Geotechnologien-Projekt EXUPÉRY

– KOORDINATOREN: TORSTEN DAHM, MATTHIAS HORT, JOACHIM WASSERMANN –

Summary of 5th Exupéry Workshop in Hamburg June 21st, 2010

Participants:

Moritz Beyreuther, Carl Gerstenecker, Conny Hammer, Matthias Hort, Lars Krieger, Manocheer Shirzaei, Klemen Zakšek.

Outline

We discussed three main issues: Web GIS, project documentation and final report. Stefan and Moritz have some general tasks for the GIS to do but each team should also take a look at their own GIS data and functionality. Please finish also the documentation as soon as possible. Reports should be finished by the end of the year. The final report deadline for the BMBF is March 31st.

Web GIS priority list for Stefan Bernsdorf (P – priority, W – work)

- **Documentation on how to install the Web GIS. P: the highest, W: high**
- **Virtual machine installation P: high, W: low (because Moritz is doing it most likely)**
- **Time series of preselected points in preselected points for thermal, deformation, stress field, permanent scatteres. P: medium, W: unclear, maybe already partly there (C. Gerstenecker checks this)**
- **Displacement (WP2 deformation) image legend not ok – if you compare the values with the legend the colours in the legend do not correspond to the values retrieved by the Info tool. P: very high, W: low**
- **Intensity (WP2 deformation) image has problems with transparent style. P: high, W: low**
- **Info button for interferogram (WP2 deformation) should give pi and not RGB → remove the info button. P: very high, W: low**
- **Info button for hotspots (WP2 thermal) should give value according to the selected style and not general metadata. The metadata button should be included. P: medium, W: low**
- **Check why inversion (WP5) is not shown and if beach balls are plotted. The mapper for beach-balls should be completed by Hans-Peter a year ago. Was that removed on purpose or do those layers simply are not shown because there are no data? P: very high, W: low**

- **Stress (WP5) display legend is missing. P: very high, W: low**
- **Geographical coordinates of cursor position should be seen somewhere in the screen. P: high, W: unknown**
- Export a map to a PDF, P: low, W: unknown
- In some cases there is a problem because one does not know for which time data are available. Because there is no display of the available data so far, data are difficult to find. For people that have access to seishub, this is not a problem. But most users of Web GIS will no have this access. Therefore, is there a way (for example by IBIS) to select the data in such a way as it is possible for satellite data (if data exist then it is on the list)?
- **Rename the layer structure P: very high, W: low:**
    - **WP1: Ground based observations**
    - **WP2: Space borne observations**
    - **WP3 Seismic observations**
    - **WP5: Modelling**

Database priority list for Moritz Beyreuther / Robert Barsch

- Heading, azimuth and incidence angle information (WP2 deformation) have to be available over Info tool by WP2 Deformation.
- Virtual machine installation.
- There is a problem with the activity and quality style of Seismic stations in WP3. If you switch between those the system hangs.

General remarks for GIS

WP1 DOAS

There are no data from Azores. Does the mapper for DOAS exist? Moritz will upload the data Thor sent us last week into the seishub.

WP1 IBIS

Mesh node run under Ubuntu in meshing mode. Is the time series display working (selected points from the GeoTiff)? Darmstadt did provide the data to Stefan. But there are no preselected points visible in the GIS and therefore no time series is visible. Select GeoTiff images from the IBIS system just like the satellite data.

WP2 SO_2

Everything is complete.

WP2 DEFORMATION

Where are the time series of the persistent scatteres? What is the temporal reference (first or the second image…) and what is the geometrical reference (add heading angle, azimuth, and incidence angle) of the displacement of the PSI image – this needs to be given in the explanation (metadata available within GIS) – contact Moritz!

Interferograms, differential image: Info button should not give the RGB but the value in terms of fractions of pi. Because this is merely a quality information for most users, the image is enough, thus remove the Info button.

Intensity: should be normalized between 0 and 1 (legend and info button), image is not transparent although this style exists.

Coherence: Why are the coherence values so often zero on the Stromboli image? Which kind of coherence is shown, spatial average, temporal average?

Displacement image: The legend does not represent the actual value in the image. This means when we click onto the info button we get the deformation, but the colour of that point does not match what is shown in the legend.

DLR needs to provide the data that Manoochehr needs to show the evolution of the source and stress field.

Problem is the access to the data in the future. TERRASAR data seem to be commercial so in the future the access may be difficult for the physical modelling.

WP2 HOTSPOTS

Time series is still missing. Info button for hotspots should give value according to the selected style (temperature…) and not the metadata. The metadata button should be included.

