

Tenth Meeting of the GGOS Steering Committee

IUGG, Perugia, Italy

Sunday, July 8, 2007, 10:00 - 18:00

Minutes (Version 1.1)

Written by

Hans-Peter Plag

(Version of 2007- 7-28 16:49).



Participants:

Steve Kenyon (*Substitute, IGFS*)
Bente Lilja Bye, NMA (*Chair, GGOS WG User Linkage and Outreach*)
Fernando Sanso (*Delegate, IGeS*)
Veronique Dehant, ROB (*Invited Participant*)
Bernd Richter, BKG (*Chair, GGOS WG Data and Infrastructure*)
Markku Poutanen, Finish Geodetic Institute (*Delegate, Commission 2*)
Srinivas Bettadpur, University of Texas (*Chair, GGOS WG on Missions*)
Michael Pearlman, Smithsonian (*Executive Committee; Chair, GGOS WG Network and Communications*)
Ruth Neilan, JPL (*Vice-Chair, GGOS Steering Committee*)
Markus Rothacher, GFZ (*Chair, GGOS Steering Committee*)
Hans-Peter Plag, NBMG (*Vice-chair, GGOS Steering Committee*)
Erricos Pavlis, JCET/UMBC (*Delegate, ILRS*)
Richard Gross, JPL (*Science Panel*)
Weijun Gan, China Earthquake Administration (*Member at Large*)
Zuheir Altamimi, IGN (*Invited Participant*)
Gerard Petit, IBWM (*Substitute*)
Harald Schuh, University Vienna (*Invited Participant*)
Chris Rizos (*Delegate, Commission 4*)
Salah Mahmoud (*Member at Large*)
Martin Vermeer (*Commission 2 Representative*)
Josef Adams (*IAG Outreach Branch*)
John LaBrecque, GSFC (*Invited Participant*)

Agenda:

1 Welcome and Discussion of Agenda

2 Minutes of SC9

The draft minutes of SC9 are available as [../scm9/minutes_sc9.html](#) and [../scm9/minutes_sc9.pdf](#). The minutes will not be discussed in any detail. The participants are asked to identify necessary changes and/or corrections.

3 Action Item Status

The list of action items from SC9 is available as [aillist.html](#) and [aillist.pdf](#). Open Action Items from previous meetings (SC8 - SC3) are listed [aillist_previous.html](#) and [aillist.pdf](#)

4 Brief report from the Chairs

5 Brief GGOS WG Reports

6 Brief GEO-Reports

- User Interface Committee
- Architectur and Data Committee: Task AR-07-03 Status, including GGOS 2020
- Science and Technology Committee: The Science Paper

- Capacity Building
- Tsunami WG
- Ministerial Summit Task Force 2

7 GEO opportunities and GGOS contributions

GEO has a number of open calls that GGOS needs to respond to in one way or another. The Calls are available at the SC10 meeting web page.

8 GGOS 2020: Main conclusions and recommendations and next steps

It is intended to review the recommendations (Chapter 11) and to discuss the next hearing steps (including GEO).

9 GGOS ToR

10 Future structural changes for GGOS (new components, WGs)

11 Call for Proposals for the GGOS Portal

12 The GEO/GGOS 2007 Workshop

13 GGOS Unified Analysis Workshop and Common Research Projects

14 GGOS 2008 Retreat and other GGOS meetings

15 Any other business

16 Summary of Action Items

Welcome and Discussion of Agenda

Markus Rothacher opened the Steering Committee meeting and welcomed all participants. He pointed out that the later points on the agenda were the more important ones, and he asked the reports of the WGs and GEO representatives to be rather brief so that more time would be for the most relevant issues.

Minutes of SC9

The draft minutes of SC9 were made available as [../scm9/minutes_sc9.html](#) and [../scm9/minutes_sc9.pdf](#). The minutes were not discussed in any detail. The participants were asked to identify necessary changes and/or corrections. No points were raised and the minutes were accepted as they are.

Action Item Status

The list of action items from the SC-9 meeting was available as [aillist.html](#) and [aillist.pdf](#). A list of all open action items from previous meetings was available as [aillist_previous.html](#) and [aillist_previous.pdf](#).

