ISTI all hands call Thurs Sept 4th @12Z (14CEST, 13BST, 8EDT)

Present on call: Peter Thorne, Steven Worley, Jared Rennie, Kate Willett, Jay Lawrimore, Richard Chandler, Victor Venema, Andrea Merlone, David Lister, Xiaolan Wang, Blair Trewin, Hermann Mächel,Akiyo Yatagai,Lisa Alexander,Rachel Warren, Antonio Possolo, Stefan Brönnimann, Colin Morice, Michael de Podesta, Renate Auchmann, Robert Dunn, Albert Mhanda

Apologies in advance: Enric Aguilar(EA), Ian Jolliffe, Matt Menne, Waldenio Almedia, Rick Crouthamel, Juerg Luterbacher, Albert Klein Tank

Actions arising

ACTION: Databank WG to consider viability of survey of degree to which NMSs have open archives and under whose auspices it may best be achieved. CCl?

ACTION: Jared to write blogpost on nrt updates following the September update.

ACTION: All to provide any information they have on parallel measurements that have been undertaken to Victor Venema and Renate Auchmann to support the development and utilization of a parallel measurements database.

ACTION: Kate to write a blogpost on the benchmarking concepts paper when formally published.

ACTION: Jay to advise when NCDC basement inventory is available online.

ACTION: Databank and benchmarking WGs to submit progress reports by end of October.

ACTION: All groups to aim to have call by mid-October

Open invitation to all to contribute potential posts to the blog to highlight work either done under ISTI auspices or of interest to ISTI. Posts can be sent to Peter. Blog is at http://surfacetemperatures.blogspot.no/

Agenda

1. Updates from Steering Committee

1.1. SAMSI workshop - Peter

Over ten days in July about 40 ISTI participants and applied statisticians met in Boulder. We split into 4 groups plus left Kate in a broom cupboard (metaphorically) to work on the benchmarks. The groups considered wide ranging aspects of the homogenisation of the databank holdings and some progress was made on understanding and on the development and / or refinement of methods. The proof of its value will be in a year or so if there are new and novel techniques forthcoming. I will post the meeting report and blog about it when it appears. It is currently with the co-sponsors for review.

RW: Can you put a link up to the blog you'll be using/ writing to?
PT: http://surfacetemperatures.blogspot.no/ (contributions always welcome - send guest posts to any editors!)

1.2. General talks / posters - Various

PT presented an update at the annual AMS meeting in Atlanta back in Feb.

PT presented an update at CLIMAR (surface marine community) in Asheville in early June

PT/JR presented a poster at Earthtemp

AY presented a talk at AOGS in August
Akiyo's feedback by email:

> "The session was relatively small, but we got 20 - 50 people during the two sections (AM2 and PM1 of Friday).
>
> Anyway, after my talk, one good question came from one of the co-conveners (hydrologist).
>
> ・Different from precipitation analysis, for temperature analyses, meta-information, such as movement of location (station) should be more important. How do you manage such information?
>
> (My answer) We need to closely collaborate with NMHs, because they have such historical information. Regarding the ISTI, I have once asked how they manage metadata including its format. They (we) of course recognize the importance of the metadata. As for the format, their (ISTI) answer was simple text file.
>
> After the session I discussed with the co-convener who asked the above question. We agreed that, it is important to release a very good data, and then users will help and/or give feedback to the data providers/creators.

He mentioned at a session which focused on meteorological downscaling, APHRODITE precipitation was used as a standard. The processes such as deducing metadata and quality control are labor-intensive. So, it is very important to release a good data and get many users in early stage. APHRODITE Water Resources - http://www.chikyu.ac.jp/precip/.

I emphasized that ISTI released the first monthly data. There are no listeners from NMHSs in Asia, but some participants checked this wonderful station temperature data. We are on the right way and let's advertise the new release of ISTI temperature database!"

EA visiting SENAMHI, Perú now to cooperate in CLIMANDES project, homogenizing a nearly 300 stations dataset (temp, precip). Gave a talk yesterday to a more general audience (20-30 people) in the service and mentioned ISTI databanks and benchmarks.
SB: CLIMANDES is a Swiss-Peruvian project on establishing and strengthening data services in the Peruvian Andes. Another Swiss-Boliviian-Peruvian project (DECADE) has a similar work for Bolivia (200 precip stations, 100 temperature stations). Much of the digitising work has been done by a large PPCR project (https://www.climateinvestmentfunds.org/cif/node/4); the data should be available at some point.

