

MINUTES FROM WG-GGI COORDINATORS MEETING Heppenheim, Germany 26-27 July 1999

Attendees: Larry Hothem, Roberto Cervellati, Drew Clarke, Glenn Johnstone, Jan Cisak, Andres Zakrajsek, Alessandro Capra, John Manning, Jerry Mullins, Chiara Ramorino, Joern Sievers, Janet Thomson, Henk Brolsma and Heinz Bennat (for Regional Place Names project)

Drew opened the meeting at 0905am on 26 July and thanked Joern for organising the meeting and facilities at Haus am Maiberg.

Joern outlined the day's events and administrative procedures.

GEODESY (GIANT) PROGRAM

1. Permanent Geodetic Observatories (Project Leaders: John Manning, Australia, Hans Werner Schenke, Germany)

Key activities:

- Collaborate with other SCAR scientists to identify requirements for space geodetic sites
- In conjunction with SCAR working groups design an extended network of continuous geodetic observatories;
 - for manned stations
 - for remote locations
- Support continuation of O'Higgins VLBI for scientific purposes and as an important contribution to the global reference frame

spoken with BKG about this, intend going ahead with upgrade (Mk4 upgrade), Larry said there have been some problems with VLBI in Santiago (no longer funded by USA) - O'Higgins will be collecting during summer only. Hobart station will hopefully be year-round

- Establish priorities for on-line satellite data retrieval from ground stations

satellite (JAVID?) scheduled for launch next year, Italy may have to have contract with TVNZ for a specified channel. 2001 - hoping to have TNB open for winter - data will then come out 2 times/year

- Deliver regular space geodesy solutions to IGS and IERS

IGN have expressed an interest in getting both raw data and a solution. Alessandro asked if TNB could utilise the satellite link that McMurdo have for sending out data from TNB.

ACTION: Larry will liaise with Pat Smith (NSF) regarding this issue and contact Alessandro

- Post details of all permanent sites on web site
- Develop and publish GPS base station specifications

gone some way with this - on track for XXVI SCAR - best guidelines so far identified are the IGS ones - world's best standard at present. Not Antarctic specific and WG should try and use Antarctic supplement for Antarctic guidelines

DGPS standards - US Coast Guard is de facto standard and is now being considered (International Lighthouse Authorities) an international standard

- Evaluate accurate local ties between collocated techniques

request for information - not gone too far

O'Higgins, Swoya, Dumont (more if tide gauges included) requires specific follow-up action. Co-location measurement field required on web page information

check sheet required to "tick off" once completed

Larry didn't use a specification at Cape Roberts or Palmer - only used GPS and levelling (at CR)

5 benchmarks to check against - at Esperanza

John Hanna (US) is working on tide gauge data - more particularly Cape Roberts and Palmer

- Facilitate tide gauge data to Southern Ocean Sea Level Centre

ACTION: Janet will attempt to get a contact in the Ukraine for tide gauge data at Vernadsky

John has prepared summary report (see attached). Showed future remote sites.

Larry would like to see the continuous GPS sites include both attended and remotely running sites

ACTION: Include remote sites (eg. JPL sites in Marie Byrd Land and Dry Valleys) on GPS web page.

Whole project is in very good shape.

Henk mentioned tide gauge installation at Mawson. New gauge to be installed around Oct 99 - results should be known by the end of the year.

2. GPS Epoch Campaigns (Reinhard Dietrich, Germany, Andres Zakrajsek, Argentina, Kevin Dixon, UK, Michel Le Pape France, E Dongchen, China, Hector Rovera, Uruguay, Alessandro Capra)

Key activities:

- Establish guidelines for ground mark monuments

guidelines don't exist as yet - should be ready by XXVI SCAR

- Co-ordinate annual epoch campaigns

see report from IUGG - table of data results - more will come in from 99 campaign - overheads data from 95 campaign published and soon to be publishing 98 campaign

- Arrange orderly data archive and data access from these campaigns

Should make this by XXVI SCAR

- Undertake GPS connections to Tide gauge bench marks

possibly pull out as a separate project at XXVI SCAR. Henk said that AAD would be happy to be involved with that - also with John Hanna

std of installation and co-location techniques + data archive and management

Check out what BODC are doing regarding tying in GPS with tide gauges

AAD will be working with the Chinese

ACTION: Manning to develop draft proposal on tide gauge project for discussion at XXVI SCAR

- Deliver results to ITRF in conjunction with results from permanent observatories
- Notify results of each campaigns occupations - on the web.

