Report to SCAR EXCOM – June 2007

SCAR Standing Committee on Antarctic Geographic Information SC-AGI

1. History and Functions

At the XXIX SCAR meeting in Hobart 2006, the Expert Group on Geographic Information (EGGI) was repositioned from within the Standing Scientific Group for the Geosciences to become the Standing Committee on Antarctic Geographic Information (SC-AGI). SC-AGI is the direct descendant of the SCAR Working Group on Cartography, formed soon after SCAR's beginnings in 1958.
All work in Antarctica relies on a consistent geographic framework, and the main function of the new SC-AGI is to manage and improve the geographic framework not only for Antarctic scientific research but also for other activities including operations, environmental management and tourism.
Building on the work done by its predecessor EGGI, SC-AGI continues to deliver a range of up to date Geographic Information products through its various projects. These products include the SCAR Composite Gazetteer of Antarctica, the Antarctic Digital Database, the SCAR King George Island GIS Database, and the SCAR Map Catalogue.
SC-AGI integrates and coordinates national Antarctic mapping and GIS programs of the SCAR member countries.
SC-AGI promotes an open standards approach to support free and unrestricted data access and this often involves the development of appropriate community-specific profiles of existing standards, for example those that have been implemented for the SCAR Feature and Symbology Catalogues.
To support its work SC-AGI has liaisons with relevant bodies outside of the Antarctic community and has a work programme with well defined projects and deliverables. SC-AGI holds regular meetings, workshops, and teleconferences to implement work programme activities.
Nominated representatives from each SCAR member country have the authority to act for their member country on issues relating to geographic information, e.g. on place name issues or in the field of standardization. SC-AGI members should have a working knowledge of geographic information systems, expertise in geographical nomenclature or a working knowledge of surveying and mapping.

2.Future plans for SCAGI

An intercessional meeting is to be held in Buenos Aires from October 8 to 10 at which SCAGI projects will be reported on in detail. A copy of the agenda is attached.
As chairman, Henk Brolsma's aim is to establish regional working groups based on geographical regions such as the Americas, Europe and Asia and promote regional meetings with the aim of distributing the workload more evenly among the SC-AGI

members.
The main challenge for the next eighteen months is to get more national members actively involved with SC-AGI and broaden the user-base of SC-AGI tools.
The web infrastructure to deliver infrastructure data such as names and maps is largely completed with some further development required for the hosting of the SCAR Composite Gazetteer at the Australian Antarctic Division and editing of data by each country.
It is also recognised that there needs to be more interaction and joint work with JCADM.

3. SCAGI membership

Prior to the formation of the SCAR Standing Committee on Antarctic Geographic Information in 2006 the active membership of the SCAR Expert Group on Geographic Information (EGGI) had dwindled to about five members. With little or no improvement in the membership between July and November 2006, (immediately after the formation of the SC-AGI) and a lack of communication with the then chairman, Colin Summerhayes set about contacting SCAR national delegates requesting nomination of SCAR national representatives to SC-AGI. The initial request by Colin did not elicit a suitable response so Colin and I set about contacting SCAR national delegates and previous EGGI national representatives by email, phone and letter.
In the six months from January 2007 to June 2007 we have managed to confirm national representatives for 19 nations and representatives from COMNAP, JCADM, International Hydrographic Organisation and the SCAR-IBSCO representative.
Unfortunately we have not been able to confirm representatives for Belgium, France, India, Russia, and South Africa despite repeated requests.
SCAGI national representatives confirmed include:
Argentina, Australia, Brazil, Canada, Chile, China, Finland, Germany, Italy, Japan, Korea, New Zealand, Norway, Poland, Spain, Sweden, United Kingdom, Ukraine and the United States of America.
Confirmed SCAGI names experts in addition to national representative include:
Argentina, Australia, Bulgaria, Brazil, Canada, Ecuador, Germany, Italy, Japan, New Zealand, Norway, United Kingdom and United Sates of America.
Unfortunately we have not been able to confirm names experts from France, India, Russia and South Africa despite repeated requests.

