2019 FDSN Plenary Minuts

Montreal, Canada

11 July 2019

**Welcome and Introductions**

The meeting was called to order by acting Chair Goran Ekstrom at 17:10. He gave regrets for Sergio’s absence and why he was standing in for him. There is one key issue related to changes in the Terms of Reference that will be presented.

**Adoption of the agenda**

Goran went over the proposed agenda briefly. Goran asked if there were any other issues to be added and there were none. Agenda was adopted.

**Message from the Chair (in absentia)**

Sent Sergio’s regrets for not being able to attend due to lack of travel funds.

**Regional FDSN reports**

**Europe**

Given by John Clinton on behalf of the ORFEUS community. Mentioned EPOS and that it is moving into an operational phase. It has a long term plan and will establish new infrastructures. These go beyond seismology. Florian Hasslinger leads the seismological effort within EPOS. Access to waveform data is done through ORFEUS. Several other parts of seismology were also mentioned. Presentation showed the extent of the network, more than 8000 stations. Mentioned several portals for accessing data products of various types. They provide access to strong motion data at this time. EIDA strongly values coordination with the FDSN. Has quality parameters for all EIDA data. Working on authentication and routing and DOIs.

EIDA would like to have a more uniform approach on how to decide things such as new formats. Mentioned agile approach to development of FDSN standards.

Thinks it would be useful to have a short section about future problems. For instance, Distributed Acoustic Systems (DAS) may be a disruptive technology.

**Asia**

No one present.

**Africa**

Atalay Ayalela from Ethiopia gave a talk. Mentioned Africa Array as one of the major efforts in Africa. Also the mentioned ESARSWG is another effort in the RIFT valley. Mentioned a training workshop in Ethiopia. A big problem in Africa is real time data.

The AfSC is now well established and trying to coordinate seismology in Africa. Meetings have been in Egypt, Morocco, and next in Botswana.

Power and network failures are frequent. Station maintenance is poor and government support is minimal.

He recommends setting up real time data from existing stations in Africa and also manpower to compute and archive daily weekly and monthly earthquake bulletins.

Johannes mentioned the problem of maintenance of older stations and specifically how is the GPS timing situation. Atalay thought the situation was in reasonable control although problems exist from time to time.

**Latin America and Caribbean**

Xyoli gave the presentation. Recent contribution to the SRL issue published last year. Gave brief reports from

* Guatemala. Total of 38 stations including 7 broadband stations,
* Costa Rica has a total of 173 stations and 55 broadbands.
* Cost Rica (TC) sends data to IRIS and has a DOI for network. Showed that they use Seiscomp3 and Earthworm for automatic and Seisan for manual review.
* Brazil has 12 new stations installed in the past 2 years.
* Colombia has a total of 57 stations 8 being installed in the past two years.
* Uruguay has 3 BB STATIONS
* Chile has many stations with 35 being transmitted to IRIS in real time. Mentioned project Kizuna but the funding in future is uncertain.

**North America**

Canada has many operating networks with broad geographic distribution. Recently refreshed all the station hardware in the past 5 years. 50 % of vaults have been upgraded. Most of the upgrades were mobbing form short period to Nanometrics broadband stations. There are currently 160 stations in the network. Using SeedLink and NP/Apollo Server and Antelope as well as SeisComp3 that they are moving to . Data is from 1979 and have 34 terabytes growing at 3 terabytes per year. All data is now available through the IRIS DMC.

US.

95 stations in the ANSS Backbone run mostly by USGS.

CEUSN has 257 stations

US TA now 296 stations

CEUSN is now opearated by the USGS. TA is in Alaska last station installed this month and will be decommissioned in Sept 2020

Summary of IRIS DMC, NCEDC, and SCEDC. More information is in the presentation.

Mexico.

171 stations in real time. RB network is run by CICESE. Exchange data with neighbouring networks.