Project in good shape with the exception of tide gauge issue.

3. Physical Geodesy (Alessandro Capra, Italy, Lars Sjoberg, Sweden, Andres Zakrajsek Argentina, Hans Werner Schenke, Germany, John Manning, Australia)

Key activities:

- The collation of extensive data holdings related to topography, bathymetry and gravity as essential inputs to Geoid computation, includes:
- Data collection and analysis of gravity related data ground/airborne/satellite data.
- Collect relevant data from satellite altimetry
- Collaboration with International Geoid Service (IGES) and International association of Geodesy (IAG)
- Collaboration with SCAR WGs Solid Earth Geophysics, Geology, Glaciology
- Collaboration with BEDMAP, ADGRAV, RAMP as data for Geoid computation
- Participate in the ADMAP meeting and Earth Science in Antarctic, NZ, in 1999
- Preparing data base of information from collated information prior to computation

- Evaluation of EGM96 improvement over OSU91 in Antarctica
- Facilitate computation of improved tidal models
- Prepare for computation of high resolution Geoid model

Gravimetric data - big gaps in data, spoke with Rene Fosberg at IUGG regarding his experience in the Artic. Establishment of a Antarctic gravity Sub-commission within IAG for this - probably set up sometime in 2000 and will last for 4 years. Robin Bell's ADGRAV project has not been providing data. There does seem to be a number of different projects collecting airborne gravimetric data. Absolute and relative gravity metadata records required.

Database Management System - in progress, presented first draft of database at AGS99 and IUGG 99

Geodesy data is well covered

DEM - satellite altimetry data covers most of the country. Remy (France) has been putting together a DEM using ERS1 and ERS2 data. BEDMAP is using RAMP DEM.

Bedrock surface - BEDMAP again.

3-4 years for data collection - preliminary around 2002 or 2004

ACTION: Physical Geodesy page required on the web - Alessandro to liaise with GJ on this and supply information to go on pages.

ACTION: GJ to supply Capra with details / reports from BEDMAP workshop.

ACTION: Capra to supply Executive Officer with Database Management System presentation (PPT) for circulation to Coordinators.

ACTION: GJ to find out from Johannes Idhe information on his work with a continental DEM - need to have standardised dataset that BEDMAP, Physical Geodesy and other projects will need to use.

ACTION: Capra to write to DC regarding the formalisation of the proposals for IAG and IGES sub-commissions and getting SCAR WG endorsement for these to go ahead.

ACTION: Manning to follow up on report on the differences between OSU91 and EGM96 & let Hothem know

4. GLONASS Evaluation (John Manning, Australia, Larry Hothem, USA)

Key activities:

- Participate in the International GLONASS Experiment (IGES) pilot project with dual frequency GLONASS instruments at IGS collocated sites
- Retrieve data by satellite for analysis
- Analyse GLONASS orbits, reference frame differences and ground positions for geodesy and navigation applications in Antarctica
- Participate in presentation of IGEX results 1999
- Report on use of GLONASS for Antarctic Geodesy and navigation

Larry submitted a report

Good to be getting data from higher latitudes integrated into orbital solutions. Possible deployment of a receiver at Cape Roberts. 40 channels

GLONASS was very useful for the navigation of the SOAR project flown last summer on a pre-planned grid. Only uses 3 W of power - very good possibilities for using in remote sites.

