

OPUS Projects Manager Training

Step 2 : Uploading Data

ngs.opus.projects@noaa.gov

I've advanced to the second slide and I'm reading it.

- Can you read this slide and hear me as I read it?
- Can you access the web?
- Is everyone comfortable?
- Does anyone have any questions before we begin?

Outline

- Introduction
- Step 1 : Creating a Project
- **Step 2 : Uploading Data**
- Step 3 : Session Processing
- Step 4 : Network Adjustment

A few words before beginning.

OPUS Projects is a web-based utility implying that access to the internet and use of a web browser are required. JavaScript must be enabled in your browser and pop-up blocking may have to be turned off. If you have difficulty configuring your browser, contact your instructor or the OPUS Projects team.

The OPUS Projects look and feel.

The overall layout and appearance of OPUS Projects will be very similar to that shown here regardless of the browser you use. For this reason, the browser window's frame is not shown in the figures.

What's in this training?

This presentation shows how to upload data to a project. The format is as a series of steps like a cookbook. Like most cookbooks, the justification for and discussion of variations in those steps will be minimal. The intent is to get you started quickly, then leave you free to explore OPUS Projects on your own.

We assume familiarity with OPUS so some steps will be quite terse. If you are unfamiliar with OPUS, mention this your instructor during a break.



OPUS: Online Positioning User Service

National Geodetic Survey

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OPUS Menu

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Upload your data file.

Tie your GPS observation to the National Spatial Reference System.

What is OPUS? [FAQs](#)

No file chosen

* **Data file** of dual-frequency GPS observations. [sample](#)

no antenna selected ▼

Antenna type - choosing wrong may degrade your accuracy.

meters above your mark.

Antenna height of your antenna's reference point.

* **Email address** - your solution will be sent here.

to **customize** your solution.

for data > 15 min. < 2 hrs. for data > 2 hrs. < 48 hrs.

FILE INFORMATION SUMMARY	
FILE NAME:	test_data.rinex
FILE SIZE:	15.10 MB
DATE:	2012-08-22 10:42:26
TIME:	10:42:26
USER:	test
GPS TYPE:	DUAL
GPS MODEL:	TRIMBLE
GPS SERIAL:	12345678
GPS ANTENNA:	TRIMBLE
GPS ANTENNA HEIGHT:	0.00

SOLUTION INFORMATION SUMMARY	
SOLUTION TYPE:	Static
SOLUTION MODEL:	TRIMBLE
SOLUTION SERIAL:	12345678
SOLUTION ANTENNA:	TRIMBLE
SOLUTION ANTENNA HEIGHT:	0.00
SOLUTION DATE:	2012-08-22 10:42:26
SOLUTION TIME:	10:42:26
SOLUTION USER:	test
SOLUTION GPS TYPE:	DUAL
SOLUTION GPS MODEL:	TRIMBLE
SOLUTION GPS SERIAL:	12345678
SOLUTION GPS ANTENNA:	TRIMBLE
SOLUTION GPS ANTENNA HEIGHT:	0.00

The accuracy of the above result is dependent upon the accuracy of the GPS receiver and the accuracy of the GPS antenna height. The accuracy of the GPS receiver is dependent upon the quality of the GPS receiver and the quality of the GPS antenna.

[Sample Solutions](#)

We'll start at the OPUS upload web page:
<http://geodesy.noaa.gov/OPUS/>



OPUS: Online Positioning User Service

National Geodetic Survey

- NGS Home
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- Surveys
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Upload your data file.

Tie your GPS observation to the National Spatial Reference System.

What is OPUS? [FAQs](#)

No file chosen

* **Data file** of dual-frequency GPS observations. [sample](#)

Antenna type - choosing wrong may degrade your accuracy.

meters above your mark.

Antenna height of your antenna's reference point.

* **Email address** - your solution will be sent here.

to **customize** your solution.

for data > 15 min < 2 hrs for data > 2 hrs < 48 hrs

FILE: C:\PROGRAMS\OPUS\...
 NAME: ...
 DATE: ...
 TIME: ...
 ...

[Sample Solutions](#)

At this time, only OPUS Static is allowed to upload to a project. The conventional OPUS Static rules apply.



OPUS Menu

- Upload
- About OPUS
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- Contact OPUS

Upload your data file.

Tie your GPS observation to the National Spatial Reference System.

What is OPUS? FAQs

2126274w.06o

* **Data file** of dual-frequency GPS observations. **sample**

Antenna type - choosing wrong may degrade your accuracy.

meters above your mark.

Antenna height of your antenna's reference point.

* **Email address** - your solution will be sent here.

to **customize** your solution.

for data > 15 min. < 2 hrs. for data > 2 hrs. < 48 hrs.