Markus Rothacher pointed to the list of Action Items and stated that most AIs were closed through appropriate actions or would be addressed in more detail later.

Brief report from the Chairs

Markus Rothacher presented the report of the chairs (see his presentation [presentations/rothacher_chairs_report.pdf](#)). He reviewed the activities since the last SC meeting and then reported on the events during the IUGG.

A key issue was the proposed change of the IAG By-Laws, which would consider GGOS as a full component of IAG, similar to the Commissions. There was some discussion of whether the IAG By-Laws need to be accepted by the IUGG or not.

The change of the IAG By-Laws also required a change of the GGOS ToR. Markus Rothacher briefly summarized the changes made to the GGOS ToR and the on-going process. The new draft ToR had been put to vote by e-mail to the SC, and the ToR had been accepted on June 28, 2007 with 30 Yes, 2 No, 2 Abstain. He emphasized that the ToR will have to evolve over the next year.

There was some discussion about the organizational diagram as developed in the GGOS 2020 process, which indicated that there is no clear consensus concerning the future structure and components of GGOS.

Markus Rothacher also gave an overview over the next GGOS-related events. Hans-Peter Plag emphasized the need to publicize the GEO/GGOS Workshop 2007 in IAG and outside. This resulted into

Action Item GGOS-SC10-1: All EC members will engage in publicizing the GEO/GGOS Workshop 2007 through appropriate channels. ***Responsible: Executive Committee, Deadline: 2007-08-15.***

Brief GGOS WG Reports

There were two WG reports:

- Michael Pearlman reported on the work of the Network and Communication Working Group (see his presentation [presentations/pearlman_wg_network_communication_report.pdf](#)). Reviewed the mission, membership, publications, and meetings. Main activities were to develop a model to estimate the stability of the frame as function of number of stations; find an effective way to monitor inter-technique vectors at colocation sites; develop a standard for reflectors on GNSS satellites; compile charts of stations and products for GEO and INDIGO. He summarized briefly the status of these activities.

There was some discussion about the use of systems for monitoring the colocation ties. Chris Rizos pointed out that in May 2008 there will be the 4-th IAG Symposium on Geodesy for Geotechnical and Structural Engineering and the 13-th FIG Symposium on Deformation Measurements and Analysis (see <http://measuringchanges.lnec.pt/>), and he suggested to propose a special session on monitoring local ties for these meetings.

Action Item GGOS-SC10-2: Chris Rizos will propose a session on observing local ties at colocation sites for the 4-th IAG Symposium on Geodesy for Geotechnical and Structural Engineering and the 13-th FIG Symposium on Deformation Measurements and Analysis in May 2008. ***Responsible: Chris Rizos, Deadline: 2007-08-15.***

- Bente Lilja Bye presented the activities of the Outreach and User Linkage WG (see her [presentations/bye_wg_outreach_report.pdf](#) and the WG [presentations/bye_WG_outreach_activity_report.pdf](#)). She requested out that the two web pages at www.ggos.org and geodesy.unr.edu/ggos should be merged, since a search brings people to ggos.org.

In following up discussions at the GGOS 2007 Retreat, a first leaflet on a *Topic of the Month* had been prepared by Philip Woodworth, with the topic being sea level. Bente Lilja Bye showed the leaflet, which was generally considered to be well done. As next Topic of the Month, Rotation was considered with Richard Gross taking the lead in preparing the leaflet. Geohazards was mentioned as another topic. Hans-Peter Plag pointed out that the Geohazards leaflet should be available by the end of October for the GEO/GGOS Workshop in November.

Bente Lilja Bye also discussed a proposal for a leaflet about GGOS. She suggested to take text pieces on geohazards, climate change, mass distribution from existing GGOS 2020 texts and some of the GGOS Workshop pages. Chris Rizos suggested to use this as template for national versions, for example, a Chinese, or Australian, with local information, so the GGOS information was not looking as something coming from far away.