Current national network has 63 stations. Use a variety of equipment. The reoriented sensors using a gyroscope from 2015-2017. Network received numerous upgrades. They recently installed 52 new broadband stations. They have an operational network operations centre in Mexico City and are going to build a backup facility out of the area.

They use SeisComp3 and have FDSN web services installed now. They still need some configuration. They have an effort tin scanning paper records.

**Current Status of the System of Federated Data Centers**

Ahern gave a brief presentation showing the progress of the FDSN Federated System. Romanowicz applauded this effort which has been a long term FDSN goal.

**Working Group updates (preview of WG meeting issues)**

**WG I**

No one was present to introduce this but the meeting is tomorrow at noon.

**WG II**

John Clinton the WGII chair gave the presentation, Saturday meeting, John went over the agenda. Next generation miniSeed. miniSeed2 will remain an acceptable standard. Completed requirements for a new standard. Update will be given by IRIS. URN time series identifiers are being proposed. Update will be given. StationXML had a minor release. Need to start a major revision of StationXML. QuakeML will be discussed, event types are still under discussion. Quality Control, minor differences can be expected in the differing systems but to first order they produce the same quality information. Data provenance will be discussed.

**WG III**

Ahern gave a review of the agenda items

1. including several bookkeeping issues including approval of 2017 minutes, 2017 action items, and approval of the 2019 agenda
2. Status of Federated System of Data Centers
3. Quality of Service (QoS) standards for Federated Data Centers
4. Harmonization of QA Metrics
5. Consistent web service calling conventions for QA metrics
6. Data Center Registration and Routing Rules
7. Status of Web Service Documentation
8. Suggested new services for consideration
   1. Timeseriesplot
9. New Business
   1. Authentication for FDSN-web service

**WG IV**

Bondar gave a presentation. Will be on Monday will give a status report of the IMS network and the GCI infrastructure.

**WG V**

Beaudoin will meet on Tuesday. Two topics will be discussed,

1. Standardize state of health information.
2. Documenting time varying locations for seismic stations.

**New Memberships**

In 2017 we agreed on a process and it was used this time. Since the last meeting there are 4 new members. ANU, Spanish seismic network, Hawaiian Volcano Observatory, and Botswana Seismological network.

University of Washington applied and the FDSN members approved their membership at the plenary meeting.

**Changes in Terms of references**

Goran presented the topic. He will give his personal opinion. Executive committee has discussed this and is now bringing this to the steering committee for consideration. Focus of FDSN has changed from instrumentation to the distribution of data. The issue of membership fees is going to be brought up.

Goran will try to highlight the changes. The final vote will be at the second plenary. Such things as travel needs and data workshops have branded FDSN on them but really relies on individual members supporting these activities. Goran went over the primary changes to the Terms of Reference.

The key issue relates to membership and Goran went over each type of proposed membership point by point. Johannes read the issue of allowing an alternate to attend in the place of the representative. Several started making suggestions and it was decided that all changes to be considered should be sent by email to capture their thoughts.

Goran feels that it is time to do something like this to maintain viability of the FDSN. The tiered membership level seems to make sense to him.

Comments from the room: Carter liked it. Barbara didn’t like the different levels of membership. Xyoli had similar concerns. The rational was somewhat about membership level having more influence on scientific decisions through tiered voting rights. Javier thought the tiered voting should perhaps apply to only things related to financial issues not scientific or policy issues.

There were lots of discussion related to this issue. Went on for some time. Decision was to develop two proposals, one as presented and one that separates policy/scientific issues to voting 1 vote per member and tiered voting only for financial matters such as the budget.

**Executive Committee Election (call for nominations)**

Javier nominated was WGII chair to replace John Clinton who wishes to step down. Send suggestions for other nominees to any one on the Excom.

**ISC presentation**

Dmitry gave a presentation concerning articles about seismic networks that the ISC is now publishing. He covered the usual topics that the network articles cover. ISC proposes network articles are used in the FDSN system and promoted among FDSN members.