

What is OPUS Projects?

PSLS Webinar

May 20, 2015

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THE FOLLOWING **PREVIEW** HAS BEEN APPROVED FOR
ALL SURVEY AUDIENCES
BY THE NATIONAL GEODETIC SURVEY

THE TOOL ADVERTISED HAS BEEN RATED

TR-13

ABOUT 13 TRAINING HOURS REQUIRED



KNOWLEDGE IN THE USE OF GPS STRONGLY SUGGESTED

USEFUL VISUALIZATION, MANAGEMENT AND
PROCESSING TOOLS CONTAINED WITHIN

Goal for this Webinar

- Participants will gain enough knowledge about OPUS Projects to determine if it is a tool that they can make use of, and if they want to invest their time into the required two-day training course

**OPUS Projects...
coming soon to training room near you?**

Operating systems and browsers.

No guarantee that OPUS Projects will work with your computer is implied. It has been successfully tested on X86 PC's in various combinations of the following...

Operating systems:

Linux[®] and Microsoft Windows[®]

Browsers:

Chrome[™]

Firefox[®]

Internet Explorer[®] 8 through 10

Opera[®]

Safari[®]

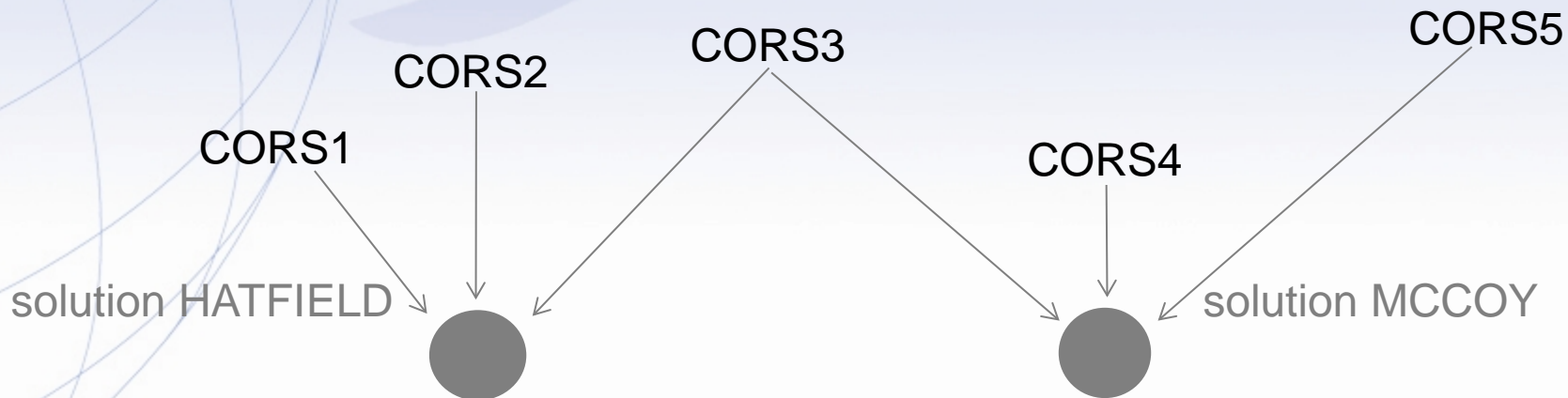
What is OPUS Projects?

OPUS Projects offers Web-based access to simple visualization, management and processing tools for multiple marks and multiple occupations. Some of its advantages include:

- Data uploading through OPUS.
- Processing using the PAGES software.
- Graphical visualization and management aids.
- Limited support of bluebooking.