IGEX meeting will provide the basis for a paper on the benefits / future (Sept 99 in Nashville, TN)

ACTION: JM & LH to produce paper on benefits & future of GLONASS - post Sept 99 meeting

5. Differential GPS Base Stations (Larry Hothem, USA, Hans Werner Schenke, Germany, IHO, Kevin Dixon, UK, Jan Cisak, Poland, Alessandro Capra, Italy)

Key activities:

- Identify global standards for use in marine DGPS transmission using Geodetic base stations
- Develop options for base station sites for shipping navigation coverage of Antarctic Peninsula.

NZ looking at using this for it's bathy survey data around Cape Adare

- Examine DGPS for real time kinematics and aviation applications in Antarctica and combination with geodetic accuracy base stations
- Liaison with COMNAP regarding transmission of GPS corrections at base stations.

1 or 2 m accuracies right down to cm accuracy - 2 locations so far identified (Palmer May 97 installation and McMurdo - signal repeated into the Dry Valleys) McMurdo site was initiated by UNAVCO

Neither of these bases uses the International Maritime Organisation transmission band - a separate band is used - around 400MHz

35 countries now transmit corrections - coordinated by International Association of Lighthouse Authorities

ACTION: Letter to Jack Sayers - intention is provide technical submission prior to Tokyo meeting. Possibly a progress report for submission before COMNAP meeting at Goa, India, Sept 99 (JM and LH) also find out if report is available on the web or in digital format (URL into letter)

ACTION: Technical submission to COMNAP - potential benefits for field, air and sea navigation for COMNAP meeting in Tokyo, 2000

6. Remote Geodetic Observatories (Larry Hothem, USA, Alessandro Capra, Italy, John Manning, Australia)

Key activities:

- Monitor and report on use of solar, wind and other methods of power generation for data logging information at remote GPS sites
- Monitor developments for remote retrieval of GPS data from remote sites by satellite communication techniques
- Collaboration with non-SCAR researchers

JPL activities in MBL and Dry Valleys. TNB data will be recovered mid-Oct
NZ working with US to put in permanent tracker (tied into tide gauge) at Cape Roberts

Watching to see how successful the technology will be - technology not robust enough yet. Some NSF funding for Autonomous Systems in Extreme Environments workshop (31 Aug - 2 Sept 99). Larry is hoping to attend this workshop.

ACTION: LH to represent GGI at workshop on Autonomous Systems in Extreme Environments

7. Information Access (John Manning, Australia, All members of GIANT program)

Key activities:

- Prepare general paper on GIANT activities for publication in Antarctic Science in 1998

Draft paper circulated for comment by JM - DC will read

- Ensure ready access to data from permanent observatories from host databases

Web work, epoch sites not quite up yet and tide gauge data still causing some headaches

ACTION: LH to pass Palmer tide gauge data contact to GJ

- Establish cross links from WG-GGI web site to individual geodetic sites
- Develop DIFs for geodetic data in conjunction with JCADM

GPS, DORIS, fed into AADC and then onto AMD - tide gauges again require further work

Absolute Gravity - JM has more info on this

- Establish newsletter/newsgroup communication for information distribution on Web
- Monitor web posting of photo idents on web sites

Henk making progress with survey control database on the web - available for demonstration at XXVI SCAR. LINZ have Antarctic geodetic database on the web

ACTION: JM to check on status of NZ work putting geodetic database on web. GJ to link into WG-GGI site.

- Continue interaction with representatives on SCAR Working Groups

JM gave brief presentation on ANTEC. Research sub groups within ANTEC have been developed.

EGS99 - 15-20 people - special symposium at EUG2000. Capra will be chairing and starting to organise in Sept/Oct this year.

- Develop IAG Commission X sub Commission on Antarctic Geodetic networks

IAG was very happy to have a report on Antarctic issues from the sub commission.

- Publish WGS84-ITRF information paper and circulate within SCAR (SCAR Bulletin)

Draft developed - road-tested on DC and further work is required. Will be submitted for publication in SCAR Bulletin and to COMNAP, etc - general distribution. Comparisons with other literature on the subject are required.

