

# FDSN WG V Meeting Minutes

## IAG-IASPEI 2017 meeting – Kobe, Japan

### 03/08/2017

#### Attendees

Wayne Crawford (IPGP)	Bruce Beaudoin (PASSCAL)
Peter Voss (GEUS)	Göran Ekström (Columbia Univ.)
Eren Tepeugur (AFAD)	Ulubey Çeken (AFAD)
David Jespen (CTBTO)	Irine Solorove (Inst. of Geology & Geophysics Uzbekistan)
Tim Ahern (IRIS)	Florian Haslinger (ETH Zürich)
Chad Trabant (IRIS)	Mark Chadwick (GNS Science)
John Clinton (ETH Zürich)	Xyoli Pérez-Campos (UNAM Mexico)
Fabien Engels (RESIF France)	Catherine Péquegnat (RESIF France)
Marc Grunberg (RESIF France)	Seiji Tsuboi (JAMSTEC Japan)
Yinshuang Ai (IGGCAS China)	Trine Dahl-Jensen (GEUS).

#### Agenda

##### Approval of 2015 minutes

motion: Ahern  
2nd: Haslinger  
approved.

##### Group/facility presentations

None

##### SOH recommendation from Prague 2015

Chad doesn't want to table this, recommends forming a small group to work on it. Hasn't heard strong objections, so proceed with making a proposal.

Tim Ahern suggests putting a deadline for time to respond

Florian agrees, wonders if spec should be only about mobile equipment, would be good to focus on mobile, afterwards see how to coordinate with permanent stations

Bruce agrees, any volunteers for the small group?

reluctant to have it all come from PASCALL instrument center, because other needs that we are not familiar with

Florian will try to solicit information, but he is not part of a pool.

Catherine Pequegnat says maybe two people, one for SISMOB, one for...

**Action Item 2017.01: Identify a small working group to develop proposal for SOH channels. – Beaudoin, Haslinger**

##### How to better capture in meta-data stations that move?

John likes idea of new miniSEED channel

Bruce advocates for timeseries

Chad: hybrid approach, timeseries data for fast-moving, StationXML addition for ranges?

Bruce: Should this be wrapped into the SOH subgroup?

Need to make clear whether the position value is directly measured or interpolated.

**Bruce will wrap it into SOH subgroup as a point of discussion**

##### OBS: Clock drift

- How is it being done – implementations differ dependent on facility

- Update once per daily file
- Update time correction in each record
- Update time correction when it becomes significant % of sample
- Resample the data to desired sample rate
- Do not correct the drift

**Action Item 2017.02: Send list out of current methods used by various parks to correct clock drift for feedback. – Crawford**

Capturing clock drift

- In mseed
  - Set I/O bit 5
- In StationXML
  - Time base
  - Start sync
  - End sync

Additions to mseed or StationXML

- Mseed
  - Flag to id linear drift
  - Change sample rate to 8-byte float
  - Use I/O block field
- StationXML
  - New CommentList type to capture clock info

Haslinger: Comments make it difficult if you want to use algorithms to later extract information. If feasible it would be best to create a proper format/field.

Trabant: Main driver to have arbitrary headers (mseed). Having drift rate or nominal drift rate recorded could be useful later in data use.

Crawford: Drift is fairly linear since temp environment is stable

OBS: [Integration into data centers](#)

- Diff standards are being used to create data/metadata from data loggers.
- Tools needed
- No huge motivation/time/funds

Clinton: When making StationXML should try to use IRIS-NRL.

Ahern: If you have instruments you want in the NRL contact DMC (Mary Templeton) for inclusion.

OBS: [Resampling/downsampling data standards](#)

SAC has a way and what was implemented in timeseries at the DMC. ObsPy has a method too. Unclear if these are the best approaches. It would be useful to have an accepted standard or FDSN recommendation.

Ahern: WG-3 discussed timeseries service that downsamples. Plan it to get it into SeisComp3.

Haslinger: Method needs to be documented and reflected in the metadata.

Downsampling and storing as channel vs on the fly.  
A short summary paper that is endorsed would be useful  
SAC decimation filters sit at sac/aux/fir  
Have 2-7x decimation, SAC docs say 7x is occasionally unstable

**Action Item 2017.03: Put together a small working group to develop a short decimation summary paper. Suggested that it would be useful to engage the ObsPy group. – Crawford**

WG-5 web presence

**Action Item 2017.04: Send out request for new and updated content for the Web Page (QC tools, stationXML, inventory) - Beaudoin**

Survey of available methods for creating and verifying stationXML

Tim: PDCC could be made to make StationXML, they are waiting to see how Nexus works out before updating. Finds PDCC awkward to use, hoping that a better new tool will come out.

Bruce will send out request for tools available to make StationXML, goal is to provide a list for others.

PIC-IRIS/PH5 – HDF5 based archive format. Tools to ingest SEG-Y, SEG-D, SEG-2, mseed, meta-data, and resp files. SEG-Y output via web-page interface. Mseed, StationXML output through FDSN compliant web-services Station and Dataselect. QuakeML will be added soon with Event web-service.

(Information at <https://github.com/PIC-IRIS/PH5>)