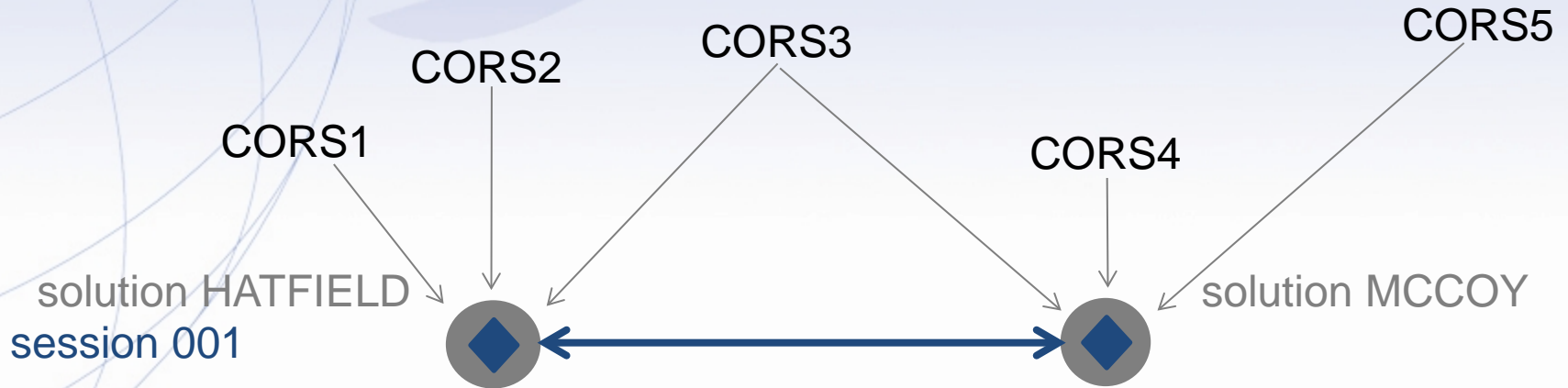
Why complicate OPUS?