USER INFORMATION		USER NAME AND NUMBER	
NAME:	jpl.com@noaa.gov	NAME:	XXXXXXXXXXXX
EMAIL:	jpl.com@noaa.gov	EMAIL:	XXXXXXXXXXXX
ANTENNA INFO		STATION INFORMATION	
ANTENNA:	ZEPHYR 4-POINT FEED ANTENNA - STEALTH GR	STATION:	TRM41249.00
ANTENNA HEIGHT:	2.00 METERS	STATION NAME:	TRM41249.00
ANTENNA TYPE:	NONE	STATION NUMBER:	XXXXXXXXXXXX
GPS TRACK: ALL AVAILABLE OBSERVATION DATA		STATION OPERATIONS STATUS	
L1:	1000000000.000000	STATUS:	XXXXXXXXXXXX
L2:	1000000000.000000	STATUS:	XXXXXXXXXXXX
L3:	1000000000.000000	STATUS:	XXXXXXXXXXXX
L4:	1000000000.000000	STATUS:	XXXXXXXXXXXX
L5:	1000000000.000000	STATUS:	XXXXXXXXXXXX
L6:	1000000000.000000	STATUS:	XXXXXXXXXXXX
L7:	1000000000.000000	STATUS:	XXXXXXXXXXXX
L8:	1000000000.000000	STATUS:	XXXXXXXXXXXX
L9:	1000000000.000000	STATUS:	XXXXXXXXXXXX
L10:	1000000000.000000	STATUS:	XXXXXXXXXXXX
<small>NO NATIONAL GEOGRAPHIC SOCIETY. INFORMATION FROM THIS SERVICE IS PROVIDED AS IS WITHOUT WARRANTY OF ANY KIND. THE USER ASSUMES ALL LIABILITY FOR THE USE OF THIS SERVICE. THE USER ASSUMES ALL LIABILITY FOR THE USE OF THIS SERVICE.</small>			

Sample Solutions

Complete the OPUS upload form normally, but before clicking the "Upload to Static" button, click the "Options" button.

OPUS Menu

- Upload
- About OPUS
- Projects
- Published Solutions
- Contact OPUS

TRM41249.00 NONE Zephyr 4-point feed antenna - Stealth Gr ▾

Antenna type - choosing wrong may degrade your accuracy.

2.00 meters above your mark.

Antenna height of your antenna's reference point.

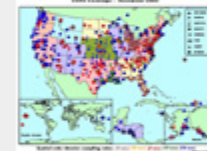
your.name@your.address

* **Email address** - your solution will be sent here.

Options to **customize** your solution.

Formats	Add solution details	standard solution ▾	
Base stations	Type in 4-char site IDs, or select from map, any CORS you wish to explicitly include or exclude from your solution Sample	Use:	Exclude:
	NOTE: the automated selection of base stations has recently improved; this option should now be used only sparingly	<input type="text"/>	<input type="text"/>
State plane	Customize your native SPCS zone	let OPUS choose ▾	
Contribute to a project	Enter the project identifier provided by your project manager	<input type="text"/>	
My profile	Customize OPUS defaults for future solutions	<input type="text"/> ▾	

Look up site IDs



browse map

This causes the Options to “accordion” into view.

for data > 15 min. < 2 hrs. for data > 2 hrs. < 48 hrs.

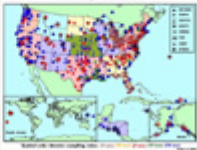
OPUS Menu

Sample Solutions

Enter your project ID into the “Contribute to a project” field. Remember that you can share your project ID so others can upload data to your project.

* **Email address** - your solution will be sent here.

to **customize** your solution.

<p>Formats Add solution details</p> <p>Base stations Type in 4-char site IDs, or select from map, any CORS you wish to explicitly include or exclude from your solution Sample</p> <p>NOTE: the automated selection of base stations has recently improved; this option should now be used only sparingly</p> <p>State plane Customize your native SPCS zone</p> <p>Contribute to a project Enter the project identifier provided by your project manager</p> <p>My profile Customize OPUS defaults for future solutions</p> <p>Publish my solution Share your solutions</p>	<p>standard solution <input type="button" value="v"/></p> <p>Use: <input type="text"/></p> <p>Exclude: <input type="text"/></p> <p>Look up site IDs</p> <p></p> <p>browse map</p> <p>let OPUS choose <input type="button" value="v"/></p> <p>hrdb86fc <input type="text"/></p> <p><input type="button" value="v"/></p> <p>No, don't publish <input type="button" value="v"/></p>
---	---

for data > 15 min. < 2 hrs. for data > 2 hrs. < 48 hrs.

OPUS Menu

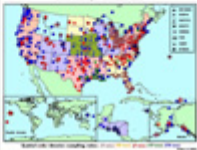
We'll leave the other options as they are. Now click the Upload button to have this data file uploaded to your project.

Contact OPUS

Antenna height or your antenna's reference point.

* **Email address** - your solution will be sent here.

to **customize** your solution.

<p>Formats Add solution details</p> <p>Base stations Type in 4-char site IDs, or select from map, any CORS you wish to explicitly include or exclude from your solution Sample</p> <p>NOTE: the automated selection of base stations has recently improved; this option should now be used only sparingly</p> <p>State plane Customize your native SPCS zone</p> <p>Contribute to a project Enter the project identifier provided by your project manager</p> <p>My profile Customize OPUS defaults for future solutions</p> <p>Publish my solution Share your solutions</p>	<p>standard solution <input type="button" value="v"/></p> <p>Use: <input type="text"/></p> <p>Exclude: <input type="text"/></p> <p>Look up site IDs</p> <p></p> <p>browse map</p> <p>let OPUS choose <input type="button" value="v"/></p> <p>hrdb86fc <input type="text"/></p> <p><input type="button" value="v"/></p> <p>No, don't publish <input type="button" value="v"/></p>
---	---

for data > 15 min. < 2 hrs. for data > 2 hrs. < 48 hr



After clicking the upload button, the upload confirmation window will appear, but with some differences from “normal”.



1. upload ✓

2. identify
your mark

3. describe ...

4. publish ...

choose one: mark has a PID mark is NEW to NGS skip descriptionmark has a PID? [Search the NGS database](#) to find out.

