



NORDISKA KOMMISSIONEN FÖR GEODESI

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THE PRESIDIUM OF THE NORDIC GEODETIC COMMISSION (NKG)

DRAFT MINUTES FOR THE 50TH MEETING

Hönefoss, NORWAY

APRIL 16-17, 2012

PLACE: Klækken Hotel, Norway

PRESENT:

Denmark: Niels Andersen, DTU Space (Chair 16 April) (Item 1, 2, 4, 6, 10, 11, 14)
Per Knudsen, DTU Space (Item 1, 2, 4, 6, 10, 11, 14)
Lola Bahl, KMS

Finland: Markku Poutanen, FGI (Chair: 17 April)
Pasi Häkli, FGI

Norway: Per Erik Opseth, K
Anne Jørgensen, K
Matthew Simpson, K
Torbjørn Nørbech, K

Sweden: Mikael Lilje, LM (Secretary)
Jonas Ågren, LM

Guest:
Martin Lidberg, LM
Karin Kollo, Estonia (Item 1, 2, 4, 6, 10, 11, 14)
Halfdan Pascal Kierulf, K (item 7)

APOLOGIES

Finland: Jarkko Koskinen, FGI

Iceland Thorarinn Sigurdsson, LMI,
Gudmundur Valsson, LMI

Sweden: Jan Johansson, Chalmers



ITEM 1. OPENING OF THE MEETING

Niels opened the meeting and welcomed all participants. Niels thanked Kartverket for the preparations and hospitality. He also said that he felt sorry not being able to participate both days due to circumstances out of his control. Markku will chair the presidium meeting during day 2.

ITEM 2. APPROVAL OF THE AGENDA

Agenda was discussed and approved.

ITEM 3. MINUTES FROM NKG PRESIDIUM MEETING 48 AND 49

The minutes from the previous two meetings were approved after one change in the protocol in January 2011.

ITEM 4. BRIEF REPORTS ON FINANCIAL AND ORGANISING ISSUES AT THE NORDIC NATIONAL MAPPING AUTHORITIES

Denmark:

DTU: The current Director General will leave his post and a new General Director will be appointed. There has been an external panel evaluating DTU regarding with focus on the scientific work there. The evaluation gave a positive result regarding the scientific level, which is considered as world top class.

ESA/EU/Polar DTU organised a two day conference at DTU on "Requirements to a future Arctic Space Infrastructure". Conclusions and recommendations are available on the ESA and Polar DTU web. This should be discussed at the NKG Autumn School.

KMS: Lola started by mentioning the economic situation at KMS. They are in the process of dismissing 23 employees. Also as a result of the economic situation, some of the task of KMS must be reduced or removed. The new director Henrik Studsgaard starts 1 may. A new KMS strategy is expected as soon as he is in place. A result will probably be that a new structure of the organisation will be decided in autumn/winter.

Hot topics at KMS are currently the adoption to climate change together with a new height model. There has been discussion on the economy for updating the height model and for creating a hydrological variant of the height model. KMS has now bought full rights of the height model.

Two levelling teams are currently doing field work and will do so until summer. After the summer it is not clear if KMS can continue with one or two teams. Agreement with the



Road Authority as well as a possible agreement with the municipalities will probably give a lot of work.

Finland

FGI; Markku mentioned that there are no budget cuts for this year. Instead they have noticed a 30% increase due to the modernisation of Metsähovi. There is a tendency to merge governmental research institutes but FGI are currently not in such plans.

Jarkko Koskinen has started a strategic discussion that will divide the focus into four topics;

1. Reference Frame
2. Mobile Geomatics
3. Changing Earth
4. Spatial data infrastructure.

FGI is looking for a Research Director (5 candidates exist) that will start in autumn.

Metsähovi has been allowed funding for approximately 8 mEuro over the coming five years. FGI has ordered a new superconducting gravity. Also, investments will be done regarding GNSS this year as well with e.g. the renewal of Finnref this year with new stations as well as a new mast at the old stations. SLR and VLBI are also in the pipeline in the coming years as well as updating the FG-5.

Norway

Statens Kartverk is now officially called Kartverket.

The economic level is stable as well as the organisation. The outreach activities are important to keep the budget on the same level.

Hot topics currently are;

- The investment and development of Ny-Ålesund. Funding is promised but not available yet. Hopefully there is more information about this in May. The investment will go to new VLBI and SLR instruments as well as other infrastructure. Kartverket is looking for a new project to cover the work.
- A sea level report was released earlier in April. The report covers sea level change in the 21st century along the Norwegian coast.
- The software GeoSat that combines different geodetic techniques into one single solution. NDI (Norwegian Defence Institute) has developed GeoSat and now



Kartverket has an agreement with NDI in using and developing GeoSat. Combination is done on observable level in the program.

- Kartverket is an IVS associated analysis centre and will in 2013 probably be an official analysis centre.
- Kartverket is working on their strategy. Currently they are looking into the three main goals to 2015 more carefully.
- Leica has asked for the access to raw data for setting up their own Network-RTK solution. Kartverket are looking into the requirements for Leica to run a Network-RTK to guarantee the access to the service.