● OPUS ◆ Session ■ Adjustment



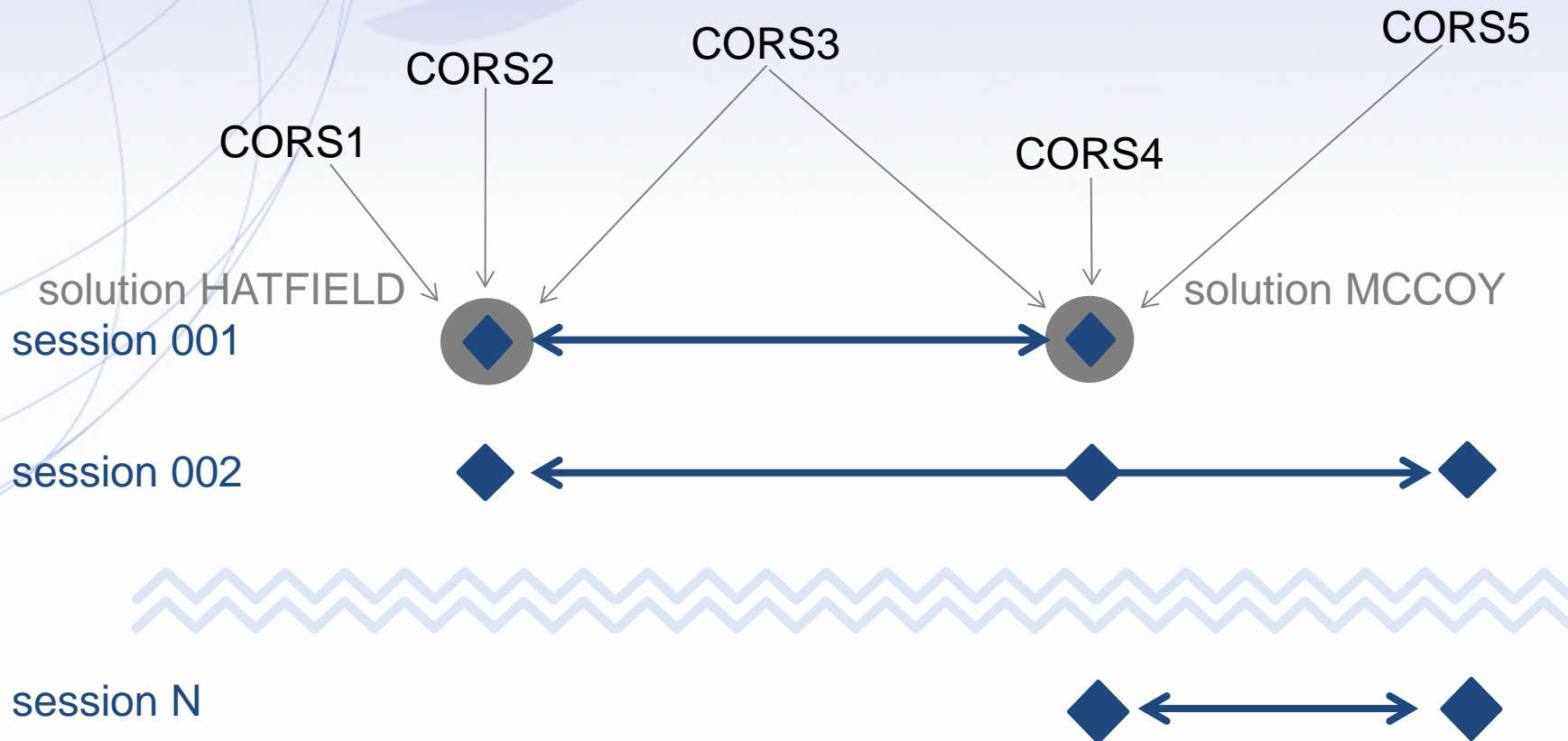
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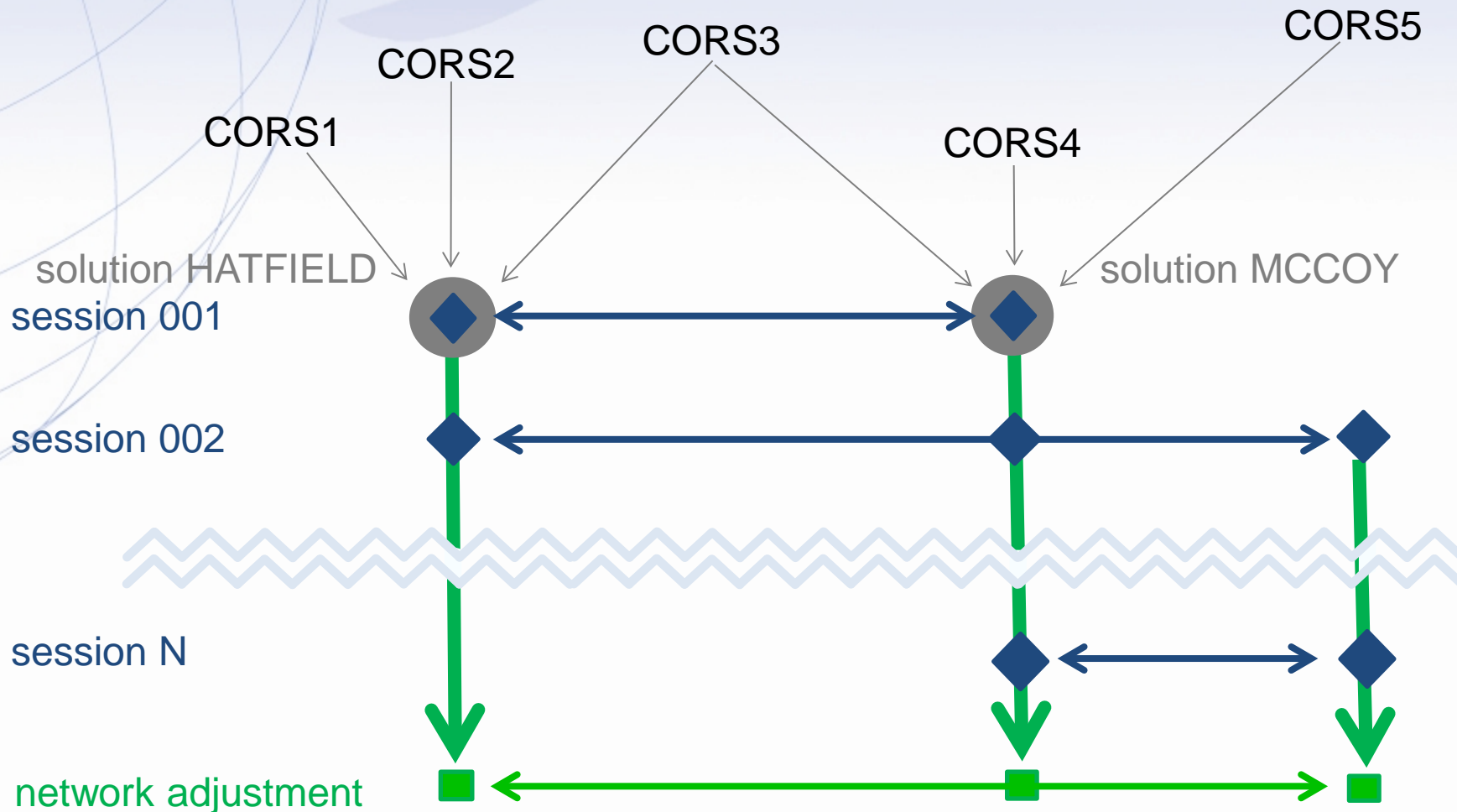