EA gave a talk in Budapest in May

1.3. WMO - Blair

The 4-yearly meeting of the WMO Commission for Climatology (CCl) took place in Heidelberg, Germany from 3-8 July, preceded by a Technical Conference from 30 June-2 July. BT gave a presentation on ISTI to the Technical Conference, which by coincidence occurred on the same day as the databank release. Audience response was generally positive.

On the data availability front, WMO Executive Council has approved a resolution on the free exchange of climate data and products which will now go to WMO Congress in 2015. An effect of this resolution (if approved) will be to commit WMO members to make freely available daily historical time series for (at least) their RBCN and GSN stations. The full text of the resolution is available through a link from the blog post below.

There are also moves towards extending the monthly CLIMAT message to include daily data from each day of the month. This is something we have been pushing for for some time and will support the near real-time updating of an ISTI daily databank (once that databank exists).

Numerous data rescue initiatives were also outlined at the meetings, including the potential for a crowdsourced data rescue portal.

CCl has also created a new Task Team on Homogenisation. Among the members of this team are Matt Menne and Victor Venema (co-chairs), Blair Trewin and Xiaolan Wang. It is expected that this TT will work closely with ISTI.

See also http://surfacetemperatures.blogspot.no/2014/07/the-wmo-commission-for-climatology.html

1.4. BIPM - Peter

I went along to BIPM (International Bureau of Weights and Measures) as an invited guest to the CCT (Consultative Committee on Thermometry) meeting and provided two talks which touched on ISTI. I somehow ended up roped in as an external expert on a new group to be led by Andrea Merlone on environmental thermometry. MdP member too.
Andrea: At BIPM only thermometry and chemical have environmental task groups. Main goal is to address needs of traceability and uncertainty quantification expressed by communities outside metrologists. Hosting members outside NMIs (National Institues of Metrology) is therefore fundamental. There may be some funded work opportunities on e.g. reference measurements. Similar Task Group on Environment under EURAMET. Two upcoming EU calls of interest (2016 - 2019).
There will be further discussions at MMC in Brdo, Slovenia 15-18 / 09 .

2. Updates from WGs and task teams

2.1 Databank WG - Jay / Jared

Operational Readiness Review of Version 1 of the Monthly Temperature Databank was completed and sign-off received and Stage 3 of the Databank Version 1 was released. Journal article by Jared Rennie et al. in Geoscience Data Journal is available in early view at http://onlinelibrary.wiley.com/doi/10.1002/gdj3.8/abstract .

Release was highlighted on NCDC “News” online as well as at NERSC.
SW: Also posted on the Research Data Archive at NCAR http://rda.ucar.edu/
PT: It was also highlighted by NPL in late August and alluded to in a Guardian article on Julia Slingo.
KW: Also Met Office research news webpage:
http://www.metoffice.gov.uk/research/news/2014/isti-databank-release

Monthly updates of the most recent month’s data are now being made to the Databank from GHCN-Daily source and global CLIMAT data.

We will be incorporating new sources over time and performing a remerge on an annual basis.

49 sources with slightly more than 32,000 stations are in version 1. The GHCN-Daily dataset provides approximately 85% of the stations. At least another 10 sources will go into the next merge (version 1.1) within the next 6 to 12 months.

This includes responses to the letter sent out by the WMO requesting countries support the ISTI Databank effort through contribution of new sources.

Now that the monthly databank is complete the Databank Working Group is looking toward the future with a focus on developing a Daily timescale databank. Given the existing attributes of the global daily dataset GHCN-Daily, there is little need to reengineer a new daily merging algorithm. So will completely leverage off GHCN-D as foundation for daily databank.

Stage 1 and Stage 2 versions of GHCN-Daily sources for ISTI already happens internal to NCDC as part of the GHCN-Daily processing system. Some of these are redundant to the current databank, but most are not.
The existing NCDC daily merge algorithm will serve to create Stage 3 data. GHCN-Daily merge algorithm is currently analogous to monthly merge algorithm (i.e., uses station metadata matching/data matching)
ISTI side ends at Stage 3.

GHCN-Daily QC algorithms produce NCDC's Stage 4 product (this also already happens).

