

Task Team 6

Site Representation

- Exists to facilitate communication between sites, LC and WG-ARO
- Each site has a representative on TT6
- TT6 desires a shared member from TT4:
Site Assessment, Expansion, and Certification (on hold)
- Each site encouraged to provide knowledgeable members for other TTs

Task Team 6

Site Representation

- Exists to facilitate communication between sites, LC and WG-ARO
- Each site has a representative on TT6
- TT6 desires a shared member from TT4:
Site Assessment, Expansion, and Certification (on hold)
- Each site encouraged to provide knowledgeable members for other TTs

TT6 Overview

- TT6 desires a shared member from TT4:
Site Assessment, Expansion, and Certification (on hold)

Facilitate communication between site representatives and TT4 to better understand the processes of assessment, expansion and certification

New sites are asked to provide TT6 with a site representative

- new site representatives benefit from TT6 being connected to TT4

Will pursue after TT4 becomes more populated

TT6 Overview

- Exists to facilitate communication between sites, LC and WG-ARO

Questions

Problems

Discoveries

Spreading of best practices

Make recommendations on technical documents that affect site operations

- changes in measurement techniques, data flow, other procedures

Facilitate inter-site collaborative projects of mutual interest

TT6 Overview

- Each site has a representative on TT6

Alternates are needed for all and in particular DOE/ARM??

Belay Demoz	Beltsville, US	co-chair	J. Everette
Dale Hurst	Boulder, US	co-chair	June Wang
Arnoud Apituley	Cabauw, NL		
Martin de Graaf	Cabauw, NL		
Paul Johnston	Lauder, NZ		Will Send a name
Rigel Kivi	Sodankylä, FI		Eskoyro
Gelsomina Papalardo	Potenza, IT		Fabio
Hakaru Mizuno	Tateno, JP		Kizu
Rolf Philipona	Payerne, CH		Ruffix(??)
Doug Sisterson	DOE/ARM Sites (5)		Jimmy Boyle(??)
Holger Vömel	Lindenberg, DE		Franz
Li Wei	Xilinhot, CN		????

TT6 Overview

- Each site encouraged to provide knowledgeable members for other TTs

Each site should have wide-ranging representation within GRUAN

TT3 encouraging sites to volunteer experts in trend determination and analysis, in situ instrumentation.

Any takers?

Doesn't exist anymore.

Capabilities ...

<i>Site</i>	<i>Prod.</i>	<i>Freq.</i>	<i>Ref.</i>	<i>GP S</i>	<i>MWR</i>	<i>Grnd Check</i>	<i>Dist.</i>	<i>Elev.</i>	<i>Lidar</i>
Payerne	SRS		SW	EU					
Xilinhot	<i>GTS1</i>		<i>Rs92*</i>	?					
Boulder	RS92		CFH/ N	S/N					
Lauder	RS92 +		CFH/ N	Soon (Dec)					
<i>HU- Beltsville</i>	<i>RS92</i>		<i>CFH</i>	<i>S/N</i>					
Potenza	<i>RS92</i>		?	?					
ARM (X5)	<i>RS92</i>		CFH	<i>S/N</i>					
Sodankyla	RS92		CFH	EU					
Cabauw	RS92		CFH	EU					
Lindenberg	RS92		CFH	EU					

EU – European network N - NOAA network S - Suominet

Dist. – distance from closest NWS station.

*** Will start soon.*

Key requirements for GRUAN sites: Who is capable?

What other network do you belong? GUAN, GAW, NDACC, BSRN and SHADOZ.
What special program do you offer GRUAN?

-

Managing Change?

- 1) Would be costly. Is this in line with your agency practice? Limitations?
- 2) GRUAN operators should err on the side of collating *as much meta-data as possible* about measurement systems even if no immediate use for those data can be envisaged. In all cases sufficient meta-data must be available to tie the new instrument via a comparable traceability chain back to the same recognized standard as the old instrument. – P.18

3) The expectation is that standard operating procedures for all instrument types within GRUAN will be archived at the Lead Centre and changes in standard operating procedures at individual stations will be managed through the Lead Centre. Are we all in agreement?? P.18

4) LC dictated “top-down” approach: Page.19. Make sure you understand this.

5) Every GRUAN station should measure, collect, and provide all information necessary to establish an uncertainty budget for every measurement. How much??

I feel “meta-data” limits should be loosely defined

- 5) . Every GRUAN station should measure, collect, and provide all information necessary to establish an uncertainty budget for every measurement. How much?? I feel “meta-data” limits should be loosely defined

- 6) To this end, optimal standard operating procedures should be developed at the GRUAN Lead Centre and then disseminated to all sites making that particular measurement.

7) Future plans: ***Moving beyond priority 1 variables (P. 28)***

8) *Page 31. See page for detail too many to list here.*

9) *Did you sign an MoU?*

10) *Periodic site visits – page 32.*

11) *Closest GUAN (or X2/day station) and representativeness.*

12) *Page 36.: What is your ground truth? Calibration procedures – should be uniform across the network.*

13) *Instrument collocation vs topography for each site. Justification for each site should be done – in collaboration with GATANDOR perhaps. Page 37.*

ARM: Objections to the data flow criteria.

COMMENTS ON GRUAN MANUAL (from Doug)

GRUAN Handbook: from ARM's perspective:

1. Key Requirements: MINOR ISSUE. Although, for now, only the first two key requirements are deemed initially required, ARM does not launch sondes at local 00 and 12 at any of its sites. Our current requirement is 00Z and 12Z. Argonne has an agreement in place with NOAA for the provision of cryogenic frost-point hygrometers at the ARM sites structured over time.