Sweden

At Lantmäteriet, the progress of the work on a new height model is good and according to plan. Also, Lantmäteriet is the Swedish coordinator for the implementation of Inspire. Both these topics have been under the subject of economic discussion.

Concerning the Geodesy Department, the strategic document Geodesi 2010 is pointing out the direction for the work. Two of these areas are SWEPOS and the introduction of SWEREF 99/RH 2000 in municipalities. Concerning SWEPOS, the number of new users is approximately 200 per year. Cooperation with Leica and Trimble is not decreasing the number of new users but the opposite. Lantmäteriet is also introducing VRS3 as software for the network-RTK service. According to time table it is officially used from June 2012.

Chalmers Tekniska Högskola has had a proposal for two new VLBI telescopes accepted by Wallenbergstiftelsen.

ITEM 5. CHAIRMEN'S AND SECRETARY'S REPORT

The secretary informed the meeting that the Agreement on the exchange of absolute gravity data is now completed and that all Nordic countries have received a copy of the signed agreement.

ITEM 6. NKG AUTUMN SCHOOL 2012, FINLAND

Markku gave a status report on the NKG autumn school. It is planned to take place in Lammi, Finland September 3-7. The autumn school starts at 12 on Monday and ends at lunch on Friday. The site is 120 km north of Helsinki. Accommodation is available for 50 people which will be the upper maximum number of participants.

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The theme is Geodesy beyond 2020 in the Arctic areas. There exist a list of proposed lecturers but they now need to be contacted. Markku has asked for names from the



persons in the scientific committee and is waiting for responses. Also, we want to have someone from a non-Nordic country.

Presentations will be available on the internet afterwards.

The participation fee will be as low as possible and approximately around 400 Euro covering most meals, accommodation, lecturers, exercises and excursion.

NordForsk has a new project on education and Markku will look into this to see if we can seek external financing.

Agreed action: The institutions agree that each institution is willing to sponsor the event with up to 1000 Euros if needed. This money should be used to attract lecturer from a non-Nordic country to the event.

Agreed action: Markku will update the NKG webpage with information on the Autumn School

Agreed action: Markku will look into Nordforsk new project to see if the NKG Autumn School can get external funding.

ITEM 7. EPOS

Martin presented about the European project concerning geoscience called EPOS, European Plate Observing System. Geodesy is part of the project today and mainly concerning the observation system. EPOS has a long-term integration plan that aims to create a single sustainable, permanent and distributed infrastructure that includes

- Geophysical monitoring networks
- Local observatories
- Experimental and analogue laboratories in Europe

The European Plate Observing System (EPOS) is the integrated solid Earth Sciences research infrastructure approved by the European Strategy Forum on Research Infrastructures (ESFRI) and included in the ESFRI Roadmap in December 2008.

EPOS is currently in the preparation phase (2010-2014) before the “construction and operational phase will start (2015-2040).

All Nordic countries are involved. In Sweden it is led by Uppsala Universities (Seismology). Lantmäteriet is involved. There exists a consortium in Denmark where DTU-Space is involved in the steering committee. There also exists a consortium in Norway where Kartverket is involved. Finland is an associated member.



Within EPOS there exist a working group called WG4 (GNSS data and other geodetic data) chaired by Rui Fernandes, Portugal. Martin Lidberg is acting as a co-chair and Halfdan Pascal Kierulf (Norway) and Abbas Khan (Denmark) are involved in the working group.

It is clear that we already are or will be involved since EPOS is asking for geodetic observation. The NKG Presidium was not able to make a decision on what level we should be involved from NKG or national level. Each institution is urged to follow the project on at least national level. No joint effort will take place at the moment.

Agreed action: One person from each country form a group where the aim is to keep each one informed to take action from NKG side if necessary. Participants from the countries are Martin (Sweden), Halfdan (Norway), Niels/Per/Abbas (Denmark) and Markku (Finland). Martin is chair of the group

Agreed action: Each institution is urged to follow the project on at least national level.

Agreed action: Each working group is encouraged to follow EPOS to identify if there is any joint effort needed from NKG.

ITEM 8. REPORTS FROM THE WORKING GROUPS.

Geodetic infrastructure (Chair Per Knudsen)

Nothing special to report.

Geodynamics (Chair Matthew Simpson)

The group had its annual meeting in Lyngby, Denmark in March together with the working group on Geoid and Height Systems. There were interesting discussions and presentations as well as discussions on the project. The minutes from Lyngby-minute are not ready yet. The agreement on the sharing of absolute gravity measurements has now been signed by all institutions. The AG-project, that the Presidium wanted more information on, was discussed and Andreas Engfeldt, LM was appointed to look into the proposal. Cooperation between the operators of the superconducting gravimeters should continue and be encouraged. See next item for more information about the projects

Geoid and height systems (Chair Jonas Ågren)

The group had its annual meeting in Lyngby, Denmark in March together with the Working group on Geodynamics. Agenda, minutes and presentations are on the web from the previous meetings. The minutes from Lyngby-minute are not ready yet. A lot of the discussions were about the projects, and information on these can also be found on the web. See next item for more information about the projects



Reference frames, positioning and navigation (Chair Pasi Häkli)

The group had its annual meeting in Hønefoss, Norway in March where mainly the project on GNSS Analysis was discussed. A questionnaire on possibility to participate to the projects was sent to the members of WG and the project plan will be updated according to the answers. See next item for more information about the projects.