- Arrange an Antarctic Geodesy Symposium (AGS99) in Warsaw Poland in July 1999

Chinese attended AGS99 with paper on GeoSTAR. New Russian member of GGI was there. Successful symposium - attracted SCAR geodesists and not so many non-SCAR scientists (most were attending IUGG). Papers in digital format to be submitted by Sept 99. SCAR Report will be published by XXVI SCAR

ACTION: GJ to liaise with JCisak regarding digital papers and also liaise with Peter Clarkson regarding publication in SCAR Report and costs for printing.

OTHER BUSINESS:

Those Antarctic geodesy conferences / symposia since Concepcion - see JM report

New conferences proposed in the next 12 months - see JM report

OVERALL: Geodesy is going well.

GEOGRAPHIC INFORMATION PROGRAM

1. STANDARDS

(Project Leader: UK)

- Map and Data: (UK, Australia)
 - finalise map and data standards model;
 - develop draft map and data standards (data standard to be ISO TC211 compliant);
 - circulate for review by all members;
 - publish "SCAR Map and Data Standards" (hardcopy and web).

See report from JT. HB has provided JT with a detailed document of what AAD is using for symbology. HB will continue collaboration with JT. The hope is that by XXVI SCAR the standards and most symbology will be finished.

Italy has many different research areas and each is working to different standards.

Comments on the feature list document

Mapping into TC211 is required.

Will have to publish draft map symbology (Version 0) and then get feedback. (UK, US, NZ, AUS work)

ACTION: GJ to examine JT's coding and see how it maps into TC211

ACTION: HB to continue liaison with JT on symbology and will follow up on those specifications already developed by UK and US/NZ.

- Metadata: (Australia)
 - liaise with JCADM to develop guidelines and examples for preparation of DIFs (metadata records) for maps, digital data and aerial photography;
 - distribute guidelines and examples to members;
 - members to submit metadata to their National Antarctic Data Centres (or directly to the Antarctic Master Directory).

ACTION: DC to liaise with Lee Belbin regarding how to deal with metadata records in the AMD

2. PLACE NAMES (Project Leader: Italy / Germany)

- Composite Gazetteer of Antarctica: (Italy)
 - prepare and distribute guidelines for supply of names approval dates and descriptions;
 - members to provide corrections, additions, dates and descriptions;
 - discuss with SCAR inclusion of station and special area names, with SCAR as source;
 - process all updates and corrections;
 - maintain CGA web site with monthly updates;
 - add approval dates and descriptions as they become available;
 - publish addendum to first edition, and distribute at SCAR XXVI.

See report from Roberto

Updating now done every 3 months.

ACTION: RC will write to SCAR members for them to supply names data at the end of Sept 99. Deadline is the 31 Jan 2000 - information on features from A to F. Include request for permission to link CGA to their names committee web site.

Should station, SSSI's and special sites be included in CGA?? General feeling of the group was that a supplement should be published at XXVI SCAR and contain a separate chapter on SSSI's, special sites and stations (location will be the centroid of the polygon)

ACTION: GJ to supply CR with stations URL from COMNAP

ACTION: HB to supply the ~2000 AAD names corrections to CR as soon as possible for inclusion in the CGA. Where there is a large discrepancy between the new coordinate and the old coordinate the feature will have to be included in the Addendum.

ACTION: Add to the web that WG-GGI and RC/CR take no responsibility for the accuracy of the coordinates - also add into next hardcopy of the CGA. Obtain legal advice (GJ and DC to run with this, ADD and AUSLIG topo maps have this - as example)

ACTION: CGA editors will consider what to do with entries into Addendum

63 copies of Vol 1 and 2 have been distributed - about 60 remain.

ACTION: First of each quarter to be when the CGA web site is updated - CR (1 July, 1 October, 1 January and 1 April)

ACTION: HB will get in contact with CGA web administrator to provide graphical search front-end. Australia may be able to supply that. Also to supply functionality of outputting locations on a map for printing.

Example of A-F names to be presented at XXVI SCAR. Will be published in the language submitted - still needs consideration

ACTION: Has SCAR made a decision on what the working languages are? WG-GGI and the CGA coordinators need to consider this for the publication of the descriptions. JT

ACTION: Examples of what the guidelines are specifying should be developed - exactly as they would appear in the final publication.