Markus Rothacher suggested to include information on the GGOS structure, the infrastructure (e.g. satellites), etc. Hans-Peter Plag considered it helpful to separate the “Who and What is GGOS” and from the “What is GGOS used for”, and he suggested a number of single page leaflets addressing these various aspects separately. Srinivas Bettadpur also favored that the leaflet should combine some statements about GGOS with the science themes.

Bente Lilja Bye then continued to discuss the Geodetic Journey Project, which aims to promote geodesy to the general public. She introduced the project (see [presentations/bye_Geodetic_Journey_outreach_project_v0.pdf](#)) and presented a draft for the Geodetic Journey web page (see [presentations/bye_website_outline_v2.pdf](#)). This web page will soon be available and it will include a blog during the journey, which will take place from July 31 to late August 2007. Moreover, a film will be produced, which could be used as a basis for the GGOS presentation at the GEO Ministerial Summit. For this event, Bente Lilja Bye also presented a proposal (see [presentations/bye_geodetic_journey_GEO_ministerial07.pdf](#)).

The definition of geodesy included on the draft web page was taken from IAG, and this was criticised. John LaBrecque suggested to use new terms, such as *environmental geodesy* .

Srinivas Bettadpur asked who is going to do the filming, and Bente Lilja Bye explained that a professional filmmaker will prepare a documentary about the geodesists traveling through China.

Rene Forsberg suggested to take along some geodetic instruments and to perform some measurements. Bernd Richter explained that BKG had carried out repeated measurements in Tibet and suggested that some of the results should be included. John LaBrecque noted that Roger Bilham was moderator for a similar project with the goal to find out whether Mt. Everest is going up or down, and he suggested to link this into the Geodetic Journey. Srinivas Bettadpur proposed to do a search for other films in order to find out what has been done similar to the Geodetic Journey.

Chris Rizos requested that GGOS outreach should not look different from IAG outreach. Josef Adams informed that a new definition of geodesy would be accepted during the IAG Council meeting the following day. Markus Rothacher requested that GGOS should have some control over outreach projects such as the Geodetic Journey. Hans-Peter Plag also supported the notion that such projects should have international participation, but emphasized that the chair of the GGOS Outreach and User Linkage was in fact the Project Leader, thus putting GGOS in full control of the project.

Rene Forsberg also emphasized the importance of international support for such projects, and suggested an IAG “Himalaya project”, which could open doors, generate support. Josef Adams

mentioned that a meeting of IUGS will be in Oslo, which could be a good opportunity to discuss outside support of outreach projects.

Hans-Peter Plag pointed out that while GGOS leaflets on GGOS topics and topics of the months were a very good outreach activity, GGOS needs to ensure the high quality of these documents. Therefore, he requested to establish a review process for the leaflets, with the GGOS Science Panel taking a main role in accepting proposals, draft versions and the final version. This resulted in ***Action Item GGOS-SC10-3: The GGOS EC will establish a review process for GGOS Leaflets including the Topic of the Months leaflets, and this review process will involve the GGOS Science Panel. Responsible: Executive Committee, Deadline: 2007-09-15.***

Brief GEO-Reports

- **User Interface Committee:** Hans-Peter Plag presented a brief report of the recent activities of the UIC and provided his assessment of the progress of this committee (see his presentation [presentations/plag_geo_uic_report.pdf](#)). The UIC is not working very well with a lot of repeated discussions on what the UIC should do and how. In particular, a new Canadian Co-Chair, Stuart Salter, requested the UIC to go back to the question of “What”, while Hans-Peter Plag himself asked the UIC to focus on the “How” since the “What” was already defined in the GEO 10-Year Implementation Plan.
- **Architecture and Data Committee:** Markus Rothacher presented a brief report on the recent ADC activities (see his presentation [presentations/richter_geo_adc_report.pdf](#)). He pointed out that with respect to radio-frequencies, it was found difficult to protect these for scientific use, and the ADC was tending to not consider this a GEO-ADC task. John LaBrecque commented that the term for ‘scientific use’ was weak, and one should better speak of ‘environmental use.’ Bernd Richter also pointed to <http://www.geoportal.org>, which is the initial version of the GEP Portal.