ITEM 9. REPORTS FROM PROJECTS

Per-Erik asks for a compilation of all projects with milestones and resources to make it easier to follow the progress of the projects. Lola will look into this and present at the next Presidium meeting.

Agreed action: Lola is to investigate on how we can adopt the existing project steering system developed in Referencenet/KMS to keep track on the projects. A report will be given at the next Presidium meeting.

Computation of the NKG2014 geoid model

Project has started. Currently in the specification phase where the project makes decision on e.g. Quasi-geoid model, extension area. The updating of data will be the next step and end by March 2012.

Investigation of the requirements for a future 5 mm (quasi) geoid model.

Lars Sjöberg is the project leader and has started with a questionnaire to all countries. The project has applied for money from the Swedish Research Council to cover Lars part as well as a PhD-student.

Finalisation of the Baltic Levelling Ring (BLR).

The project will start now when Jaakko Mäkinen is back from Antarctica. Jonas is project leader and will contact Jaakko.

ITRF – ETRS 89 Transformations.

Pasi is the project leader and the first task is to finalise the NKG 2008 GNSS campaign with constraining studies, final solution as well as final transformations. The project is working according to project plan. Pasi as well as Lola will ask and seek for resource from Denmark.

Agreed action: Pasi and Lola to ask Per Knudsen about the availability of Karsten Engsager to the project.



NCGN – Nordic Combined Geodetic Network

The project plan is slightly updated according to the discussion at the Presidium meeting in January. FGI has now a resource to start with the project. More details will be on the web shortly and that there will be progress within the project in the coming 4-5 months.

ITEM 10. PROPOSED PROJECTS

Status report on the projects that were proposed earlier but the Presidium has asked for more information or postponed the start.

Review of current and near-future levelling technology.

Olav will be the project leader now since he is back. The project is therefore accepted by the Presidium.

Agreed action: The project *Review of current and near-future levelling technology* is now a NKG project.

Empirical land uplift modelling.

A new GNSS solution is needed for the projects as well some other issues discussed during the work shop the 16th of April. The working group on Geoid and Height System has decided to postpone the start of this project.

Absolute gravity measurements in Fennoscandia.

The working group on Geodynamic met before Easter and the working group has appointed Andreas Engfeldt (Sweden) as project leader and he is working on the project description. It will need to be iterated between the working group members before it can be sent to the Presidium.

Nordic GNSS Analysis Centre (NKG AC).

The working group met a few weeks ago. Pasi presented a new version of project plan based on discussions at the meeting. The project has already done a questionnaire among the Nordic countries and interest is good. Norway has replied that they will submit RINEX files but not participate actively in the project. The presidium approved the project and its timetable.

ITEM 11: NKG WORKSHOP

A discussion on the workshop held the 16th of April took place. The Presidium members in general agreed that the workshop was useful and given the opportunity for working group chairs together with the Presidium had the possibility to discuss. However, we also need workshops that it is more open to other participants than the Presidium members.



More experts should be invited. Perhaps also have workshop in conjunction with working group meetings or joint meetings between working groups.

The next workshop would be to have a follow up on the workshop on the 16th of April. Per is responsible to plan the next work shop

Agreed action: Per is responsible to organise a workshop in conjunction with a NKG Presidium meeting during the Autumn.

ITEM 12. NKG WEB

Several of the working groups have updated their web pages with minutes and project plans and those who have not are encouraged to do so. Also presidium minutes are uploaded when they are agreed.

Information about the Autumn School is also on the nkg.fi web and it will be more information as soon as it is available.

The webpage will be moved to a new Internet Server during the spring 2012. Hopefully, no users will notice any different.

ITEM 13. THE INTERACTION BETWEEN NKG AND THE EUREF TECHNICAL WORKING GROUP.

Both Markku and Martin participating in the last EUREF TWG meeting. ECGN is supposed to have a test area in the Nordic area and that is the NKG project, NCGN. The former working group that Martin was leading has now changed name to EUREF working group on Geokinematics.

Next EUREF symposium will be in Paris 6th-8th of June, 2012.

ITEM 14. NEXT MEETING OF THE PRESIDIUM

The next NKG Presidium meeting will take place the 4th September in the afternoons/evenings in Lammi, Finland.

Three of the working groups are invited by our Icelandic colleagues to have their meetings in March 2013 in Iceland. The presidium decided to try to organise its meeting in conjunction to that. Proposed week is week 12, 2013.



Agreed action: Week 12, 2012 on Iceland for three working group meetings as well as Presidium meeting.