ACTION: Come to XXVI SCAR with an example of just the letter 'A'

- Publications: *(Australia, Italy, UK, Germany)*
 - draft a paper on history and application of the CGA and circulate for review;
 - submit final paper to "Polar Record";
 - produce and distribute CGA brochure and publicise CGA web site.

DC requires a small number of clarifications and then it will be ready for publication.

ACTION: GJ to send a copy of the CGA flyer to HB

Elsiever to publish Vol.2 - or definitions.

ACTION: Defer this publication issue with Elsevier until definitions issue is resolved (XXVI SCAR)

ACTION: GJ to follow up this action to inform Elsevier of status

Policy on the distribution of the CGA digital database - adopt the policy as per ADD inc. how to deal with commercial applications.

ACTION: Draft policy on how to deal with distribution of the digital version of the CGA

ACTION: Propose to names authorities the policy for distribution - any objections, let CGA know

ACTION: Italy to advise if they can host the distribution function, UK can assist in setting up. WG web site could be a fall-back position if necessary.

- Regional Names: *(Germany, UK, Australia)*
 - compile draft reference map defining boundaries of Antarctic regions;
 - circulate to members for review and comment;
 - publish a final version for SCAR XXVI, and include a digital version in the ADD

Presentation by Heinz Bennat - BKG.

Example of Enderby Land entries in the CGA. Definitions of regions provided from literature research.

Integration of regional names with ADD is required.

Regions could be shown either along ice divides (as defined by Vaughan & Bamber) or lines along longitude

Definite and indefinite lines could be utilised

Heinz sat down with a copy of the ADD, the CGA, a satellite image and his new definitions - had quite a few problems in trying to construct regional names.

Investigations have revealed the complexities of the issue of regional names.

Two projects - high level area names & more localised / geomorphological feature related names.

Initial project should be for spatial definition for higher level areas ("Lands") 10's of features rather than 100's or 1000's. Also includes coasts - how far in & out do they go?

Proposal should be circulated to all GGI members for comment.

JS expressed concerns about the inclusion of political boundaries. These would not be documented - those that have historical connections - such as the Lands - should be defined (This is the main task of the project).

Overlaps, duplications should be recognised.

ACTION: Heinz's paper to be circulated as a working paper for all GGI members

ACTION: Draft map of high order features "Lands", "Coasts", etc and background information paper prior to at XXVI SCAR - for discussion in Toyko. JS and Heinz Bennat

DC thanked Heinz for all his work.

3. TOPOGRAPHIC DATABASE

(Project Leader: UK)

- Antarctic Digital Database (ADD): (UK)
 - members to provide new digital topographic data (from 1:250K to 1:5M);
 - complete ADD updating process;
 - produce new generalised map data;
 - publish Version 3 on World Wide Web.

See report by JT.

- Global Map: (Australia, UK)
 - produce SCAR contribution to the International Global Mapping project

HB mentioned that the Glaciology group (WDC Young) at AAD have been working on a new coastline from ERS1/2 data. Davis to Casey 80E to 110E and should be ready in about one month.

ACTION: HB will have to find out about the interferometric data to help in the delineation of the coastline and supply to ADD.

ACTION: Alternative distribution methods for the 1:5M and 1:10M products - Put on agenda for XXVI SCAR

ACTION: Hardcopy version of the manual - currently in PDF format. Would like to have a printed version. For consideration at XXVI SCAR

Version 1 of GM published in 2000. Version 2 might include bathymetric data - up for consideration.

4. KING GEORGE ISLAND GIS

(Project Leader: Poland)

- Scoping Study: (Poland)
 - members to advise Poland of currently available KGI geodetic and map data;
 - compile listing of all KGI geodetic and control points (UK);
 - compile index of all KGI maps, charts and digital datasets (Poland);
 - prepare proposal for development of KGIS, for consideration at SCAR XXVI.

Information from BAS regarding the list of maps available over KGI - the only contribution from members.