Other benefits of leveraging off of GHCN-Daily include that GHCN-D is multi-element and these are used jointly in data matching. Would be a step backwards to focus on temperature only.
But by providing the Stage 1 and Stage 2 data we will permit an alternative merge algorithm if another center wants to commit resources to that.

For submission of new sources periodic "drop-box" sources are okay, but there are still unexploited web-service databases out there that could be exploited using the GHCN-Daily update/reprocessing paradigm.

In coming year focus will be on incorporating new daily sources into GHCN-D as time permits. There may be some temperature only stations in GHCN-D.

MM notes also that it probably makes sense for the databank component of ISTI to come under a larger umbrella effort that encompasses all station elements. It is not clear exactly what this umbrella is yet, but we want to avoid the "balkanization" of Land Surface databank building (e.g., having separate holdings for temperature, for pressure, for snowfall/snowdepth etc.). The CCl President is supportive of recognizing a larger data collection umbrella. Keeping GHCN-Daily as multi-element ensures that we at least aren't proactively contributing to a fragmented database structure.

ALSO - Scott Woodruff, Project Manager for the International Comprehensive Ocean-Atmosphere Data Set (ICOADS) has asked that I pass along a proposal that came out of an ACRE meeting held in Toronto last week. A number of sources of land data are becoming available - a mix of elements and timescales. The data holders would like to have a place to archive the data in a common format. Scott and Gil Compo are suggesting they could do a pilot project to place land observations in IMMA format -- although originally designed for ICOADS marine

data it is potentially suitable for land observations with some additions. Potential benefits of placing land data in IMMA format include:

- To help facilitate greater interoperability between basic synoptic land station and marine meteorological data, e.g. extending to the possibilities of more shared software, user data-access infrastructures, and documentation efficiencies.
- To provide a robust, extensible, international agreed, and archive-ready ASCII format to serve as the "target" foundation format for ongoing data rescue efforts, etc.
- To provide a working mechanism (i.e. through the Suppl attm feature) for the permanent archival preservation of all the original input data.

This request makes it clear there is a growing need for an expansion of the capabilities of the ISTI Databank. Should we attempt to combine and leverage these efforts?

An example of some of the data - from Vicky Slonosky (ACRE-Canada: Canadian Volunteer Climate Data Rescue Project, Canada): Historical Data Digitization in Canada: recovery of daily climate data from the 18th and 19th centuries Some of the weather
logs: https://sites.google.com/site/historicalclimatedata/canadian-historical-data-typing-project
XW: Many thanks to Jay for talking about this. I was the local organiser of ACRE7 workshop and was planning to talk about this. Thanks.
PT: Yes, we should participate if there is resource to do so (funded or like most else we do unfunded volunteer ...). But the formatting issue is the 'easy' (its not really easy - easiness is used relatively here) part. The more vexed part is merging the sources, reconciling and integrating vertically (hourly, daily, monthly) so that they sum appropriately and horizontally (temperature, precip, pressure, humidity, wind, snow depth etc.) so that the variable set is internally consistent. The long-term aim has to be about substantively more than just a question of formats - it has to be about ability to integrate information and analyse information seamlessly. We need one unified, integrated, reconciled database that covers all elements and all temporal resolutions and is internally consistent. As Matt says, GHCN-D is a great start.

Other updates:
Realclimate post -
http://www.realclimate.org/index.php/archives/2014/07/release-of-the-international-surface-temperature-initiatives-istis-global-land-surface-databank-an-expanded-set-of-fundamental-surface-temperature-records/

Feedback received from users and any innovations that may arise as a result?
JL: Many users want a qc'ed version to work with.

We will need to perpetuity archive the v1 release and associate it with the benchmarks that will mirror it.