It is necessary to identify the national representatives for names on the SC-AGI as the SCAR Composite Gazetteer should show all names from all nations and authorities for names in each country will most probably be different from those with responsibility for mapping and those with expertise in geographic information systems.

ACTION: SCAR Executive Committee
SC-AGI would like the SCAR Executive Committee to write to all SC-AGI members after the SC-AGI intersessional meeting in October, after receiving report from Henk Brolsma on the Buenos Aires meeting, reminding them that a condition of the formation of SC-AGI was that SC-AGI would need to show that it is a functional group, with numerous active members and the possibility that it could be disbanded if it is shown otherwise.

NOTE: Henk Brolsma's continuation as chairman of SC-AGI is conditional on an improved contribution of SC-AGI members to the working of the group and hence the functioning of SC-AGI.

4. SC-AGI activities for 2006/08

4.1 Place names – SCAR Composite Gazetteer Antarctica – SCAR CGA

Italy has compiled, maintained, printed and hosted the SCAR CGA on the PNRA web site for over ten years. The Australian Antarctic Division will host the SCAR CGA later in 2007 with Italy continuing to liaise with national names authorities in the compilation of the SCAR CGA.
Roberto Cervellatti is to present a paper on the SCAR CGA at the intersessional meeting in October.
Resources are limited to just two people in Italy working part time in liaising with SCAR members with input from programmers in Italy and Australia in maintaining the database and web sites.
Activities 1 to 6 are active for some countries.

Activities

1. Continue to collect descriptions and dates of approval, for new or modified entries include source of co-ordinates
2. Address non-responding countries via letter through SCAR delegates / COMNAP delegates / Place Names Committees
3. If countries supply names for submarine features advise GEBCO
4. Investigate links to existing gazetteers for place names north of 60° South
5. Italy, Australia to discuss AADC hosting of website and database and enhance content
6. Development of a policy for the future of the CGA

SCAR Composite Gazetteer and associated problems
There are several continuing problems associated with the compilation of the SCAR Composite Gazetteer and the location of place names.
1. Compilation
Unfortunately not all new names are forwarded to the SCAR Composite Gazetteer for inclusion in the SCAR Composite Gazetteer. Reports and maps are received that show names not in the SCAR CGA. Requests for the information are either ignored or take a very long time to be received.
Appointment of National representatives to SC-AGI with authority for names in Antarctica are difficult and sometimes impossible to determine.

2. Coordinate accuracy of names
In the past, the accuracy in the knowledge of coordinates ranged from meters to kilometres depending on the accuracy of mapping, the equipment available and the

purpose of the mission. What has been left in the national gazetteers is the result of such different levels of accuracy.
For very large features this is not such a problem, (although some locations are tens of kilometres apart) but for smaller features it can mean that islands are on land, lakes are out to sea or the confusion as to which feature people are referring to where many features of the same type such as lakes occur.

ACTION: SCAR Executive Committee

1. *to ask SCAR National Delegates who have not yet appointed a National Representative to SC-AGI, to identify the relevant naming authority in their country and a contact person at that authority for Antarctic names. This could be done by SCAR National Delegates contacting either their names or national mapping authorities and / or their national representative to UNGEGN United Nations Group of Experts on Geographical Names*

2. *to table the recommendations in SCAR Bulletin 138 regarding names at the next meeting of the ATCM for consideration.*

4.2 SCAR Antarctic Digital Database - SCAR ADD

The SCAR Antarctic Digital Database is a compilation of topographic datasets supplied by numerous countries since 1984 such that small scale datasets suitable for the production of medium to small scale maps of Antarctica may be produced. Without this sharing of data whole of Antarctica maps would be impossible to produce. With the introduction of Geographic Information Systems the sharing of data is becoming more complex and data needs to comply with International Organisation for Standardisation standards – ISO. It is time consuming and challenging to convert hard copy standards to the digital environment.
The coordinator for this project is the British Antarctic Survey, with data input from numerous countries and development input from Australia, Canada and Germany.
There has been a delay in the release of version 5 due to ill health of personnel.
Resources are limited to just one person at BAS in maintaining the SCAR ADD, data input from a number of nations and input in the development of the SCAR Feature Catalogue from several countries.
Activities 1 to 5 are all active.

