

SUMMARY OF THE EXUPERY KICKOFF MEETING OCT, 11TH, 2007, KARLSRUHE, 9:00-16:15

Morning session: Presentation of the different projects inside the 5 work packages. Main discussion points were the data volume and type of data which were generated with respect to the VFRS. This was picked up and discussed in detail during the afternoon session.

SZGRF is currently acquiring to identical computer systems incl. 2 quadcore PCs and a raid system hosting about 7Tb of disk space. One system is the dedicated field unit and the other system is the server for testing the VFRS during the development and test phase.

Results of the afternoon session are listed below.

Agreed formats:

- Time will be in UTC,
- Georeference (ellipsoid) will be WGS84.
- Operating system of the VFRS data storage and processing unit will be Unix based.
- GIS Interface can be either DOS or Unix based doesn't really matter.

Short description of the data flow in the VFRS:

Core of the system is a central data base which hosts data and metadata (data about data). All queries by any task within the VFRS will be handled by the central metadata base which hosts the pointers to the different archives where the real data are stored. The pointer is send back to the requesting task, which is then used to directly retrieve the data from the archives. The tools, developed in WP5 use so called WebServices to request data from an appropriate archive. WebServices are used also to fill in the database. WebServices are operated mostly with the description of the data (metadata), which are stored in the XML format (extended markup language). Although the amount of metadata is significantly increased when storing it in an XML format this allows easier access to the data in the case the computer requesting the data is not the computer hosting the data base. Parallel to data base a real time system is running to collect the data from the instruments in the filed. This system will be based on EarthWorm as this is becoming a standard in especially third world volcano observatories. It was agreed upon that we should not completely neglect the possibility of exchanging EarthWorm with SeisComp3 which is currently under development.

Tasks:

Each project provides a sample data set to K. Stammmler or K. Klinge for setup purposes of the data base. Each data set should include a short descriptive file, which will be used to prepare a XML metadata template (e.g. time coordinates and other relevant information), which will be stored in the central data base. The data itself will be archived in separate files. Furthermore, a list of queries have to be listed for each dataset in order to set up WebServices (e.g. show movements recorded by GPS between time X and Y on the point Z). It would make sense to adopt the metadata to some geo-data standard.

E-Mail addresses from all new members of the Exupery working group. Please send them either to Klemen Zaksek (klemen.zaksek@zmaw.de) or to myself (matthias.hort@zmaw.de)

WebPage: The domain Exupery as well as the domain VFRS are already taken, so we need to come up with a new idea for a domain name to host the WebPage of the Exupery project (perhaps exupery-vfrs.de?).

Data Inputs into VFRS

- WP1: IBIS same as remote sensing data in WP2, This data is 2D data
GPS data 1Hz (Raw data must be stored locally). 1D data can possibly be stored like seismic data
MiniDOAS: Data every 2-3 minutes, so far unclear how these data will be stored, for monitoring purposes we basically need SO₂ as a function of time. It still has to be determined if a separate system is need for processing the data or if this can be done at the central system. Problem here is the software: DOAS is running under Windows, VFRS is Unix based.
- WP2: Fringe images (raw data are stored locally at the DLR)
Time history of permanent scatteres
SO₂ images (quantity and perhaps the height of the plume)
SO₂ trajectories (vector format – Esri line shape?)
Satellite images in visible and thermal channels: AVHRR (if own antenna can be collected locally), MODIS, ASTER, etc.
Temperature data: provide land surface temperature images and lists with temp. for intersting pixels.
- WP3: Seismic data
Tilt data
GPS data
These three (1D data, i.e. one data point each sample) can go via seedlink into the data base.
- WP5: Detections
Models (incl. e.g. DEM)
Greens Functions?

All 2D images should be standardized to one format that allows essentials to be stored (like time, coordinates, etc.) The format should contain also a free field for additional information, which should be easy to update. Most likely this will be GeoTIFF.

Hamburg, 15.10.2007 Klemen Zaksek, Matthias Hort