Upload successful!
You will receive an email when processing is complete.

uploaded:

data file 2126274w.06o
 converted to 2126274w.06o (RINEX format)
 antenna type TRM41249.00 NONE
 antenna height 2.00 meters
 email address your.name@your.address
 processor Static

Solving with:

solution format **Extended**
 base sta. used --
 base sta. excluded --
 state plane zone **AUTO**
 project ID **hrdb86fc**

You project ID will be listed (and should be visually confirmed) ...



- 1. upload ✓
- 2. identify
your mark
- 3. describe ...
- 4. publish ...

choose one: mark has a PID mark is NEW to NGS skip description

mark has a PID? Search the NGS database to find out.



Upload successful!
You will receive an email when processing is complete.

uploaded:		Solving with:	
data file	2126274w.06o	solution format	Extended
converted to	2126274w.06o (RINEX format)	base sta. used	--
antenna type	TRM41249.00 NONE	base sta. excluded	--
antenna height	2.00 meters	state plane zone	AUTO
email address	your.name@your.address		
processor	Static	project ID	hrdb86fc

... and you'll be able to provide a mark description.



1. upload ✓

2. identify
your mark

3. describe ...

4. publish ...

choose one: mark has a PID mark is NEW to NGS skip description

mark has a PID? [Search the NGS database](#) to find out.



Upload successful!
You will receive an email when processing is complete.

uploaded:

data file **2126274w.06o**
 converted to **2126274w.06o (RINEX format)**
 antenna type **TRM41249.00 NONE**
 antenna height **2.00 meters**
 email address **your.name@your.address**
 processor **Static**

Solving with:

solution format **Extended**
 base sta. used **--**
 base sta. excluded **--**
 state plane zone **AUTO**
 project ID **hrdb86fc**

The data files included in the training are all from published marks; however, we encourage you to use them to try all three of these options during the training: PID, NEW and skip.



1. upload ✓

2. identify
your mark

3. describe ...

4. publish ...

choose one:



Upload successful!
You will receive an email when processing is complete.

uploaded:

data file `2126274w.06o`
 converted to `2126274w.06o (RINEX format)`
 antenna type `TRM41249.00 NONE`
 antenna height `2.00 meters`
 email address `your.name@your.address`
 processor `Static`

Solving with:

solution format **Extended**
 base sta. used `--`
 base sta. excluded `--`
 state plane zone **AUTO**
 project ID `hrdb86fc`

Because it's a little more interesting, let's start by pretending this is a NEW mark. Click the "mark is NEW to NGS" button.



1. upload ✓

2. identify
your mark

3. describe ...

4. publish ...

choose one:

mark has a PID? [Search the NGS database](#) to find out.



Upload successful!
You will receive an email when processing is complete.

uploaded:

data file	2126274w.06o
converted to	2126274w.06o (RINEX format)
antenna type	TRM41249.00 NONE
antenna height	2.00 meters
email address	your.name@your.address
processor	Static

Solving with:

solution format	Extended
base sta. used	--
base sta. excluded	--
state plane zone	AUTO
project ID	hrdb86fc



Step 3 of 4: Describe new mark.

for data file: 2126274w.06o

1. upload ✓ 2. identify **3. describe your mark** 4. publish

* **Stamping**

* **Designation**

* **Type** Choose Type

* **Setting** Select Setting Code

Specific setting (optional):

* **Description** (describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)

In a moment, the “Describe new mark” form will appear. Through this form, the minimal information needed to identify a mark, and describe its location and condition can be uploaded.



Step 3 of 4: Describe new mark.

for data file: 2126274w.06o

1. upload ✓ 2. identify **3. describe your mark** 4. publish

* **Stamping**

* **Designation**

* **Type** Choose Type

* **Setting** Select Setting Code

Specific setting (optional):

* **Description** (describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)

Although simpler, the description is no less important. Consider reviewing “Help File: Mark Description” before submitting a new mark. <http://geodesy.noaa.gov/marks/descriptors.shtml>



Step 3 of 4: Describe new mark.

for data file: 2126274w.06o

1. upload ✓ 2. identify **3. describe your mark** 4. publish

* **Stamping**

* **Designation**

* **Type** Choose Type

* **Setting** Select Setting Code

Specific setting (optional):

* **Description** (describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)

The description for 2126274a.06o and all the marks used in the training materials can be found in the readme.txt file. The form is too large for a single slide, so we'll focus on the top half first.

**Step 3 of 4: Describe new mark.**

for data file: 2126274w.06o

1. upload ✓

2. identify

3. describe
your mark

4. publish

* **Stamping**

* **Designation**

* **Type** ▾ ▾

* **Setting** ▾

Specific setting (optional):

* **Description** (describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)

If the mark is a disk, the stamping should be copied exactly as it appears on the mark. In other cases, the designation may come from historical or other documentation. Usually stamping and designation will be the same. Example shown includes date in the designation which is “wrong”.



Step 3 of 4: Describe new mark.

for data file: 2126274w.06o

1. upload ✓ 2. identify **3. describe your mark** 4. publish

* **Stamping**

* **Designation**

* **Type**
 Rod Depth Sleeve Depth ft m

* **Setting**

Specific setting (optional):

* **Description** (describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)

2126 is a flange-encased rod, so we select the type appropriately. Remember to enter the rod and sleeve depths in these cases.

Horizontal photo: No file chosen

Stability:

Magnetic:

Application:



Step 3 of 4: Describe new mark.

for data file: 2126274w.06o

1. upload ✓ 2. identify **3. describe your mark** 4. publish

* **Stamping**

* **Designation**

* **Type**
 Rod Depth Sleeve Depth ft m

* **Setting**

* **Description** **Specific setting (optional):**
 (describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)

A variety of settings for the mark are provided via the pull-down menu. Use the "Specific setting" field for unique information.