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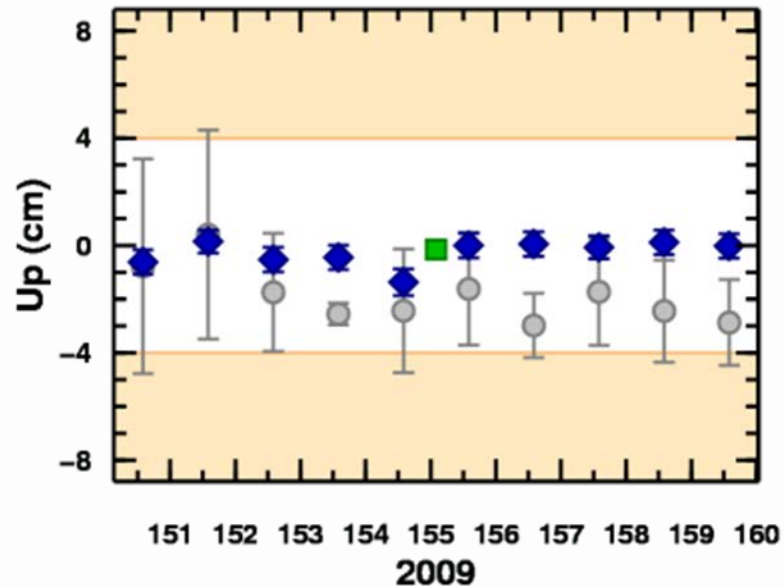
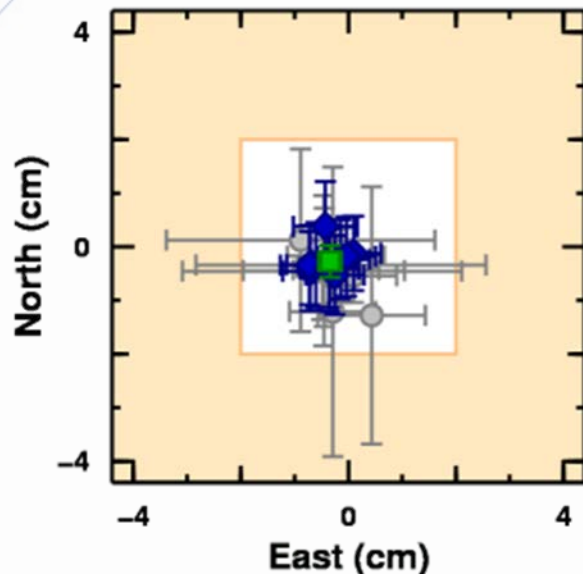
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What's in it for me?