Activities

1. Release of V5 by end 2006
2. Another appeal for Sub-Antarctic data
3. Incorporate BEDMAP by end 2007
4. Refine webmap software to handle raster data
5. Link ADD to USGS/NASA/BAS Landsat mosaic for IPY
6. Continue to add new data

4.3 SCAR Map catalogue

This is a catalogue of all maps and charts produced by SCAR members, developed and maintained by the Australian Antarctic Division. We have made it possible for countries to edit their map entries via the web and are encouraging SC-AGI members to make use of this facility to distribute the workload.
Unfortunately most member countries have not taken the opportunity to edit and add maps via the web.
Resourcing is now limited to one person working less than one day per week with additional input from applications developers at the Australian Antarctic Data Centre Activities 2, 3 and 6 are active with the remainder needing input from member countries.
The maintenance of the map catalogue is on the agenda for the SC-AGI intercessional meeting in October to be held in Buenos Aires.

Activities

1. Relevant countries to check existing entries and to add new or missing ones
2. Define additional fields if necessary
3. Evaluate inclusion of SCAR geological map catalogue (at BAS)
4. Link US and BAS thumbnails into the map catalogue
5. Request countries to provide thumbnail scans of their maps
6. Redesign web interfaces

4.4 SCAR King George Island GIS

This is a Map Server developed by Steffen Vogt from Freiburg University, the German representative on SC-AGI. It is a web based interactive Geographic Information System of King George Island with topographic information supplied by those countries with stations on King George Island. Steffen will continue to maintain the Web Map Server.
Resourcing is unknown. There is a need to get KGIS names into the gazetteer.
Activities 1 to 6 are active.
Activities

1. Continue obtaining and integrating data
2. Maintain database and website
3. Promote KGIS amongst user / data producers addressing specifically IPY projects
4. Establish / maintain close links to GIS projects on King George Island
5. Create near shore bathymetry
6. Adopt symbology from SEAL

4.5 SCAR Feature Catalogue

The SCAR Feature Catalogue contains detailed descriptions of standard geographic features as agreed by the SCAR Antarctic Community and is ISO compliant. The features

can be used within any GIS software to represent geographic data. The FC has been developed by Australia with input from UK, Germany and Canada.
Resourcing is limited to one person at the Australian Antarctic Division developing it on as needs basis.
Activities 1 to 3 are active.

Activities

1. Continue developing the SCAR Feature Catalogue
2. Ensure compliance to and investigate implementation of ISO TC211 and OGC standards
3. Implement versioning

4.6 SCAR symbology

The aim of this project is to produce symbology for standard features acceptable to the SC-AGI community. The project is time consuming and symbols are being developed as they are required.
Resourcing is limited to developing symbols as they are needed.
Activities 1 to 3 are active

Activities

1. Continue developing SEAL (Symbol Editor and Library)
2. Produce SLD (OGC Styled Layer Descriptors) based symbols
3. Add functionality required for SCAR to SEAL

4.7 Geospatial Information Enabling Technologies

This project is a watching brief to make SC-AGI members aware of developing technologies. Cheryl Hallam at USGS is the contact person.
Progress report:

1. Integration of on-line geospatial information from distributed web services
USGS recently met with Google Earth to discuss the display of Antarctic data using their system. They would like to utilize existing data services and assist SC-AGI in the development of KML's to serve data for most efficient use by their viewer. They asked if would be possible for them to make a presentation to the SC-AGI at our October meeting.

2. Produce a report on the results from using of airborne GPS digital cameras and navigation based photogrammetry for near real-time mapping in Antarctica

Recent technical papers and publications of the results of using airborne and satellite GPS-aided inertial sensor systems and navigation based photogrammetry, particularly as it relates to its potential for near real-time mapping in Antarctica:

Sanchez, Richard D. and Mullins, Jerry L., 2007, Integrated GPS-aided Inertial Lidar and Optical Imaging System for Aerial Mapping, Proceeding of the 5th International Symposium on Mobile Mapping Technology, Padua, Italy, May 2007.