Geodetic control points index will be ready before XXVI SCAR - task remains with Kevin Dixon

AAD has provided the URL of the spatial data model for digital geographic data. Will liaise with Poland

ACTION: Jan Cisak to liaise with Australia regarding the spatial data model AAD has developed for possible adoption into KGIS

Jan has a copy of a paper that has been developed by Polish person on the GIS for Environmental Protection of Poland.

ACTION: Jan Cisak will ask the Polish SCAR member if the person who developed the paper on Environmental GIS for Poland and assist with the plan for KGIS in consultation with other scientists (biologists, geologists, glaciologists, etc)

Plan for KGIS will be delivered by XXVI SCAR

Bathy data should be included in the model.

ACTION: JC to advise DC of contact within Polish government for DC to write to regarding resources for KGIS

Good potential for the project - once the plan is in place.

China have the potential to digitise the maps and the WG will need to make contact (once the plan has been developed) for China to take on some role within the project.

5. GEOGRAPHIC DATA INTEGRATION

(Project Leader: Australia)

- Project Plan: (Australia)
 - small information paper and associated graphics to explain the project.
- Specifications: (Australia)
 - finalise data product requirements, in consultation with GLOCHANT;
 - develop data product standards, based on ISO TC211 and Global Mapping.
- Projects: (Australia)
 - promote specifications to key agencies and projects;
 - support integration of fundamental datasets, as appropriate.

GJ gave report to the group

ACTION: Technical specifications for datasets to follow, by XXVI SCAR

ACTION: Send AGDI brochures to Coordinators

ACTION: AZ to find out from HWS his work in Antarctic for GEBCO - coverage - only Weddell Sea area??

ACTION: Examine the possibility of including imagery as part of the "Data Type" characteristics

ACTION: CR to email GJ regarding Italian contact for bathy data.

6. MAPS AND CHARTS CATALOGUE

(Project Leader: USA)

- Revision: (Australia, USA)
 - review metadata model, incorporating ISOTC211, Geoscience catalogue (UK), and 5th edition of the SCAR Map and Chart Catalogue;
 - validate existing data entries, by circulation to members.
- Publication: (USA, Australia)
 - establish on-line catalogue and routine maintenance procedures (Aus).
 - publish 6th edition of SCAR Catalogue, for SCAR XXVI (USA).

Henk Brolsma gave presentation on AAD's work on digital map catalogue

ACTION: HB - Validation of what appears in the AAD on-line map catalogue will need to reconcile those entries in the hardcopy 5th edition.

Project is on-track.

ACTION: Draft of 6th edition circulated for validation prior to XXVI SCAR (once the comparison between the on-line version and the 5th edition)

Metadata being incorporated into on-line version 3 catalogue is DIF compliant.

ACTION: Corrections from Germany - JS to follow up initially on the web and then provide updated information to HB

Jerry gave a presentation on the hardcopy 6th edition of the Map Catalogue

Unique SCAR identifier for the catalogue? - as per CGA

Titles of fields of the 5th edition - should be carried over to the 6th edition

Publication Authority - needs to be brought up to the main field

Field for availability of digital data - currently found under "Availability" field on the DB.

ACTION: "Digital" (raster &/or vector), SCAR unique number, will need to be on hardcopy - JM Take the 5th edition field of "Quadrant" out.

ACTION: JM to send digital version of the 5th edition to Henk

ACTION: HB email GGI members for feedback on fields (deadline for feedback mid-Sept)

ACTION: JM to send letter to GGI members to update their countries maps - for inclusion on AAD's map catalogue (deadline 15 December 99) - letter to SCAR delegate and GGI member from DC or Peter Clarkson (letter to include guidelines)

ACTION: JM to receive updates by 16 Dec 99 for inclusion in 6th edition - all members

ACTION: Draft catalogue to DC by March 2000 - JM

ACTION: GJ to send address list of agencies receiving maps of Antarctica to Henk Brolsma