Stability

Magnetic

Application



Step 3 of 4: Describe new mark.

for data file: 2126274w.06o

1. upload ✓ 2. identify **3. describe your mark** 4. publish

* **Stamping**

* **Designation**

* **Type**
 Rod Depth Sleeve Depth ft m

* **Setting**
 Specific setting (optional):

* **Description** (describe the mark, witness ties, etc., to enable future recoveries. Max. characters=500)
 MARK IS 23.6 FT (7.2 M) SOUTH OF THE CENTERLINE OF LA-438, 151.4 FT (46.25 M) EAST OF THE CENTERLINE OF LA-21, 76.3 FT (23.25 M) WEST OF WEST RAIL OF RAILROAD TRACKS, 109.0 FT (33.25 M) EAST OF A POWER POLE WITH TWO TRANSFORMERS NUMBER 113, AND 0.8 FT

Next, describe how to find the mark. The description is limited to 500 characters, but that's OK. Assume the next person will be able to get close to the mark using their handheld GNSS, and include just the last few critical steps needed to find the mark.

Only one close-up and one horizon photo are required. Make sure any stampings or other identifying marks are clearly visible in the close-up photo and the horizon photo adequately represents the surroundings.

MARK IS 23.6 FT (7.2 M) SOUTH OF THE CENTERLINE OF LA-438, 151.4 FT (46.25 M) EAST OF THE CENTERLINE OF LA-21, 76.3 FT (23.25 M) WEST OF WEST RAIL OF RAILROAD TRACKS, 109.0 FT (33.25 M) EAST OF A POWER POLE WITH TWO TRANSFORMERS NUMBER 113, AND 0.8 FT (0.24 M) NORTH OF A CARSONITE WITNESS POST. ACCESS TO MARK IS THROUGH A 5 INCH (13 CM) PVC PIPE AND LOGO CAP. SLEEVE DEPTH DOES NOT MEET SPECIFICATIONS FOR A CLASS A MARK.

* Close-up photo 2126_closeup.jpeg

* Horizon photo 2126_horizon.jpeg

Stability

Magnetic

Application

Antenna S/N Receiver S/N:

Model Firmware

* required fields

Stability, Magnetic, Application, Antenna S/N, and Receiver Model, S/N and Firmware fields aren't required, but still important to the description of the mark and traceability of the work. Complete these if possible.

MARK IS 23.6 FT (7.2 M) SOUTH OF THE CENTERLINE OF LA-438, 151.4 FT (46.25 M) EAST OF THE CENTERLINE OF LA-21, 76.3 FT (23.25 M) WEST OF WEST RAIL OF RAILROAD TRACKS, 109.0 FT (33.25 M) EAST OF A POWER POLE WITH TWO TRANSFORMERS NUMBER 113, AND 0.8 FT (0.24 M) NORTH OF A CARSONITE WITNESS POST. ACCESS TO MARK IS THROUGH A 5 INCH (13 CM) PVC PIPE AND LOGO CAP. SLEEVE DEPTH DOES NOT MEET SPECIFICATIONS FOR A CLASS A MARK.

* Close-up photo 2126_closeup.jpeg

* Horizon photo 2126_horizon.jpeg

Stability

Magnetic

Application

Antenna S/N Receiver S/N:

Model Firmware

* required fields

* Stamping

H 393 2006

Once the form is complete, click the “Upload Description” button. This makes the description and photos available to the project. The project manager can edit these or add information at a later time.

MARK IS 23.6 FT (7.2 M) SOUTH OF THE CENTERLINE OF LA-438, 151.4 FT (46.25 M) EAST OF THE CENTERLINE OF LA-21, 76.3 FT (23.25 M) WEST OF WEST RAIL OF RAILROAD TRACKS, 109.0 FT (33.25 M) EAST OF A POWER POLE WITH TWO TRANSFORMERS NUMBER 113, AND 0.8 FT (0.24 M) NORTH OF A CARSONITE WITNESS POST. ACCESS TO MARK IS THROUGH A 5 INCH (13 CM) PVC PIPE AND LOGO CAP. SLEEVE DEPTH DOES NOT MEET SPECIFICATIONS FOR A CLASS A MARK.

* Close-up photo

Choose File 2126_closeup.jpeg

* Horizon photo

Choose File 2126_horizon.jpeg

Stability

B = Monument will probably hold position well

Magnetic

I = Marker is a steel rod

Application

Choose Special Application

Antenna S/N

60129898

Receiver S/N:

0220390632

Model

TRIMBLE R7

Firmware

Upload Description

Abort

* required fields



OPUS Menu

Description entry successful! APPROVAL PENDING

You should soon receive a normal "solution report" email from OPUS. If successful, it and your mark description will be forwarded for approval:

- for option "**publish my solution**" you are **ALMOST done**.
-- You will receive a second email with final publishing instructions.
- for option "**contribute to a project**" you are **done!**
-- This second email will go to the manager for your project.

Thank you for using OPUS!

After another moment, the description upload confirmation appears. Uploading this data file and description are complete (and probably in the project by now).



OPUS Menu

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Upload your data file.

Tie your GPS observation to the National Spatial Reference System.

What is OPUS? FAQs

2137274u.06o

* **Data file** of dual-frequency GPS observations. **sample**

NONE Zephyr 4-point feed antenna - Stealth Gr

Antenna type - choosing wrong may degrade your accuracy.

meters above your mark.