- **OPUS solutions** = pretty good, but each treated as independent and assumes “perfect” CORS.
- ◆ **Sessions** = simultaneously-observed marks processed together in sessions increases consistency.
- **Adjustments** = interlinking sessions through network adjustments increases accuracy.



Do we *really* need another OPUS flavor?

- The practical answer is probably yes.
The NGS and other groups have a history of projects whose specifications can't be entirely supported by OPUS.
- The academic answer is probably yes.
As good as OPUS does, and that is very good indeed, sacrificing simplicity for flexibility can improve results.

What does this mean operationally?

- 1. Plan your project**
- 2. Collect data and metadata (photos and mark descriptions)**
- 3. Gather data and metadata onto one computer**
- 4. Process the data**
- 5. Perform a network adjustment**
- 6. Publish (if desired)**

What does this mean operationally?

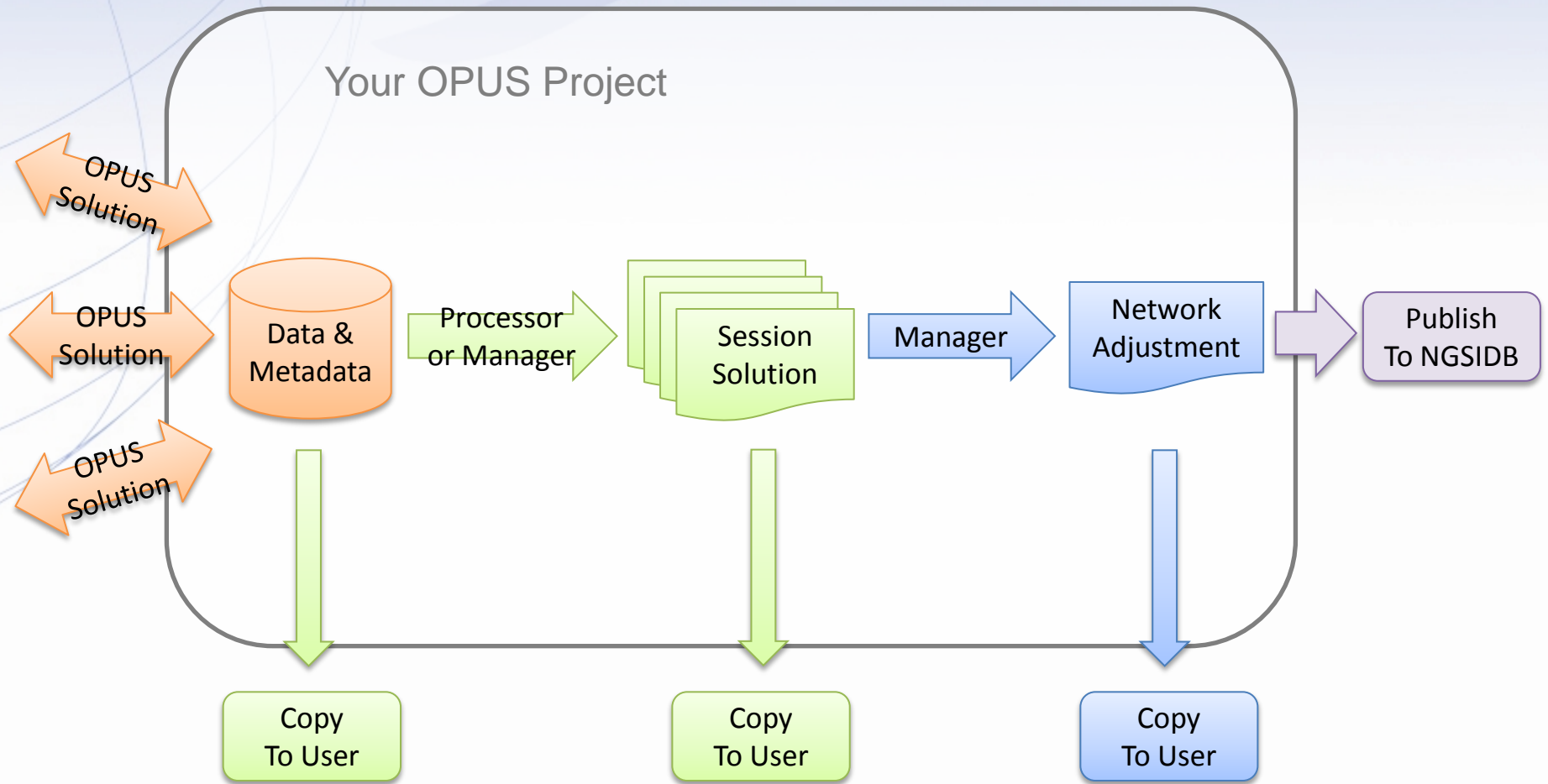
- 1. Plan your project**
- 2. Create an OPUS project**
- 3. Collect data and metadata**
- 4. Upload data to your project using OPUS**
- 5. Process sessions**
- 6. Perform network adjustment**
- 7. Publish (if desired).**

What does this mean operationally?

Admittedly an oversimplification, nevertheless there is value in thinking of OPUS Projects as four steps with an optional fifth step.

- 1. Creating A Project**
- 2. Uploading Data**
- 3. Session Processing**
- 4. Network Adjustment**
- 5. Publishing to the NGS Integrated Database**

The steps represented graphically.



Are there any side effects?

Exploiting a Web-based application like OPUS Projects can mean:

- Less backtracking.
 - Data consolidated while teams are in the field.
 - Rapid data quality assessment.
- Simpler logistics.
 - Data are immediate availability through on-line storage.
 - Automated organization.
- Less worry.
 - Share information.
 - Share results.

Limitations?

- Uploads through OPUS-Static.
 - Dual-frequency.
 - $2 \text{ hrs} \leq \text{data span} \leq 48 \text{ hrs}$ (≤ 2 GPS midnights).
 - Observation interval = a factor of 30 (seconds).
- Minimum project size.
 - None
- Maximum project size.
 - There are *practical* limits to a project's maximum size.
 - About 100 marks in a single session.
 - Number of data files < a few hundred.

G.I.G.O.

We still need surveyors. We hope OPUS Projects can help, but it can't do your job for you.

- Follow your project's specifications.
- Use best practices and careful field procedures.
- Select permanent marks of public interest.
- Good coordinates come from good data.



<http://gis.larc.nasa.gov/>

Things To Come.

OPUS Projects improves because your criticisms and suggestions. Although we can't act upon every comment, we do appreciate and consider every one. They have and will continue to steered development.

Here are a few things already in the works:

- Allowing data files < 2 hrs in duration.
- Better integration with CORS.
- Better support for publishing to the NGSIDB or Sharing to OPUS-DB.

Live Demo