2. Changes in data processing algorithms: MINOR ISSUE. ARM uses publishing retrievals in the open literature as validation for processing data. ARM also provides the zeroth order raw data, which is maintained in its Archive. It is acceptable that GRUAN might choose a different retrieval for processing ARM data. I would assume that all GRUAN stamped data would be archived and made available to users at NCDC. The ARM processed data would be made available to its users through the ARM Archive. We would just need a good description of data at both ARM and NCDC so that users are not confused. This, of course, applies to any GRUAN site that has other sponsor obligations.

COMMENTS ON GRUAN MANUAL (from Doug)

GRUAN Handbook: from ARM's perspective:

3. Gap fill: MINOR ISSUE. As a policy, ARM does not gap fill missing data. Users can do whatever they wish to fill in data holes.

4. Site Certification: CRITICAL ISSUE. ARM will not forgo locally established operating procedures and will not adhere to standard operating procedures imposed by the Lead Center. The ARM Climate Research Facility is a US Department of Energy (DOE) national scientific user facility and therefore operates under specific guidance set forth by its sponsor: the US Department of Energy. While I understand the intent of such a requirement, the language will have to be considerably softened or exceptions identified for ARM to participate.

COMMENTS ON GRUAN MANUAL (from Doug)

GRUAN Handbook: from ARM's perspective:

5. MOU requirement: MAJOR ISSUE. (Just ask Howard Diamond the hoops DOE and NOAA had to go through for the Cryogenic Frost-Point Hygrometers at ARM Sites!). My guess is that any such agreement would have to be with DOE and by the time the layers got done with it, the agreement would have so many exceptions that it would not be much of an agreement. I understand the intent, but for GRUAN sites that have sponsors and clear responsibilities, a formal agreement will take a long time and would not be worth the effort unless there are exceptions to this mandate (which feeds back to #4 above.)

Doug

Notes from Task Team of Site Representatives Breakout Meeting, 2 March 2011

Sites represented:

***Beltsville (Demoz), Boulder (Hurst), Cabauw (de Graaf), Lauder (Johnston),
Lindenberg (Vömel), Payerne (Philipona), Sodankylä (Kivi), Tateno (Mizuno),
Xilinhot (Wei)***

Others attending: Bodeker, Rannat, Sommer

Sites not represented:

***Potenza (Madonna attended GATNDOR meeting)
DOE/ARM (no representative present at ICM-3)***

Discussions and Actions

- An incomplete list of Task Team alternate members was compiled.
- A matrix of sites and their current instrumentation was proposed for the GRUAN website. **Lead center to compile information already available, circulate, with individual sites to correct/update their information.**

- **Task Team communication methods discussed.**
Only e-mail used to date. Blogge suggested for thread development. LC can create WordPress blog specific to site issues; accessible by site reps, LC, WG-ARO.
WP blog not accessible to Xilinhot. GoogleDocs also suggested.
Decision of specific blog host deferred to LC.
- **Question of how a widespread site evaluates collocation of measurement locations:**
GATNDOR working on statistical evaluation method. Each site will be responsible for applying method to their own data.

GRUAN data vs. data submissions to other programs/networks:
Should submitting data to GRUAN preclude data processing procedures/requirements for other programs/networks, thus preventing two different versions of data files?

GRUAN discourages non-GRUAN processing and archiving, suggests submitting GRUAN-standard data to other programs/networks. This may be problematic for some sites, DOE/ARM specifically identified.

- **Change management:**

- **Cost of changeover studies may be prohibitive to some sites.**

It was suggested that any changeovers common to GRUAN sites should be studied at 1-2 sites and results shared amongst sites.

Evaluation of costs vs benefits for change management studies is important. If costs of change are prohibitive, remain with old technology unless it is becoming obsolete.

- **Change management:**

Should sites undertake changeover studies or should manufacturers be asked to do this and their results trusted?

Majority voices “no”. Sites may rely on other sites’ test results if they the resources to perform tests themselves. GRUAN long-term stability objectives are put at risk if only manufacturers’ results are trusted.

- **Meta Data:**

“submit as much as possible”. Which values are essential, which are not?

RSLClient won't submit data if certain essential fields are left blank. LC will try to make it more clear which fields are essential.

- **GRUAN-mandated procedures:**

Language needs softening because some sites/programs have set procedures that they will not change. Can LC provide transformative algorithms to convert data to GRUAN standard? Can acquired data based on non-GRUAN procedure be transformed into GRUAN-usable data? (Example of ECC ozonesonde using 0.5% KI solution instead of (theoretical) GRAUN standard 1% KI solution.)

Yes for this example but probably not for every procedural deviation at sites.

- **MOU between sites and GRUAN:**

language in manual to be deleted

- **Periodic re-certification of sites:**
every 3-5 years, looking for adherence to GRUAN measurement scheduling and best practices.

Ground Check:

- **Uniformity of procedures between sites.** Some sites may have traditional pre-flight checks that conflict with GRUAN requirements. TT1 working to provide guidelines for ground check, including essential and suggested procedures.
 - **Sites will evaluate and discuss guidelines once made available.**

Adding/Upgrading instrumentation at sites:

- **question of instrument prioritization.** E.g., how to best increase the measurement capability of site? Priority 1 ECVs should be targeted, including some redundancy.
 - **LC to create generic advisory on instrumentation priority list.**