NRT and periodic updates plans

[NRT = Near real time]

New sources to include in next version increment?
Eirik Forland reports that there is a new round of homogenization for Norwegian Precip. series. Also, the NORDHOM Project will produce Scandinavian series by the end of the year. [DL]
The HISTALP series are being rehomogenized and updated etc. (Inge Auer expects data to be available early 2015). [DL]
* What do we already have?
- 300 UK Stations from the Met Office (Thanks to Christine Duffy)
- German data released by DWD (Thanks to Frank Kaspar) This is several hundred sites I believe? (more than 1000 in monthly, daily and subdaily resolution; station history is also available; HMä)
Frank may also visit NCDC in December to discuss with Jay and Jared.
- EPA's Oregon Crest to Coast Dataset (Thanks to Ron Washmann, 24 Stations)
- LCA&D: Latin American Climate Assessment and Dataset (Thanks to Albert Klein-Tank, 148 temperature stations)
- Daily Chinese Data (Thanks to Xiaolan Wang, 380 Stations Homogenized, 190 raw stations)
- NCAR Surface Libraries (Thanks to Joey Comeaux, unsure on number of stations)
- Stations from Meteomet project (Thanks to Peter Pavlasek, 240 stations)
- Libya Stations sent by their NMS (Thanks to Director-General AbdElfatah H. Shibani, 9 Stations)
- C3/EURO4M Stations (Thanks to Manola Brunet, 80 Stations)
- Additional Digitized Stations from the University of Giessen (Thanks to Juerg Luterbacher, 10 Stations)
- Homogenized Iranian Data (Thanks to Fatemeh Rahimzadeh, 50 Stations)
XW: Are daily Canadian data included here? If not, we have 300+ stations homogenized and we can send in both raw and homogenized daily temperature data.
JR: Not here, most of the Canadian Stations are included in GHCN-D, but can double check to see if new stations can be added

PT: I believe that Meteoswiss opened their archive up. Does anyone have further info / know how we can get hold of these? I also signed an agreement with Meteoswiss over 5 long-term sites but have heard nothing. Perhaps our Swiss colleagues have more info on this?
SB: Has not happened yet. MeteoSwiss has delivered 7 long series directly to ISTI post-1864, Renate has submitted the pre-1864 data. The new "Swiss Meteo Law" is under consultation and it may take another three years or so until we will see unrestricted access. Currently near-real time updates require a contract, things will hopefully improve soon.

BT: quite a few countries have their whole databanks or large parts of them online in some form - has anyone tried to do a survey of these and make contact with those countries to incorporate into ISTI?

VV: Such a survey would also be useful to make the new sharing-culture visible to the countries that still close up their data.

ACTION: Databank WG to consider viability of survey of degree to which NMSs have open archives and under whose auspices it may best be achieved. CCl?

PT: When will the cut-off be for folks to get new sources to you in next increment?
JR: February 28, 2015. Next merge freeze of sources end of Feb, then testing update by spring 2015
Any leads: data.submission@surfacetemperatures.org

Anyone know of other potential sources recently released?

WOW? (Met Office and BOM)
KW: WOW may not be standardised enough - includes amateur submissions but I think each one is graded as to its quality so could just incorporate the high quality ones.
http://wow.metoffice.gov.uk/ (BT - agree that lack of standardisation likely to be a problem. Experience with Cocorahs in US suggests WOW likely to be more useful for analysing individual extreme events than for long-term data sets).

NRT updates by 11th of month..

PT: Now that we are undertaking NRT updates can Jared prepare and publish a blogpost detailing what is added and how (by what date and how frequently) and also (perhaps as a second blogpost) any issues users have found and fixes applied as a result making appropriate hat tips to the originators.

ACTION: Jared to write blogpost on nrt updates.

Parallel data

VV: Parallel data:
* Recent progress (flyer for data providers, database structure) described on: http://variable-variability.blogspot.com/2014/08/database-with-parallel-climate-measurements.html
* Proposal for file format: <https://drive.google.com/file/d/0B7sJmg1UW9uGdXZ0M3BuRU54ckk/edit?usp=sharing>
* We have a list of potential data sources: <https://ourproject.org/moin/projects/parallel>, more are welcome and real data contributions also, especially this month.
BT: I think this is something that the new WMO TT could involve itself in, too.
VV: Yes, that is something we should propose.
AM: MeteMet and C3 performing parallel observations with calibrated and un-calibrated instruments. Scope: evaluate effect and time required to exchange instruments and achieve full traceability. Talk at MMC 2014

VV: Great those are the kind of parallel measurements we are interested in, if the calibrated measurements become the standard, we need to know what kind of non-climatic change they will cause.

VV: All elements, focus on instruments (set-ups) that were historically used.

ACTION: All to provide any information they have on parallel measurements that have been undertaken to Victor Venema and Renate Auchmann to support the development and utilization of a parallel measurements database.