Antenna height of your antenna's reference point.

* **Email address** - your solution will be sent here.

to **customize** your solution.

<p>Formats Add solution details</p> <p>Base stations Type in 4-char site IDs, or select from map, any CORS you wish to explicitly include or exclude from your solution Sample</p> <p>NOTE: the automated selection of base stations has recently improved; this option should now be used only sparingly.</p>	<p><input type="text" value="standard solution"/> <input type="button" value="v"/></p> <p>Use: <input type="text"/></p> <p>Exclude: <input type="text"/></p>	<p>Look up site IDs</p>
---	--	--------------------------------

FILE: 2137274u.06o

DATE: Thursday, 06, 2013

TIME: 10:00:00

STATION: TRM41249.00

ANTENNA: NONE Zephyr 4-point feed antenna - Stealth Gr

HEIGHT: 2.00

USER: your.name@your.address

PROJECT: NONE

DESCRIPTION: NONE

FILE: 2137274u.06o

DATE: Thursday, 06, 2013

TIME: 10:00:00

STATION: TRM41249.00

ANTENNA: NONE Zephyr 4-point feed antenna - Stealth Gr

HEIGHT: 2.00

USER: your.name@your.address

PROJECT: NONE

DESCRIPTION: NONE

[Sample Solutions](#)

Let's upload another file, 2137274u.06o, but follow a slightly different path. Complete the upload form normally ...

Share your solutions

Choose File 2137274u.06o

* Data file of dual-frequency GPS observations [sample](#)

... once again, make sure the project ID is provided and click the upload button ...

About OPUS

Projects

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Contact OPUS

Antenna height of your antenna's reference point.

* **Email address** - your solution will be sent here.

to **customize** your solution.

Formats Add solution details

standard solution

Base stations Type in 4-char site IDs, or select from map, any CORS you wish to explicitly include or exclude from your solution [Sample](#)

Use:

Exclude:

Look up site IDs



[browse map](#)

NOTE: the automated selection of base stations has recently improved; this option should now be used only sparingly

State plane Customize your native SPCS zone

let OPUS choose

Contribute to a project Enter the project identifier provided by your project manager

hrdb86fc

My profile Customize OPUS defaults for future solutions

Publish my solution Share your solutions

No, don't publish

for data > 15 min. < 2 hrs. for data > 2 hrs. < 48 hrs.

* required fields

We may use your data for internal evaluations of OPUS use, accuracy, or related research.



- 1. upload ✓
- 2. identify your mark
- 3. describe ...
- 4. publish ...

choose one: mark has a PID mark is NEW to NGS skip description

mark has a PID? [Search the NGS database](#) to find out.



Upload successful!
 You will receive an email when processing is complete.

uploaded:

data file 2137274u.06o
 converted to 2137274u.06o (RINEX format)
 antenna type TRM41249.00 NONE
 antenna height 2.00 meters
 email address your.name@your.address
 processor static

Solving with:

solution format **Extended**
 base sta. used --
 base sta. excluded --
 state plane zone **AUTO**
 project ID hrdb86fc

... but this time, let's follow the "mark has a PID" path.



Step 3 of 4: Describe recovered mark.

for data file: 2137274u.06o



* Enter the mark's **PID**

Find PID

* Close-up **photo** 2137_closeup.jpeg

* Horizon **photo** 2137_horizon.jpeg

Mark **condition** Good condition Poor, disturbed, mutilated, requires maintenance

Description

(Amend existing description, if necessary. Max. characters=500)

RECOVERED AS DESCRIBED IN GOOD CONDITION.

The description for a recovered mark is simpler still. Provide the PID, new photos, the mark's condition and additional descriptive text.

What a field member would see.

Let's review the emails that would be sent to a person uploading data to your project.

FILE: 2126274w.06o OP1369236601254

NGS OPUS SOLUTION REPORT

=====

All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: your.name@your.address
RINEX FILE: 2126274w.06o

DATE: May 22, 2013
TIME: 15:33:11 UTC

SOFTWARE: page5 1209.04 master12.pl 082112 START: 2006/10/01 22:07:00
EPHEMERIS: igs13950.eph [precise] STOP: 2006/10/02 01:45:00
NAV FILE: brdc2740.06n OBS USED: 8062 / 8267 : 98%
ANT NAME: TRM41249.00 # FIXED AMB: 39 / 41 : 95%
ARP HEIGHT: 2.00 OVERALL RMS: 0.013 (m)

REF FRAME: NAD_83 (2011) (EPOCH:2010.0000)

IGS08 (EPOCH:2006.7507)

X:	18197.041 (m)	0.005 (m)	18196.361 (m)	0.005 (m)
Y:	-5473864.221 (m)	0.007 (m)	-5473862.729 (m)	0.007 (m)

The project team member uploading the data files will still get the OPUS solution report. The report will also be available to you, the project manager.

The RINEX file listed below did not meet all the current threshold limits for submission to ...

```
PROJECT:      hrdb86fc
RINEX FILE:   2137275u.06o
ANTENNA:      OK          TRM55971.00      NONE
ARP HGT:      OK          1.500 m

RMS:          OK          0.016 m
EPHEMERIS:    OK          igsl3951.eph
OBS USED:     OK          91.6%
FIXED AMB:    WARNING 76.1% < 80% fixed ambiguities threshold.
LAT RANGE:    OK          0.012 m
LON RANGE:    OK          0.013 m
HGT RANGE:    OK          0.013 m
```

However, the project team member might also receive a second email if the OPUS solution doesn't meet the project's solution quality threshold preferences. The highlighting is mine.