Hans-Peter Plag reported on the status of Task AR-07-03 (see his presentation [presentations/plag_geo_adc_ar0703_report.pdf](#)). The main activity in this task is the GGOS 2020 Process and the preparation of the GEO/GGOS Workshop. He mentioned that the Task was on the list of the GEO Early Achievements for the Ministerial Summit.

There was a question concerning DEMs, and it was mentioned that the Director of the GEO Secretariat, J. Achache, had written a formal letter to the U.S. Government asking for the release of the high-resolution terrain data, and received a No as an answer. However, behind the scene, considerable activity is going on to free the data.

Susanna Zerbini mentioned that the first COSMIC satellite is up, and she emphasized the need for scientific proposals, since otherwise military would likely take over.

- **Science and Technology Committee:** Susanna Zerbini reported that the main activity of the STC is a *Science Paper*. The STC met in June 2007 in Brussels with the goal to finalize this Science Paper. She noted that at least one of the chapter lead author did not coordinate a group but rather wrote the chapter alone. The paper is still in process, and there should soon be a meeting of the co-chairs to finalize the document.
- **Capacity Building Committee:** There was no report.

- Tsunami WG: Tilo Schoene had provided a written report prior to the SC (see [presentations/schoene_geo_wg_tsunami.pdf](#)).
- Ministerial Summit Task Force 2 (TF2): Hans-Peter Plag reported on the activities and status of the preparation of the Report on Progress (see his presentation [presentations/plag_geo_task_force_2_report.pdf](#)). He summarized the work of the TF2 briefly, and reported that the follow-up of the input provided during TF2 meetings through the TF2 Co-Chairs and the GEO Secretariat had been rather weak, with much of the TF2 input and decisions being ignored. Therefore, there was considerable frustration by the TF2 members. Similar frustration was also growing in the GEO Committees, where the GEO Secretariat tends to ignore decisions of the Committees. This had already led to Thomas Roswall (ICSU) to resign from Co-Chairing the GEO STC.

GEO opportunities and GGOS contributions

Hans-Peter Plag presented a number of calls for contributions issued by GEO recently (see his presentation, [presentations/plag_geo_opportunities.pdf](#)). The following was decided: **Action Item GGOS-SC10-4:** Markus Rothacher will follow up the GEO Call for a Notice of Interest to contribute to the Exhibition at the Ministerial Summit. **Responsible: Markus Rothacher, Deadline: 2007-07-16.**

Action Item GGOS-SC10-5: Hans-Peter Plag will follow up the GEO Call for contributions to the GEO publication "The Full Picture" and coordinate the production of the contributions for GGOS. **Responsible: Hans-Peter Plag, Deadline: 2007-07-31.**

Action Item GGOS-SC10-6: Bente Lilja Bye will follow up the GEO Call for contributions to the GEO Video Exhibition at the Ministerial Summit. **Responsible: Bente Lilja Bye, Deadline: 2007-08-31.**

GGOS 2020: Main conclusions and recommendations and next steps

Hans-Peter Plag presented an overview of the current status and the key remaining issues (see his presentation, [presentations/plag_ggos_2020.pdf](#)). In particular, he summarized the comments received in the course of the internal IAG hearing. Most of these comments were easy to integrate, with only a few issues remaining. Concerning Chapter 7, the long list of products with some duplication was noticed. No comments were received concerning the functional specifications, which raised the question whether everybody agreed on these. The need for a full relativistic formulation of the future reference frame had been pointed out in some comments, and a more elaborate discussion of the future treatment of Earth rotation was requested. Concerning Chapter 9, it was emphasized in several comments that the necessary infrastructure was not clearly enough specified, while new and emerging technologies were not sufficiently integrated. Chapter 10 was criticized as being too IAG-centric and not open enough for other stakeholders. The recommendations we found to be not focused enough, not specific enough, not prioritized, more like a shopping list.

Concerning the recommendations, it was agreed that Chris Rizos, Markus Rothacher, Ruth Neilan, and Hans-Peter Plag would meet on July 9, 2007 and review the recommendations in detail.