Sanchez, Richard D., Mullins, and Jerry L., Echols, Alton. C, 2007, The Applicability of Topographic Mapping in Antarctica with the Advanced Land Observing Satellite (ALOS), 10th International Symposium on Antarctic Earth Science (ISAES) Online Proceedings, U.S. Geological Survey and the National Academies, U.S. Geological Survey Open File Report 2007-1047, Extended Abstract 1415, 1-3.

3. Promote the use of the produced data in the scientific community

Progress continues on the Landsat Image Mosaic of Antarctica with BAS and NASA based on NSF funding. Delivery will be via the Internet and is planned for completion by the end of 2007.

Most of the collection of photography taken by the US has been converted to a digital format and a system is being tested that will deliver the project indexes and mid resolution digital versions of the photos to the science community via the Internet.

Activities

1. Integration of on-line geospatial information from distributed web services
2. Produce a report on the results from the use of airborne GPS digital cameras and navigation based photogrammetry for near real-time mapping in Antarctica
3. Promote the use of the produced data in the scientific community

4.8 Landsat Image Mosaic of Antarctica

This is a very ambitious and major project being developed by the UK and USA and will be of major benefit to all SCAR member countries. The Landsat Project uses a series of satellites to gather Earth resource data. Landsat's Global Survey Mission is to repeatedly capture images of the Earth's land mass, coastal boundaries, and coral reefs; and to ensure that the data acquired support the scientific goals of observing changes in the Earth's land surface and surrounding environment.
Project is in development and report will be tabled at the Buenos Aires intercessional meeting of SC-AGI. – Go to http://landsat.usgs.gov/gallery/detail/442/
Resourcing is unknown but would be substantial by both BAS and the USGS.
Progress report from Adrian Fox at BAS
Landsat Image Mosaic of Antarctica (LIMA) project:

The Landsat Image Mosaic of Antarctica (LIMA) is a collaborative project between the British Antarctic Survey, NASA and the US Geological Survey. It aims to compile a seamless, standardised mosaic of Landsat ETM+ images covering the whole of the Antarctic continent to support international, interdisciplinary scientific research in Antarctica

during International Polar year 2007-2008 and leave a lasting dataset for the future. The mosaic will be an invaluable resource for scientific research, topographic mapping and logistics activities in Antarctica. Additionally the image mosaics will be visually powerful and have great potential for enthusing wider audiences about Antarctica, Antarctic research and remote sensing science. Hence the project will also develop linked resources for use by students and schools.

The LIMA project will provide the first mosaic of Landsat images covering the whole continent and it will include three separate products. There will be 30 metre resolution mosaics with bands 1,2,3 and 2,3,4 and a panchromatic 15 metre resolution mosaic. Both the mosaic data and individual Landsat frames will be freely available for browsing or download through a web-interface developed by the USGS. The mosaic will also be offered to geo-browsers such as GoogleEarth and NASA WorldWind and linked to other complementary data such as the SCAR Antarctic Digital Database.

About 1100 Landsat scenes are needed to complete the mosaic. The continent includes a wide range of terrain from almost flat open snowfield to very steep, rugged mountains, with reflectance ranging from almost black rock to pure white snow. Some parts of the continent have few cloud-free scenes so that images with a wide range of sun elevation angle and illumination have to be used. These factors together have created challenging technical difficulties for compiling the image mosaics and normalising the image brightness over the whole mosaic.

Current status:

All scenes have been acquired and orthorectified to remove distortion effects from topographic relief.
Bindschadler and Vornberger at NASA have developed a new procedure to normalise scene brightness by correcting for sun elevation angle, sensor near-saturation and other effects.
Processing of the 1100 images with this method and defining the mosaic cutlines and stacking order are proceeding in parallel at USGS, NASA and BAS. USGS are in process of developing the web interface to the data.
Work on developing educational and public outreach materials linked to LIMA is also proceeding.
Based on current progress, the LIMA mosaic may be ready for launch in late summer 2007.