The RINEX file listed below did not meet all the current threshold limits for submission to ...

```
PROJECT:      hrdb86fc
RINEX FILE:   2137275u.06o
ANTENNA:      OK          TRM55971.00      NONE
ARP HGT:      OK          1.500 m

RMS:          OK          0.016 m
EPHEMERIS:    OK          igsl3951.eph
OBS USED:     OK          91.6%
FIXED AMB:    WARNING 76.1% < 80% fixed ambiguities threshold.
LAT RANGE:    OK          0.012 m
LON RANGE:    OK          0.013 m
HGT RANGE:    OK          0.013 m
```

Part of your job as project manager, is to prepare your field teams for this eventuality. This does not mean this data was omitted from the project. It simply means that this solution will be flagged for easier identification.

Let's look at what we've got so far.

Before we upload any more data, let's look at what we've got so far with the understanding that this mimics what you might see after the first day of an active project.



OPUS Projects

National Geodetic Survey

NGS Home About NGS Data & Imagery Tools Surveys Science & Education Search



OPUS Projects gives users web-based access to simple management and processing tools for projects involving multiple sites and multiple occupations. The advantages of OPUS-Projects are:

- Data uploading through OPUS.
- Customizable data processing via the PAGES software suite.
- Visualization and management aids.

Create a new project.

RESTRICTED to trained project managers. If you have completed OPUS Projects training, you are registered and may create a new project. All others, see the **Training Schedule**.

Configure, edit, and process individual network sessions.

Project Identifier:
Session Keyword:
Your Email:

Manage, edit, process, and publish the project.

Project Identifier:
Manager Keyword:

Tools/OPUS Menu

Upload

About OPUS

Projects

Published Solutions

← Returning to the OPUS-Project gateway:
<http://geodesy.noaa.gov/OPUS/OpusProjects.html>

Enter the project ID and manager keyword, then click Manage.



OPUS Projects

National Geodetic Survey

- NGS Home
- About NGS
- Data & Imagery
- Tools
- Surveys
- Science & Education
-
- Search



Scanning Project

Your project is being scanned and web page prepared.

This is a normal operation, but may take a few moments to several minutes depending upon the size of the project and the number of changes.

Website Owner: National Geodetic Survey / \$Revision: 51114 \$Created: 2010-12-13

- Tools/OPUS Menu**
- Upload
 - About OPUS
 - Projects
 - Published Solutions

<-- back

Session Keyword:

Your Email:

Manage, edit, process, and publish the project.

Project Identifier:

Manager Keyword:

A comfort message will appear while your project prepares itself for display.

Controls		MARKS: ● meet preferences ● do not meet preferences ⊗ are not included ⊗ have error				LEGEND MARKS ● 2126 ● 2137
? ← ↻		CORS: ▲ meet preferences ▲ do not meet preferences ▲ are not included				
Preferences Project List Design Serfil Solutions Show File Send Email Set up Adjustment Review and Publish Delete Project		Baselines: ██████████				
		+ Marks Marks&CORS -		Map Satellite Terrain		
						Add MARKS CORS ▲ covg ▲ dstr ▲ hamm ▲ msht ▲ mssc

In a few moments, the project manager page will appear. We're broadly familiar with the page, but let's look at how this page has changed now that some data has been uploaded.

Controls

? ← ↻

Preferences

Project List

Design

Serfil

Solutions

Show File

Send Email

Set up Adjustment

Review and Publish

Delete Project

LEGEND

MARKS: ● meet preferences ○ do not meet preferences ⊗ are not included ⊗ have error

CORS: ▲ meet preferences ▲ do not meet preferences ▲ are not included

Baselines:

Map Satellite Terrain

LEGEND

MARKS

● 2126

● 2137

Add MARKS

CORS

- ▲ covg
- ▲ dstr
- ▲ hamm
- ▲ msht
- ▲ mssc

The marks represented by the two data files we've upload now appear on the map and in the table to the right. The CORS used in the OPUS solutions are included too.

Controls

? ← ↻

Preferences

Project List

Design

Serfil

Solutions

Show File

Send Email

Set up Adjustment

Review and Publish

Delete Project

LEGEND

MARKS: ● meet preferences ○ do not meet preferences ⊗ are not included ⊗ have error

CORS: ▲ meet preferences ▲ do not meet preferences ▲ are not included

Baselines: —

+ Marks Marks&CORS -

Map Satellite Terrain

2137

STATUS	ANTENNA	HEIGHT	DATA FILE	UPLOADED	OBSERVER
●	TRM55971.00 NONE	2.000 m	2137274u.06o	2011-08-13T15:12 UTC	mark.schenewerk

LEGEND

MARKS

● 2126

● 2137

Add MARKS

CORS

▲ covg

▲ dstr

▲ hamm

▲ msht

▲ mssc

Clicking on a map icon or a table entry causes a short summary of the data files for that mark to appear. The observer's name is also a convenience link to send that person an email.