OTHER BUSINESS

SCAR Review

Clarke

Decision taken at XXV SCAR, ad-hoc committee to investigate and report back to Executive Committee - chaired by Phil Smith (USA). Drew outlined members. TOR are not well defined (as in XXV SCAR Bulletin, No. 133). Roberto has submitted his response through the Italian SCAR member. JS said he has passed comments to the German SCAR representative and in that he said GGI is effectively cooperating and necessary that the WG meets regularly (particularly in joint meetings with other WG's), current structure of WG works well. GGI "character" is a little different from other WG's as we "service" the other groups rather than doing hard science. JT - tangible products have been produced. Some WG's seemed to have stagnated. JS - ATCM meeting and participation from SCAR did not seem to figure prominently. SCAR executive needs to more actively promote SCAR activities. JM - project sub-commissions could be established and not meet for a whole week. National representatives are not always involved in SCAR WG activities.

Antarctic Remote Sensing session at ISPRS XIX Amsterdam 14-26 July 2000

Manning

No progress on this so far and needs no further action.

Policy decision on distribution of CGA and SCOUT software

Clarke

Guidelines for extra submissions. SCOUT software is now on an FTP site and freely available (paper from Chiara on how to access)

ACTION: RC/CR to make link to SCOUT software once the CGA database distribution mechanisms have been finalised.

Web site harmonisation with SCAR and other Working Groups + WG-GGI web site in general (inc. statistics on site)

Johnstone

GGI will go to <www.ggi.scar.org> when SCAR decides what the overall protocol will be.

Digital data distribution (see separate paper)

Johnstone

ACTION: Availability of digital data would be advised on the covering letter when the printed map has been sent to organisations - if they want a copy then they can contact the producer - GJ

ACTION: Link on the web site to new maps "Recent Publications" page and email to listserver (digital data availability) - GJ

Keep on developing the on-line Map Catalogue - this will help overcome the issue of maps not getting into the user community or getting sent to inappropriate agencies.

- ISO standard on Data Dictionaries (see separate paper) Johnstone
Circulated for information. Already discussed in relation to ADD and GJ has action item to assist JT with desyphering the TC211-speak.
- On-line aerial photography index Brolsma
Prototype has been developed at AAD. HB to liaise with JS and Heinz Bennat regarding the German developments in this area.
Digital indexes of aerial photography - request to GGI members - HB
- Outcomes from XXIII ATCM, Lima, Peru, 24 May – 4 June (see separate paper) Johnstone
For information.
ACTION: GJ to follow up with CEP regarding the Waste Disposal issue and data from ADD or ADDS
- On-line survey control database (see separate paper) Brolsma
Currently contains information only in AAT
ACTION: Proposal on geodetic and survey control on-line database picked up by GIANT program. Proposal should be ready for XXVI SCAR - JM
JM and LH to liaise with HB regarding the US on-line survey database (and advise what UNAVCO are doing on this)
- Protocol for accessing SCAR funds Clarke/Johnstone
Proposal endorsed - see attached paper
Italy - explore possibilities to use SCAR funds allocated in 1999 and 2000 for CGA activities (eg. printing the Addendum)
- Report on ANTEC Manning
John Manning provided a hardcopy version of the report and briefly outlined its contents. This was done in the first session on Monday during the GIANT Program report.
- Outcomes from 6th ISCGM meeting, Cambridge, 24 July Clarke
Drew gave a report of this on the first day when Janet was talking about ADD producing a 1:1 Million scale product from ADD for Global Mapping
- Chinese GeoSTAR package outlined by JM
JM and GJ will examine more closely. JM to distribute GeoSTAR paper to Coordinators. Chinese would like to host a GeoSTAR workshop prior to XXVI SCAR. Maybe it should be titled "KGIS" workshop to help
ACTION: JM and GJ will examine the on-line version GeoSTAR more closely
ACTION: Dongchen will send the invitation for the KGIS workshop in Wuhan to JM
ACTION: JC to send digital version of GeoSTAR paper to GJ
- JS told members that his situation in Germany has not changed - he might be able to continue with names work. This could be the last time he attends a WG-GGI meeting. Appreciated contact and interaction WG members. DC thanked JS for his contributions to the group over the period of his membership.
- Meeting closed at 1610 on 27 July 1999