GGOS ToR

Markus Rothacher briefly summarized again the main changes in the ToR, which he had already addressed in the Chair's report (see his respective [presentations/rothacher_chairs_report.pdf](#)). He

pointed out that the main goal of the recent modifications of the ToR was to bring the ToR in compliance with the new IAG By-Laws expected to be accepted the following day. Therefore, the part on vision, mission and task were not modified this time. However, in this respect, the ToR would have to be considered transient with more thorough changes to be worked out in the near future.

Following this up, Hans-Peter Plag presented ideas concerning new ToR (see his presentation, [presentations/plag_ggos_tor.pdf](#)), where in particular proposals for new vision, mission and task descriptions were included. It was agreed to continue working on the ToR and to progress the work towards a better vision and mission statement during the next few SC meetings.

Future structural changes for GGOS (new components, WGs)

Markus Rothacher introduced this topic by pointing out the new elements of GGOS to be implemented, for which he used the latest version of the GGOS-organogram provided by Hans-Peter Plag (see [presentations/ggos_future_org_new.jpg](#)). He emphasizing the need for implementing a GGOS office. In the discussion, it was agreed to call this office "Coordinating Office" (CO) instead of "Central Coordinating Office". He asked whether a Call for Proposals for the CO in November 2007 would make sense. Ruth Neilan requested that a Notice of Intent for such a call should be issued soon in order to alert potential bidders and to give them time to prepare the proposal. Hans-Peter Plag pointed out that UNESCO had voiced an intent to support a GGOS Office and suggested that the dialog with UNESCO was continued on the basis of the GGOS 2002 document.

Concerning the GGOS-organogram, Zuheir Altamimi commented that it was not clear where outreach was located. Bernd Richter suggested to keep the WGs in the diagram. Michael Pearlman pointed out that the name of the WG is *Networks and Communication* and suggested that the same title is used for the new entity in the organogram (instead of *Communication and Networks*).

Concerning the CO, the following Action Items were agreed: ***Action Item GGOS-SC10-7:*** Michael Pearlman, Ruth Neilan, Josef Adams, and Bente Lilja Bye will prepare a draft Notice of Intend and a draft Call for Proposals for the GGOS Coordinating Office and provide this to the EC. ***Responsible: Ruth Neilan, Michael Pearlman, Josef Adams, Bente Lilja Bye, Deadline: 2007-08-31.***

Action Item GGOS-SC10-8: The EC will finalize the Notice of Intend for a CfP for the GGOS Coordinating Office and distribute this NoI to all potential bidders. ***Responsible: Executive Committee, Deadline: 2007-09-30.***

Action Item GGOS-SC10-9: The EC will finalize the CfP for the GGOS Coordinating Office and issue this at the latest after the GGOS Stakeholder Conference in Spring 2008. ***Responsible: Executive Committee, Deadline: 2008-03-31.***

Concerning the three new entities for Networks and Communication, Standards and Conventions, and Satellite mission, Gerhard Beutler suggested to prepare white papers detailing the mission and tasks of these entities and their role inside and outside of GGOS. The following Action Items were agreed with respect to the first two entities: ***Action Item GGOS-SC10-10:*** Michael Pearlman will prepare a white paper, together with co-authors of his choice, on the GGOS entity for Networks and Communication, which will detail the mission, tasks, and internal and external linkage of this new GGOS entity as a basis for its implementation. ***Responsible: Michael Pearlman, Deadline: 2008-01-31.***

Action Item GGOS-SC10-11: Hermann Drewes will prepare a white paper, together with co-authors of his choice, on the GGOS entity for Standards and Conventions, which will detail the mission, tasks, and internal and external linkage of this new GGOS entity as a basis for its implementation, taking

into account that this entity will have to be based on relevant existing IAG activities and components.
Responsible: Hermann Drewes, Deadline: 2008-01-31.

Concerning the third entity on satellite missions, there was considerable discussion.

Gerhard Beutler recommended that a white paper on the permanent monitoring of gravity field, sea surface, and land surface be prepared, address in particular the intercalibration, including in situ observations. Srinivas Bettadpur commented on the difficulties to integrate satellite mission teams into GGOS and doubted the necessity of such an entity. Hans-Peter Plag brought up the GGOS membership in CEOS, and reported that at the last IGOS-P meeting, CEOS members had stated clearly that GGOS should be a member of CEOS. However, Gerhard Beutler recommended to prepare a white paper first. No specific Action Item was agreed.