Activities:

1. Production of a continent wide Landsat and MODIS image mosaic for Antarctica using Landsat-7 data

4.9 SCAR Cybercartographic Atlas

This is a research project being undertaken by Canada (Carleton University) using Antarctic topographic data and is dependant on external funding.
When this project moves to production level it will be a very valuable tool in outreach for the SCAR Community to the general public.

The project is nearing the end of a preliminary development phase that focused on working with the community to establish data infrastructure (i.e. AntSDi) and developing technology that can support atlas production.
From this effort, the laboratory at Carleton University has produced an open source atlas development framework compatible with open geographic information exchange standards developed by the open geospatial consortium. In addition to supporting standard geodata exchange standard, the software model natively supports temporal representation (timelines) and active linking of multiple media formats (sound, video etc.). For more information, see http://nunaliit.org
At present, the project has published several prototype modules that are a proof of concept for the atlas. These modules can be accessed from the following page: https://gcrc.carleton.ca/confluence/display/GCRCWEB/Atlases.
Two additional modules are expected by Fall 2007:
Antarctic Biodiversity and Integration in Antarctic Science.
The current objective is to raise funds to move the atlas to a production level. This includes:
expansion of content,
inclusion of accessibility for persons with disabilities,
addition of curriculum material
providing ability for end users to add content (e.g. my research site is there)
active editing of narrative by trusted participants

Additional funds are being sought under the IPY project led by the GCRC.
See http://classic.ipy.org/development/eoi/proposal-details.php?id=176.
An education and outreach funding call by the Canadian IPY Program Office is expected during the fall of 2007. GCRC will apply.
At present, the project has limited resources and a portion of Research Assistant's time (Peter Pulsifer).

Activities (Pending on funding):

1. Release Atlas Version 1 (11-2006)
2. Seek new funding
3. Develop atlas content in collaboration with national and international partners
4. Further develop atlas development framework

4.10 Allan Hills Place names map

This a joint project between New Zealand, USA, Italy and Australia (Project leader)
The aim of the project is to derive accurate locations for the named features in this region. The project is using scanned 1:250000 USGS maps to locate the names.
Activities 1 to 3 are completed with activities 4 to 6 remaining to be completed by June 2008.

Activities:

1. Identify area of interest
2. Identify existing maps and provide in digital form
3. Identify existing names and coordinates
4. Agree to change coordinates as required
5. Produce a map showing the updated locations of names
6. Provide improved and new information to the SCAR CGA
7. Report on issues overcome

4.11 Larsemann Hills names map

This is a joint project between China and Australia. The aim of the project is to derive accurate locations for the named features in the Larsemann Hills where China and Russia have year round stations and India proposes building a station. Australia has a summer base near the Chinese and Russian stations. The area has been mapped to a scale of 1:25000 so the accurate locations of names are possible.
Maps showing the locations of all named features have been produced and printed by Australia.
China has promised to table a full report on the project at the intercessional meeting in October 2007.
Activities 1 to 4 are completed with China needing to approve the locations of Chinese names before entering new coordinates to the SCAR CGA.

Activities:

1. Identify area of interest
2. Identify existing names and coordinates
3. Agree to change coordinates as required
4. Produce a map showing the updated locations of names
5. Provide improved and new information to the SCAR CGA
6. Report on issues overcome