EA: I have spoken with Clara Oria (SENHAMI, Perú) who is a member of the new CCl ET on Homogenization about AWS-CON comparisons. She provided me with a list of 35 stations she is willing to share with the databank. They have an overlap of 5 years. They're looking forward to study and describe the potential bias and approaches for correction.
XW: we have some stations of 2-year overlap (between manned and automated stations), which we can contribute to the paralell database. This database would be particulrly useful for benckmarking homogenizaton/adjustment methods. I think the WMO TT should definately involve itself in.
VV: Thank you. Yes, an important reason to start this project was that we did not realy know how that generate a realistic daily benchmark dataset.

KW: DOI issueing - either for databank as a whole or individual component parts? Discussed as one way to help all contributors get recognition for their effore/citations for datasets? May encourage more to submit to the parallel databank?
CM: There's been some discussion of this. The ISTI databank has a DOI. Can the databank working group provide assistance/advice in the procedure of assigning DOIs?
JL: Our Archive Branch personnel handled processing/acquiring the DOI. They can provide advice on how to go about the process. I can provide a contact.
KW: That may be useful for us at the Met Office too - will be in touch Jay.
VV: Interested in DOIs for individual parallel datasets as incentive to contribute. Another incentive is that the datasets will be published after writing a/the firstl paper(s) with contributors
CM: We also have contacts at BADC (British Atmospheric Data Centre) who should be able to assist. KW: Ah, cool - a little closer to home.
SW: We have experience assigning DOIs to datasets in the Research Data Archive at NCAR. I would be happy to contribute knowledge and possibily serve as an archive location to support the DOI long-term reference location. RA: Thanks, Great! Victor and I will contact you.

2.2. Benchmarking and assessment WG - Kate

2.2.1. Concepts paper

This was submitted to Geoscientific Instrumentation, Methods and Data Systems: http://www.geosci-instrum-method-data-syst-discuss.net/4/235/2014/gid-4-235-2014.html

Discussion period/review now closed. We had three generally good reviews. I have now revised the manuscript, resubmitted and am awaiting a response.
PT: Response came in on Saturday: Published :-)
KW: Final files submitted so - yes, hopefully out very soon.
PT: Can you run a blogpost when it does come out officially?
VV. Would be interested in a repost at Variable Variability.
ACTION: Kate to write a blogpost on the benchmarking concepts paper when formally published.

2.2.2. Progress with creating benchmarks

We aimed to have these completed by the SAMSI/IMAGe workshop in July but I could not get the Clean World code working sufficiently in time. With help from Richard Chandler I modified the original VAR+GCM method to deal with 20000+ stations. There are issues with short/gappy/non-overlapping stations and station quality in general in terms of obtaining the VAR parameters for each station. This has been rectified by using distance as a proxy to estimate cross-correlation at lag0 and lag1 time steps. We are currently investigating slightly more complex Matern functions to bring in elevation as well as distance. Future versions may being in aspect and other station features.

During the SAMSI/IMAGe workshop much progress was made on the clean worlds: equation fixing (still more to do here), building the distance function, speeding up the code to run in minutes rather than hours, tweaking parameters to improve the fit to the real data, choosing statistics to measure how good the Clean World data are:

- station autocorrelation (a little too high) - should be higher than real data that still contain random and systematic error, but not much
- station-neighbour cross-correlation (a little too high) - should be higher than real data that still contain random and systematic error, but not much
- station-neighbour autocorrelation (ok)
- station-neighbour standard deviation of the difference series (a little too low) - should be lower than real data that still contain random and systematic error, but not much

We plan to look at USCRN in the first instance to compare Clean World vs real statistics because these are the highest quality data known to be available at present.

Lots of discussion of inhomogeneity characteristics: do smooth gradual trends exist or are they actually a series of small jumps? seasonal cycles? Coding started at the workshop. Victor and Claude to visit the Met Office to work on this.
MM notes that from the Boulder workshop we have now documented some case studies on smooth vs jumpy trends for Phoenix and Reno in the USA (stations with huge UHI associated trends) and the evidence is coming down in favor of stair-step type trends. MM is currently working on another example and may add one more. Also, VV and MM plan to use detected changepoints results from runs of the PHA/BFA on the ISTI v1 monthly data to infer a realistic step change frequency distribution for seeding the error worlds.