Controls MARKS: ● meet preferences ● do not meet preferences ⊗ are not included ⊗ have error

LEGEND

?"my project @ 2006-10-01"

OPUS Solution 2126 2126274w.06o Show File

2126274w.06o.txt created: 2011-06-13 14:15 UTC downloaded: 2011-06-13 15:27 UTC

NGS OPUS SOLUTION REPORT
=====

All computed coordinate accuracies are listed as peak-to-peak values.
For additional information: <http://www.ngs.noaa.gov/OPUS/about.html#accuracy>

USER: mark.schenewerk@noaa.gov DATE: June 13, 2011
RINEX FILE: 2126274w.06o TIME: 14:15:04 UTC

SOFTWARE: page5 1009.28 master11.pl 061011 START: 2006/10/01 22:07:00
EPHEMERIS: igsl3950.eph [precise] STOP: 2006/10/02 01:45:00
NAV FILE: brdc2740.06n OBS USED: 8270 / 8385 : 99%
ANT NAME: TRM41249.00 NONE # FIXED AMB: 30 / 35 : 86%
ARP HEIGHT: 2.0 OVERALL RMS: 0.012(m)

REF FRAME: NAD_83(CORS96) (EPOCH:2002.0000) ITRF00 (EPOCH:2006.7507)

X:	18197.035 (m)	0.015 (m)	18196.367 (m)	0.015 (m)
Y:	-5473864.210 (m)	0.026 (m)	-5473862.725 (m)	0.026 (m)
Z:	3262753.723 (m)	0.008 (m)	3262753.535 (m)	0.008 (m)
LAT:	30 58 0.78089	0.017 (m)	30 58 0.80051	0.017 (m)
E LON:	270 11 25.69368	0.015 (m)	270 11 25.66869	0.015 (m)

2126 ● 2126
2137 ● 2137

The OPUS solution reports are available through the controls on the left.

At the bottom of the page, a new table has appeared. This lists the marks and indicates the sessions to which their data files belong.

Sessions & Solutions		
MARKS	2006-274 A	MARKS
2126	●	2126
2137	●	2137

The column and row headers are more convenience links. The mark names on the left and right take you to the project's page for that mark. The session names across the top take you to the project page for that session.

Sessions & Solutions		
MARKS	2006-274 A	MARKS
2126	●	2126
2137	●	2137

Let's briefly visit the session 2006-274-A session page. Click on the link ...

Sessions & Solutions		
MARKS	2006-274-A	MARKS
2126	●	2126
2137	●	2137

Session: 2006-274-A Results From: OPUS Solutions

Controls

Manager's Page

Show File

Send Email

Set up Processing

LEGEND

MARKS: ● meet preferences ● do not meet preferences ⊗ are not included ⊗ have error

CORS: ▲ meet preferences ▲ do not meet preferences ▲ are not included

Baselines: —————

LEGEND

MARKS

- 2126
- 2137

Map Satellite Terrain

Map

MARKS

2126

2137

LEGEND

CORS

- ▲ covg
- ▲ dstr
- ▲ hamm
- ▲ msht

This page contains information and controls specific to this session: 2006-274-A. Here again, we see the marks and CORS on the map and in the tables.

DATE	ANTENNA	HEIGHT (m)	EPH TYPE	OBS (%)	Step 2: Uploading Data	HGT (m)
2013-08-07	TDW11210.00	2.000	...	88.6	95.7	0.012
						0.017
						0.015
						0.024

Session: 2006-274-A Results From: OPUS Solutions

Controls

Manager's Page

Show File

Send Email

Set up Processing

LEGEND

MARKS: ● meet preferences ● do not meet preferences ⊗ are not included ⊗ have error

CORS: ▲ meet preferences ▲ do not meet preferences ▲ are not included

Baselines: —————

LEGEND

MARKS

- 2126
- 2137

Map Satellite Terrain

WICComp

Map Marks Marks&CORS

Add MARKS

CORS

- ▲ covg
- ▲ dstr
- ▲ hamm
- ▲ msht

Similar information and reports as found on the manager's page are available for these marks, but it is limited to information specific to this session.

DATE	ANTENNA	HEIGHT (m)	EPH TYPE	OBS (%)	Step 2: Uploading Data	HGT (m)
2013-08-07	TDW11210.00	2.000	...	88.6	25.7	0.012

And there are new tables on this page too. The “Solution Quality Indicators” table lists the solution values checked against the quality threshold preferences. The “Data Availability” table gives a representation of the satellite availability in each data file.



Solution Quality Indicators

MARKS	ANTENNA	HEIGHT (m)	EPH TYPE	OBS (%)	FIXED (%)	RMS (m)	LAT (m)	LON (m)	HGT (m)
2126	TRM41249.00 NONE	2.000	precise	98.6	85.7	0.012	0.017	0.015	0.021
2137	TRM55971.00 NONE	2.000	precise	95.5	86.5	0.015	0.015	0.010	0.023
PREFERENCES:			Best Available	≥80.0	≥80.0	≤0.025	≤0.030	≤0.030	≤0.060

Data Availability

2006-10-01T20:00:00 GPST to 2006-10-02T02:00:00 GPST in 10 minute cells

MARKS	2006-10-01										2006-10-02																							
	20	21	22	23	00	01																												
2126	0	0	0	0	0	0	0	0	0	0	0	0	7	7	8	8	8	7	8	8	8	7	7	7	7	7	8	7	7	8	8	7	0	
2137	7	7	7	7	8	7	8	7	8	8	9	9	A	A	8	8	8	8	9	8	8	8	7	7	7	7	8	8	8	7	8	8	7	7

The row headers in these tables are convenience links to the individual mark pages, just as on the manager's page. Let's visit the page for mark 2126.