4.12 SCAR Antarctic coastal change project

The aim is to show the change along the coast in Antarctica using remote sensing techniques.
Report from Jane Ferrigno at USGS
The USGS is capturing the changing coastline of the circumference of Antarctica using 3 main data sets---early 1970s Landsat, later 1980's- 1990s Landsat and 1997 RADARSAT. The USGS use other data sets where available e.g. the Antarctic Peninsula area.
The three peninsula data collections have been made with the cooperation of BAS, using some of their historic data. USGS originally planned to publish the coastline data as 24 printed 1:1,000,000 scale maps, 1 x 5,000,000 scale map, and on line digital files. However, because of delays in printing, we now plan to complete the project with nine printed 1:1,000,000 scale maps, 1 5,000,000 scale map, and the rest of the data being released as digital on line files. Of the nine printed maps, 5 have been completed (Trinity Peninsula, Ronne Ice Shelf, Eights Coast, Bakutis Coast, and Saunders Coast); the rest are in various stages of production (Larsen Ice Shelf, Palmer Land, Ross Ice Shelf, and Ross Island). The digital data of the rest of the coastline has been captured in raw format. It is planned to have that available on line by Spring 2008.

Activities 1 to 3 are all active.

Activities:

1. Determine coastline changes in Antarctica that have occurred at three or more time intervals between the mid-1970s and the latest available images
2. Establish an accurate base-line series of 1:1,000,000-scale maps
3. USA and AUS to define exact area of common interest, required data, and activities

4.13 Grove Mountains GIS Portal

The aim of the project is to produce a portal for detailing the work by China in the Grove Mountains region some 500 kilometres to the south west of Davis and Zhongshan stations.
They are working on the Larsemann Hills names, there are some questions with some names which have been pointed out and are being discussed.
China has promised to table a full report on the project at the intersessional meeting in October 2007.
Resourcing is unknown.

Activities:

1. GPS Control Point Database
2. Topographic database
3. Satellite Imagery Database from large scale to small scale
4. DEM Database
5. Meteorite Distribution Database
6. Grove Mountains GI web service Portal
7. Decision Service for Antarctic Expedition

4.14 History of Aerial Photography in Antarctica

Aim of the project is to document the development and use of aerial photography in Antarctica. Project leader is John Manning, a previous chairman of SCAGI with collaborators in UK, USA and Australia.
Resourcing and progress are unknown as no progress report has been received.
Activities:

1. Compile an historical listing of aerial photography flown in Antarctica
2. Identify circumstances of the photography including dates and types of photography, areas, film type and cameras, aircraft and film space photography.
3. Where possible identify location of film storages and sources of meta data for cameras and current availability of photography
4. Project will be undertaken in four sections 1900-1939 1940- IGY (1957/59) 1960 – 1974 1975 - current
5. Provide input to ISPRS WG VIII-8 and associated IPY projects on records of historical aerial photography.
6. Provide material to SCAR Cybercartographic Atlas of Antarctica Project
7. Liaise and develop linkages with SCAR History action group

For example, the authority for Antarctic names in the UK rests with the foreign office, in New Zealand the national authority for names is with Land Information New Zealand but the national representative may not know that person. Some countries include Antarctic names in their national gazetteer while others have a separate Antarctic gazetteer.

5. SCAGI web site

The SCAGI content management system is presently located on the Freiburg University web site. It is a good web site but unfortunately the resources are not available for the management of SCAGI so Peter Pulsifer from Carleton University, Canada offered to host the content management system. The transfer from Freiburg University to Carleton University will take place in late July. Peter is the SCAR national representative on both SCAGI and JCADM.

6. Proposed budget for 2007 and 2008

Funds 2007

Funds of $7,000 were agreed for SC-AGI in 2006, from an initial allocation of $8,300. These funds were carried forward unspent into 2007.

In 2006, the SCAR Finance Committee agreed to allocate $4000 per year to SC-AGI.

In order to enable a full-scale meeting of SC-AGI to take place in Buenos Aires in October 2007, as planned, an additional $9000 is requested. This will help in particular to get people to the meeting who come from SCAR Members with limited resources. It is important that this meeting makes good progress, bearing in mind the intention of the Delegates to review SC-AGI's progress comprehensively in July 2008.