Kate to visit the University of Bern to talk about ISTI and the benchmarks - meet with Renate and Stefan too.
Kate to visit Edinburgh Univeristy to talk about ISTI and the benchmarks

2.2.3. From here to benchmarks release

Still to do for the Clean Worlds:

- better choice of GCM for background trends and play with obtaining more low frequency variability from the GCM (at present its almost linear leaving station series with too little interannual/interdecadal variability)
- improve the distance function, possibly to include elevation, especially at lag1.
- test against high quality networks like USCRN
- write up methods in two papers (simple network case, whole globe methods)

Still to do for the Error Worlds:

- coding
- decision on jumpy vs smooth gradual trends
- decisions on types of seasonal cycles
- paper describing error world building methods
- paper describing the benchmarks for the first benchmark cycle?
  VV: You mean a paper on the validation measures?
  KW: I'm not 100% sure what this paper should be yet but a paper to introduce Benchmark Version 1 in its entirety might be useful (VV: I thought that was the concept paper). I suppose it may be more a technical document.

Still to do for the validation:

- choose a few key measures to assess for Level 1 (climate features) and Level 2 (changepoint detection skill)
- code up specific assessment tests
- design assessment report to be returned to users
- paper describing validation methods

IJ: Sorry I can't join the call today. A general question, perhaps as AOB: my understanding was that the original intention was that the validation criteria we use would not be known to developers. It now seems that we intend to publish our validation criteria before release of the benchmark data. Was my understanding wrong, or have we changed our minds, or have we drifted into a new position? Complete secrecy was clearly never going to be possible, but it would be good to clarify exactly how much information we want to make public before release.
VV: I had always thought the validation measures would be open. The homogenizer needs to know what the task is, which is described by the validation measures. Also some of the homogenizers are part of the benchmarking group and they should not have an unfair advantage over outsiders.

KW: Tricky - we don't want users to tune to the methods but I like the idea of everything being as transparent as possible and to some extent the measures of correct detection time/character and closeness of homogenised world to clean world is a reasonably obvious choice of validation measure so perhaps no real harm in releasing it. It may also depend how novel these methods are to cope with our particular problem - if they are novel then its nice to get them published so that they are described in full. Then, when we write up the first benchmark cycle results we can refer back to these papers rather than having to describe methods in full there.
VV: Time for a telecon on validation!

Aim to complete benchmark by New Year 2015.
KW: Now wondering whether to tie in to V2 of the databank in February 2015 - think its best to see how we get on and where we are at New Year. Should be reasonably quick to run the code on the new version of the databank once it is available and there would be more interest if the benchmarks are as up to date as possible I think.

2.2.4 Daily benchmarking

Rachel Warren's PhD
2 years in to the 3 years
Now has 4 regions of the USA clean and error worlds created - testing/tweaking to get them 'real enough'
Focussing on station moves, shelter changes and changing station density.
Should be made available in next month - people need to play with these (homogenise them) so that Rachel has some data to analyse for her PhD!
Going to be very useful as ISTI (or whatever umbrella) moves to daily and need for global daily homogenisation becomes imminent.

2.3 Data rescue task team

We have been quiet again. But will re-engage

PT repatriated a number of reels of Norwegian and Scandinavian tape to the Norwegian Met Service on a recent trip to Asheville. Also investigated the NCDC archives a little and has had nascient discussions over how we might have European / US collaboration on getting these archives imaged / digitized. Hopeful that we can arrange a fuller bilateral visit with more European folks and with these archives as the focus to explore what may be possible. There are 5 shelves 50m long and 6 units high of int'l hardcopy and a room full of int'l fiche/reels. NCDC recently acquired 5 boxes of tape material from German WW2 holdings which are pan-European measures and they believe may be unique. Much of the info may be redundant but much may be truly unique. (HMä) I think these may be the same data that Eric Freeman (cc: Devin Thomas) informed me about in 2010. A new CDMP Project was planned to "Recovering German stations occupied during WW2" and I wrote him that we have already the data from German stations in paper and digital (about 300) format. Additionally there are 40 stations from Norway, France, Czech Republic and Poland. The data is a precursor of the synop data named "Kopenhagen Schluessel" and is encoded.