Solution Quality Indicators

MARKS	ANTENNA	HEIGHT (m)	EPH TYPE	OBS (%)	FIXED (%)	RMS (m)	LAT (m)	LON (m)	HGT (m)	
2126	TRM41249.00	NONE	2.000	precise	98.6	85.7	0.012	0.017	0.015	0.021
2137	TRM55971.00	NONE	2.000	precise	95.5	86.5	0.015	0.015	0.010	0.023
PREFERENCES:			Best Available	≥80.0	≥80.0	≤0.025	≤0.030	≤0.030	≤0.060	

Data Availability

2006-10-01T20:00:00 GPST to 2006-10-02T02:00:00 GPST in 10 minute cells

MARKS	2006-10-01										2006-10-02																							
	20	21	22	23	00	01																												
2126	0	0	0	0	0	0	0	0	0	0	0	0	7	7	8	8	8	7	8	8	8	7	7	7	7	7	8	7	7	8	8	7	0	
2137	7	7	7	7	8	7	8	7	7	8	8	9	A	A	8	8	8	8	9	8	8	8	7	7	7	7	8	8	8	7	8	8	7	7

Controls

MARK 2126

Project Marks, Project CORS, Published Marks

+ This Mark All Marks Marks&CORS -

Map Satellite Terrain

Manager's Page

Show File

Send Email

Change Mark ID

Remove Mark

Verify For Publication

Map data ©2013 Google - Terms of Use

MARK 2126 Datasheet Mock-up

Upload A Photo Save Description

Description

PID

stamping* H 393 2006

name* H 393 2006

type* R = Rod

F = Flange-encased rod

Rod Depth*: 31.7 Sleeve Depth: 0.9 Feet Meters

setting* 59 = Stainless steel rod in sleeve (10FT+ or 3.048M+)

specific setting

description* MARK IS 23.6 FT (7.2 M) SOUTH OF THE CENTERLINE OF LA-438, 151.4 FT (46.25 M) EAST OF THE CENTERLINE OF LA-21, 76.3 FT (23.25 M) WEST OF WEST RAIL OF RAILROAD TRACKS, 109.0 FT (33.25 M) EAST OF A POWER POLE WITH TWO TRANSFORMERS NUMBER 113, AND 0.8 FT (0.24 M) NORTH OF A CARBONITE WITNESS POST. ACCESS TO MARK IS THROUGH A 5 INCH (13 CM) PVC PIPE AND LOGO CAP. SLEEVE DEPTH DOES NOT MEET SPECIFICATIONS FOR A CLASS A MARK.



Here, you can review, edit or enter the mark description. Many other tools are available, but we'll save those for later.

condition: Good condition Feet, disturbed, mutilated, requires maintenance

2013-08-07

Step 2 : Uploading Data

Manage Data Files Save Occupations

Let's look a little farther ahead.

Let's jump to the point where all project data has been uploaded.

Results From ALL OPUS SOLUTIONS

Controls

Preferences
Project List
Design
Serfil
Solutions

Show File
Send Email
Set up Adjustment
Review and Publish
Delete Project

LEGEND

MARKS: ● meet preferences ● do not meet preferences ⊗ are not included ⊗ have error

CORS: ▲ meet preferences ▲ do not meet preferences ▲ are not included

Baselines: —

LEGEND

MARKS

- 2123
- 2126
- 2137
- 2139

+

Marks

Marks&CORS

-

Map

Satellite

Terrain

POWERED BY Google

5 mi / 5 km

Map data ©2013 Google - Terms of Use

Sessions & Solutions

MARKS	2006-274	2006-275	2006-275	2006-276	2006-276	2006-277	MARKS
	A	A	B	A	B	A	
2123			●	●	●	●	2123
2126	●	●	●	●			2126
2137	●		●	●			2137
2139			●	●	●	●	2139

Note that all four marks in our training project are now shown and six sessions have been defined. Let's click the Marks&CORS button on the map.

Results From ALL OPUS SOLUTIONS

Controls: MARKS: ● meet preferences ● do not meet preferences ⊗ are not included ⊗ have error
 CORS: ▲ meet preferences ▲ do not meet preferences ▲ are not included
 Baselines: —

LEGEND MARKS
● 2123
● 2126
● 2137
● 2139

Map Satellite Terrain

Marks Marks&CORS

LEGEND CORS
▲ covg
▲ dstr
▲ hamm
▲ msht
▲ mssc
▲ nola

Add MARKS
Add CORS

MARKS	Sessions & Solutions						MARKS
	2006-274	2006-275	2006-275	2006-276	2006-276	2006-277	
	A	A	B	A	B	A	
2123			●	●	●	●	2123
2126	●	●	●	●			2126
2137	●		●	●			2137
2139			●	●	●	●	2139

The map's center and zoom level changes to encompass all project marks and the included CORS.

Results From ALL OPUS SOLUTIONS

Controls

MARKS: ● meet preferences ○ do not meet preferences ⊗ are not included ⊗ have error
 CORS: ▲ meet preferences ▲ do not meet preferences ▲ are not included
 Baselines: —

LEGEND MARKS
 ● 2123
 ○ 2126
 ⊗ 2137
 ⊗ 2139

Map Satellite Terrain

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20 mi
20 km

2123
2126
2137
2139

2123
2126
2137
2139

2123
2126
2137
2139

MARKS	Sessions & Solutions						MARKS
	2006-274	2006-275	2006-275	2006-276	2006-276	2006-277	
	A	A	B	A	B	A	
2123			●	●	●	●	2123
2126	●	●	○	●			2126
2137	●		○	●			2137
2139			○	○	○	○	2139

Let's take a short break.

The preliminaries are now complete. Let's take a break, stretch our legs and clear our heads.

Use this break to verify that you can access the project provided with this training, and that the training project has all mark data and metadata loaded.

If you are new to OPUS, take this opportunity to try re-loading one or more of the data files.

OPUS Projects Manager Training

Step 2 : Uploading Data

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