As is evident from the above description of SC-AGI activities, the scope of SC-AGI is large. Given that SC-ATS operates on a budget of $10,000, and that $10,000 is also allocated to JCADM, it would seem reasonable, in the light of the contribution made by SC-AGI to the infrastructure for SCAR science, to raise the annual allocation from $4,000 (for which no justification was sought), to $10,000. An allocation of $10,000 in 2008, for example, will enable two things:

(i) $5000 for SC-AGI members from less developed countries to attend the annual meeting, which will be held as one of the SCAR Business meetings in July 2008.

(ii) $5000 for further development of the SCAR Antarctic Digital Database (this is a worthwhile investment, since revenues are expected from eventual sales.

Henk Brolsma
Chairman
SCAR Standing Committee on Antarctic Geographic Information
29 June 2007

Annexe1

SCAR

Standing Committee on Antarctic Geographic Information (SC-AGI)

Intersessional meeting

Buenos Aires

October 8 to 10, 2007

1. Welcome – Secretary Antarctic Treaty Secretariat – to be confirmed!

2. SCAGI Infrastructure projects – general introduction on SCAR ADD, map catalogue, composite gazetteer and linkages to SCAR Biodiversity database.

3. Report on SCAGI projects
   SCAR CGA – Roberto Cervellatti (Italy) and Henk Brolsma (Australia)
   SCAR ADD / SCAR Feature Catalogue – Paul Cooper (UK) and Henk Brolsma (Australia)
   SCAR Map Catalogue - Henk Brolsma (Australia)
   SCAR King George Island GIS – Steffen Vogt (Germany)
   SCAR Symbology – Adrian Fox (UK) and Henk Brolsma (Australia)
   Geospatial Information – Enabling technologies – Jerry Mullins (USA)
   LIMA – Landsat Image Mosaic for Antarctica – Adrian Fox (UK), Bob Bindschadler (USA)
   SCAR Cybercartographic Atlas of Antarctica – Peter Pulsifer (Canada)
   Allan Hills place names map - Henk Brolsma (Australia) and Wendy Shaw (New Zealand) and Jerry Mullins (USA)
   Larsemann Hills place names map - Henk Brolsma (Australia) and Dongchen E (China)
   Antarctic Coastal Change Project – Jerry Mullins (USA)
   SCAR Grove Mountains GIService Portal (GCMP)
   History of Aerial Photography Antarctica – John Manning (Australia)

4. SCAR map distribution – review of policy
   Discuss SCAR standing resolution Gd-5 as approved by XX SCAR.
   Confirm distribution list – institution names and addresses (electronic and street addresses, contact person.
   Institutions requiring copies of existing maps.

5. SCAR CGA – transfer of web site to AADC web site.
   Further development of – additional fields and mapping of generic terms to SCAR

Feature Catalogue.

6. SCAR Content Management System
   Transfer to Carleton University web site. Review any problems associated with transfer, need for improvements etc.,

7. SCAGI – establishment and continued functioning as a standing committee.
   SCAGI was established as a standing committee in Hobart 2006 on the condition that it's functioning be reviewed by the SCAR executive in July 2008. We need to show that the functioning of the group has improved, that we have an active membership and work programmes are on schedule and we are looking ahead in the service we provide to the wider SCAR community.
   Distribution of workload among SCAGI members
   EG Provision of Web Feature Services (WFS) and Web map Servives (WMS) and that existing infrastructure is being maintained and where necessary being developed.

8. SCAGI – communication within group.
   Suggestion that we have regional groupings with volunteer secretary to report to the SCAGI chair on projects, names and infrastructure projects.
   For example, groups by geographical location:
   North and South America – Argentina, Brazil, Canada, Chile, Colombia, Ecuador, Peru, United States of America, Uruquay
   Europe – Belgium, Bulgaria, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Russian Federation, Spain, Sweden, Ukraine, United Kingdom
   Asia – Australia, China, India, Japan, Korea (Republic of), South Africa, New Zealand.

9. SCAGI funding

10. IHO GIS for Antarctica:
    Go to http://www.iho.shom.fr/ then Reg Hyd Comm and Miscellaneous

11. Other business

12. Next meeting – meeting prior to main meeting in St Petersburg. Location?

Henk Brolsma
Chairman
SCAGI
22 June 2007