Some of the station data started in 1931 and end in 1948. The observations are not regularly distributed, only few nighttime observations and no digits after the decimal point. Therefore it is difficult to estimate daily means.
PT: Jay, can Jason Cooper share with Hermann further details on what is on the tapes so these can be cross-checked please?
JL: I will talk to Jason.
Here is the list of German WWII microfilm. Albania, 1943-44, 1 reel Austria, 1934-45, 39 reels Belgium, 1940-44, 14 reels Bulgaria, 1941-44, 3 reels Czechoslovakia, 1938-45, 23 reels Danzig (Gdansk), 1939-44, 3 reels Denmark, 1939-44, 11 reels England, 1942-44, 2 reels Finland, 1941-44, 4 reels France, 1940-44, 66 reels Germany, 1933-45, 252 reels Greece, 1941-44, 12 reels Italy, 1940-44, 18 reels Libya, 1940-44, 2 reels Luxembourg, 1940-42, 1 reel Netherlands, 1940-45, 16 reels Norway, 1940-44, 18 reels Poland, 1939-44, 63 reels Romania, 1941-44, 5 reels Russia, 1939-44, 80 reels Spain, 1937-43, 3 reels Berlin Tempelhof, 1933-45, 5 reels Yugoslavia, 1941-45, 12 reels Station names and periods of record for each are recorded on the outside of each box.
JL: Additional information from Jason - An online inventory of NCDC basement holdings will be available - hopefully by the end of October or November. It was originally scheduled for end of August but was held up by hardware issues.

ACTION: Jay to advise when NCDC basement inventory is available online.

XW: during the ACRE7 workshop in Toronto last week, we also found some more old weather data for Canada and abroad (Germany, Russia, Portual...) in our library and climate data archive and will get to the inventory.

Juerg:
at U Giessen we are going on with our efforts to digitise subdaily meteorological data for different stations worldwide and covering parts of the 19th and 20th century.

SW: The Research Data Archive at NCAR has the ability to read 7trk and 9trk tape reels, if support is required to read these data please contact us.

3. General updates from call attendees on relevant activities / items

Please report anything of interest here that has not been covered above.

PT: Surface reference networks: There is some growing momentum behind this between CCl, GCOS and BIPM. They are not joined up but there is some encouragement that this is heading in the right direction.
CCT can send official reccomendtations to NMIs for any issue of dealing with metrology and of interest to ISTI.

KW: Recognition from WMO-GCOS, ISI-TIES, BIPM. We did seek official recognition from these bodies and I believe had some kind of positive response but no formal recognition. Can this be pushed further (or is it a brick wall) and then published on the website to give a bit more weight behind ISTI?

PT: We are recognized by each of these in what they feel is appropriate manner in each case. We will try to keep communication channels open with our sponsors.

4. Future plans

Next week PT will be attending a WCRP/IPCC invitation only future directions type meeting in Bern. Beyond the promotion in generality of the ISTI activity, data sharing, data rescue etc. is there anything specific that should be raised?
VV: Parallel data and the strong inhomogeneities in daily data?

Several ISTI folks (PT, RA, VV, AM) will present at MMC-2014 the following week. PT will give a talk on ISTI and chair a session full of ISTI relevant talks. For further details see the meeting site at http://www.mmc-2014.org/index.php/program and links therein.

PT has an oral slot at the EMS meeting in October.

We need progress reports from the two WGs by the end of October please. These do not need to be long but they do need to be done so we can prep an annual report in January.

ACTION: Databank and benchmarking WGs to submit progress reports by end of October.

Are there any meetings that we should definitely aim to have a presence at in the coming year?

We still have on our guilty list how we serve the data in a way that aids decision makers. This will become critical once we start getting datasets submitted.
VV: Visualisation & analysis of the (homogenized) data? (Or still too early?) PT: Moved this here as it is part of this issue. There was a third envisaged WG to do with serving and visualization of data products to end-users

Richard Chandler: Big database effort is ongoing in UK. They are looking to develop interface but may be IPR issues. Will pursue.

We should all be encouraging groups to undertake analysis of the databank and submit to the benchmarking exercise. This is key to the success of the whole thing. This should be something we all push for. Don't leave it just to to benchmarking and assessment group.

5. AOB

Please can WGs and task teams aim to have calls in next month to inform annual progress reports

ACTION: All groups to aim to have call by mid-October

We will have another all hands call in Jan 2015

MO led EU EO1 project?
Item on next all hands call?
MO members to consider and advise.