Markus Rothacher reiterated that the GGOS/IAG representatives to the GEO Committees no longer are members of the GGOS Steering Committee, but they are now members of the new GGOS GEO Working Group. Only the Chair of this WG is a member of the SC. Bernd Richter criticized this solution and stated that the GEO Representatives are now underrepresented in the Steering Committee. Markus Rothacher responded that they can be invited to the SC meetings with voice. Bente Lilja Bye stated a need to link this GEO WG to outreach. With respect to the chair of the WG, Bernd Richter requested that the the WG members elect their chair. Hans-Peter Plag stated that according to the ToR, WG chairs are appointed by the SC. Bente Lilja Bye proposed Hans-Peter Plag as chair for the GEO WG. Markus Rothacher voiced some uncertainty concerning the ToR, and the issue of the EG chair was postponed. This led to ***Action Item GGOS-SC10-12: The EC will clarify the procedure for appointing/electing the chair of the GEO Working Group of GGOS and ensure that a chair is appointed/elected accordingly. Responsible: Executive Committee, Deadline: 2007-09-30.***

Call for Proposals for the GGOS Portal

Bernd Richter presented a draft Call for Proposals for the GGOS Portal (see his [presentations/richter_ggos_portal.pdf](#)). In his presentation, he discussed in particular the functions, architecture, tasks, and elements of the GGOS Portal. He proposed a schedule with the CfP finalized by the authors on September 15, the review by the EC completed on October 15, 2007 and the CfP being issued on October 31. The deadline for proposal would be February 29, 2008 and proposal selection would be finished by March 31, 2008. After some discussion, this schedule was basically accepted All SC members are asked to provide input or comments on the draft CfP to Bernd Richter by mid September. The resulting Action Items are: ***Action Item GGOS-SC10-13: Bernd Richter and Carey Noll will finalize the draft CfP for the GGOS Portal and submit it to the GGOS EC. Responsible: Bernd Richter, Deadline: 2007-09-15.***

Action Item GGOS-SC10-14: The EC will review the CfP for the GGOS Portal, finalize it and distribute it widely within IAG with the deadline for submission of proposals set to February 29, 2008. Responsible: Executive Committee, Deadline: 2007-10-31.

Subsequently, Hans-Peter Plag presented a proposal for a GGOS Clearing-house for geodesy (see his presentation, [presentations/plag_ggos_clearinghouse.pdf](#)). This proposal includes a Clearing-house mechanism to address international issues related to geodesy. However, due to the late hour, the proposal was not further discussed.

Outside the agenda, Michael Pearlman presented draft standards for retroreflectors for GNSS satellites (see his [presentations/pearlman_retro_standard.pdf](#)). He will ask the Steering Committee to endorse these standards.

Ruth Neilan showed a resolution of IAG on laser retro-reflectors on GNSS satellites (see presentations/pearlman_IAG_laser_resolution.pdf).

The GEO/GGOS 2007 Workshop

Hans-Peter Plag and Markus Rothacher briefly summarized the status of the GEO/GGOS Workshop 2007, which is integrated in the International Geohazards Week (see http://geodesy.unr.edu/ggos/ggosws_2007/). They emphasized again the need to publicize the Workshop and to motivate submission of abstracts from both invited and other speakers. Markus Rothacher mentioned that Volker Liebig, Director of ESA agreed to speak in the opening.

GGOS Unified Analysis Workshop and Common Research Projects

Markus Rothacher gave a brief overview of the preparations for the Unified Analysis Workshop (see his presentations/rothacher_Unified_Analysis_Workshop.pdf). His presentation included a list of pending actions. Concerning the long list of potential common projects, he suggested to group these into themes or chapters. With respect to the limited participation, Harald Schuh recommended to send an official request to the IAG Services asking them to nominate representatives to the Workshop.

