/api/edit/map/" } </pre>

# SLM 2.0 Phases

- Phase 1 (nearing completion):
  - Edit/Moderation/Publish Functionality
  - Automated validation infrastructure
  - Basic API functionality
  - Sitelog upload/download
  - Demo will soon be live at <https://slmdemo.igs.org>
- Phase 2:
  - More robust automated validation
  - Full support for GeodesyML and JSON formats
  - Fully searchable APIs