WP3 ALERT LEVELS

The GUI was added to interface interactively to the probabilities (can be changed by the user). Program has to be downloaded and runs locally. Documentation is also done. Klemen will try to install it and run it on his computer. Moritz will check if he can give a confidence for the alert level.

WP3 SEISMIC STATIONS

There is a problem with the activity and quality. If you switch between those system hangs. Does activity refer to the current station network and gives only a result when stations are actually sending data. Is the displayed quality just a test case?

WP3 SEISMIC EVENTS

seicom 3 → Earthworm → Quakeml, that is working in the Bayern Netz according to Moritz. Currently there is no link between the actual classification and the events. Has to be done within a time window to associate the picked events with the classified events.

WP5 SEISMIC DATA AND CLASSIFICATION

Where are the buttons for classification and moment tensor inversion stuff. Was that removed on purpose or do those layers simply are not shown because there are no data?

Check the mapper for the inversion of the seismic events check if everything is displayed properly. Check if display of beachball is ok.

There is currently no way to connect quakeml to the stuff of Lars and Conny.

WP5 STRESS

Legend is missing.

Major problem with the time series, DLR needs to provide the data → evolution of the source and stress field. This would be very nice to have.

Documentation

An outline is provided on the Web (http://www.exupery-vfrs.de/How-to-set-up-use-VFRS.900.0.html). The documentation is partially already finished. Within the documentation there should be also a link to software download that should be open without password. We have a mailing list so everybody that downloads the code and gives us his email address can be informed in the case the code changes. So please include the mailing list next to your code.

WP1 IBIS: Mostly complete. Note that IBIS software and Berner software for the GPS processing has to be bought (ca. 500 €).

WP1 DOAS: There is still no documentation of the DOAS system. Especially field installation, software installation, usage of the output, and the current code versions have to be described.

WP2 Deformation: Mostly complete. Please extend and correct the typos.

WP2 SO2: Complete.

WP2 HOTSPOTS: Complete.

WP3 ALERT LEVELS: Complete.

WP3 GIS: Installation of the Web GIS system is still missing (this has to be done by Stefan Bernsdorf). Klemen has made some videos to show how to use the interface.

WP3 SEISMIC EVENTS: Conny gives Klemen a background and he finishes the documentation.

WP4: Mesh nodes are linked to the Potsdam WIKI. We need to upload the images for the nodes to the seedlink server -> Moritz checks for those images. Still need to describe power boxes and general setup of Arturo (Klemen and Matthias will do it).

WP5 CLASSIFICATION: Mostly complete.

WP5 INVERSION: Mostly complete.

WP5 STRESS: To be uploaded in the following days.

Final Report

We will provide one report for the whole project.

Matthias has to write the summary with the main results. He will also describe the WEBGis System which was developed. So this part is covered. But unfortunately this is not all.

Each contractor has to provide own reports. There are two options, a) each institution writes his stuff and sends it in separately or b) we write reports for each workpackage. This makes more sense. However, from this report it has to be perfectly clear what was done by whom.

The report should emphasise the results of our work. The report will be in German. If anybody wants to do his part in English, a summary in German has to be provided too. It is not allowed to just send papers!

At the end of the report we will include the online documentation so make sure that the report you write emphasises your scientific work and not the technical solutions in the GIS system (exept of course for those who worked on the GIS, i.e. WP3 there the technical details are needed.).

As some of the PhD students are finishing already this year I would like to ask the coordinators for each WP (WP5 Torsten Dahm, WP4 Matthias Hort, WP3 Joachim Wasserman, WP2 Klemen Zakšek, WP1 Carl Gerstenecker) to collect the reports from each subproject by the end of the year. The coordinators have to check if all required information is in the report. We will provide guidelines on how each workpackes should be formatted.

In addition for the final report, each institution has to prepare also a quality report (Erfolgskontrollbericht). The templates (German and English) and instructions will be sent to by e-mail.

General announcements

MAILING LIST

Mailing list is available. It was made for the updates of the code. Go to the following link to add a subscriber or read the emails in the archive (starting in June 2010):

https://lists.zmaw.de/mailman/listinfo/exupery

Write to the following e-mail, to contact all the contact in the list:

exupery@lists.zmaw.de

PUBLICATIONS

Please update the following link (contact Klemen about it):

http://www.exupery-vfrs.de/Publications.633+M5e34df5a01a.0.html

See if all your publications (relevant to the project) are listed. Send also the links to your abstracts.