GGOS 2008 Retreat and other GGOS meetings

Due to the late hour, the GGOS 2008 Retreat (see [./scm13/](http://scm13/)) was only briefly discussed, with main focus on whether or not to combine the Retreat with a GGOS Stakeholder conference. There was no consensus on how large and wide a stakeholder conference should be. No decision was made.

Any other business

There was no other business.

Summary of Action Items

Action Item GGOS-SCI0-1: All EC members will engage in publicizing the GEO/GGOS Workshop 2007 through appropriate channels. ***Responsible: Executive Committee, Deadline: 2007-08-15.***

Action Item GGOS-SCI0-2: Chris Rizos will propose a session on observing local ties at colocation sites for the 4-th IAG Symposium on Geodesy for Geotechnical and Structural Engineering and the 13-th FIG Symposium on Deformation Measurements and Analysis in May 2008. ***Responsible: Chris Rizos, Deadline: 2007-08-15.***

Action Item GGOS-SCI0-3: The GGOS EC will establish a review process for GGOS Leaflets including the Topic of the Months leaflets, and this review process will involve the GGOS Science Panel. ***Responsible: Executive Committee, Deadline: 2007-09-15.***

Action Item GGOS-SCI0-4: Markus Rothacher will follow up the GEO Call for a Notice of Interest to contribute to the Exhibition at the Ministerial Summit. ***Responsible: Markus Rothacher, Deadline: 2007-07-16.***

Action Item GGOS-SCI0-5: Hans-Peter Plag will follow up the GEO Call for contributions to the GEO publication "The Full Picture" and coordinate the production of the contributions for GGOS. ***Responsible: Hans-Peter Plag, Deadline: 2007-07-31.***

Action Item GGOS-SCI0-6: Bente Lilja Bye will follow up the GEO Call for contributions to the GEO Video Exhibition at the Ministerial Summit. ***Responsible: Bente Lilja Bye, Deadline: 2007-08-31.***

Action Item GGOS-SC10-7: Michael Pearlman, Ruth Neilan, Josef Adams, and Bente Lilja Bye will prepare a draft Notice of Intend and a draft Call for Proposals for the GGOS Coordinating Office and provide this to the EC. **Responsible: Ruth Neilan, Michael Pearlman, Josef Adams, Bente Lilja Bye, Deadline: 2007-08-31.**

Action Item GGOS-SC10-8: The EC will finalize the Notice of Intend for a CFP for the GGOS Coordinating Office and distribute this NoI to all potential bidders. **Responsible: Executive Committee, Deadline: 2007-09-30.**

Action Item GGOS-SC10-9: The EC will finalize the CFP for the GGOS Coordinating Office and issue this at the latest after the GGOS Stakeholder Conference in Spring 2008. **Responsible: Executive Committee, Deadline: 2008-03-31.**

Action Item GGOS-SC10-10: Michael Pearlman will prepare a white paper, together with co-authors of his choice, on the GGOS entity for Networks and Communication, which will detail the mission, tasks, and internal and external linkage of this new GGOS entity as a basis for its implementation. **Responsible: Michael Pearlman, Deadline: 2008-01-31.**

Action Item GGOS-SC10-11: Hermann Drewes will prepare a white paper, together with co-authors of his choice, on the GGOS entity for Standards and Conventions, which will detail the mission, tasks, and internal and external linkage of this new GGOS entity as a basis for its implementation, taking into account that this entity will have to be based on relevant existing IAG activities and components. **Responsible: Hermann Drewes, Deadline: 2008-01-31.**

Action Item GGOS-SC10-12: The EC will clarify the procedure for appointing/electing the chair of the GEO Working Group of GGOS and ensure that a chair is appointed/elected accordingly. **Responsible: Executive Committee, Deadline: 2007-09-30.**

Action Item GGOS-SC10-13: Bernd Richter and Carey Noll will finalize the draft CFP for the GGOS Portal and submit it to the GGOS EC. **Responsible: Bernd Richter, Deadline: 2007-09-15.**

Action Item GGOS-SC10-14: The EC will review the CFP for the GGOS Portal, finalize it and distribute it widely within IAG with the deadline for submission of proposals set to February 29, 2008. **Responsible: Executive Committee, Deadline: 2007-10-31.**