



NORDISKA KOMMISSIONEN FÖR GEODESI

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The NKG Steering Committee on the on-going sub projects for "NORDIC POSITIONING SERVICE"

Minutes of the 19th meeting
Gävle, Sweden - January 20-21, 2005

PRESENT

Denmark:	Sigvard Stampe Villadsen Casper Jepsen
Finland:	No representative
Norway:	Bjørn Engen Rune Hanssen Per Erik Opseth
Sweden:	Bo Jonsson Andreas Engfeldt (secretary)



ITEM 1: OPENING OF THE MEETING

Bjørn Engen welcomed everybody to the 19th meeting of the NKG Steering Committee on the on-going sub projects for “Nordic Positioning Service”.

The Steering Committee agreed to the following agenda for the meeting

1. Opening
2. Minutes from the 18th Steering Committee meeting on 9-10 September in København and review of action lists from that meeting and from the latest telephone meeting on 6 December.
3. Review of the “Klekken list”
4. Ongoing activities
 - Nordnet – the computer network, including the new sub-project
 - NorDPOS
 - NordRTK
 - The national GPS-services in each country
5. Report from the latest Presidium Meeting and preparation for the next
6. Preparation for the next Directors General Meeting
7. DARC/Global Star
8. Future activities
9. RTK tests
10. Agreements
11. EGNOS
12. Summary of action list
13. Next meeting and closing

AGREED ACTION LIST:

- Rune shall mail the project plan to the rest of the Steering Committee as a mpp-file and as a pdf-file after the meeting.
- There shall be a telephone meeting about the project plan at 13.00 on January 27. Andreas is responsible for the booking of the meeting.
- Before the telephone meeting all partners will check the project plan and which staff from respective partners shall be involved in the project.
- Örjan Zackrisson and Anders Frisk will go to Hønefoss for a meeting with Rune and Mohammed Ouassou on February 2.
- GlobalStar will be a subject on the Agenda list for next ordinary meeting.



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- The SWEPOS distribution agreements will be studied until next ordinary telephone meeting.
- Casper will investigate how the distribution agreements of GPSNet.dk look until next ordinary telephone meeting.
- Casper starts to write a list of reports related to the project Nordic Positioning Service, fills it with Danish reports, sends it further to Per Erik who fills in the Norwegian reports and sends it further to Andreas who fills in the Swedish reports and distributes the whole complete list to the Steering Committee.
- The results of the calculation for a new common Nordic Reference Frame by the NKG working group, Positioning and Reference Frame, shall be presented on the next meeting of the Steering Committee.
- Two different types of reference stations shall be classified from each country before 1 April by a Working Group consisting of Bo Madsen, Gunnar Hedling and Svein Ola Thorsen.

ITEM 2: MINUTES FROM PREVIOUS MEETING

Minutes from the 18th Steering Committee meeting on September 9-10 was approved, with the following remark:

ITEM 7: It should be Longyearbyn.

REVIEW OF THE ACTION LIST FROM THE MEETING OF THE STEERING COMMITTEE ON SEPTEMBER 9-10

- SK and LMV shall decide how to co-locate the permanent reference stations along the border between Norway and Sweden before October 1. Per Erik and Peter are responsible. **Action carried out:** It is now decided where to place the stations.
- When it is time to start a new activity in the sub-project NorDPOS the project activity responsible person shall make an activity plan with milestones. See Appendix A in the minutes from the 17th Steering Committee Meeting. **Action carried out:** No more activities have started yet.
- The NorDPOS activity "Testing of NorDPOS in Denmark by means of a monitor station at KMS" has started and continues with the monitoring (ITEM 4). Casper is responsible. **Action carried out:** A new activity plan will be written quite soon.
- A station data availability report shall be delivered to the Steering Committee each month (ITEM 4). Per Erik is responsible. Such report has been delivered for each month between March and July. The one from August is though still missing. **Action carried out:** All reports from September to December have been delivered.
- Stability tests of the Swedish delivery of data to Nordic Positioning Service. Peter is responsible. **Action carried out:** Nothing has happened.



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- A Javad/Topcon – Ribex converter shall be developed (ITEM 4). Rune and Per Erik are responsible. At moment such a one is running, but there are a few problems with it which are not solved. **Action carried out:** Nothing more has happened.
- All the partners shall provide a data delivery service with an availability of 90% per month for the NorDPOS-data (ITEM 4). For Norway that has been provided since a long time ago. The responsible for Denmark is Casper and the responsible for Sweden is Peter. **Action carried out:** Nothing has happened.
- The reference/coordination group for NordRTK has been established. The members of the group have had their first meeting, see Appendix B, and shall have a meeting again latest in November or December this year (ITEM 4). **Action carried out:** A meeting took place on January 19-20, 2005, in Gävle.
- The Swedish and Danish permanent reference stations shall be classified before November 1 (ITEM 8). Bo M is responsible. **Action carried out:** It has not been done.
- A status report for RTCM version 3.0, a comparison of version 3.0 with version 2.3/2.4 and an analysis of the impact of RTCM version 3.0 on Nordic Positioning Service shall be written before November 1. Gunnar H is responsible (ITEM 8). **Action carried out:** The report has been written and distributed.
- A new sub-project to check the line between the different computer networks shall be established (ITEM 4). Roger Hougen is responsible and it shall also include Casper and Örjan. This sub-project shall start around week 44. **Action carried out:** Nothing has happened.
- The old list of permanent reference stations shall be distributed to the Steering Committee by Andreas. After that the list shall be updated in each country and sent back to Andreas and Stampe before October 10. After that a new map will be drawn in Denmark (ITEM 9). **Action carried out:** The list was distributed and updated and a new map, which has been used in at least two presentations, was created.
- When reports are printed in the different countries, they should be distributed to the members of the Steering Committee. **Action carried out:** Agreed.
- The Swedish diploma work report about a comparison between single station RTK and network RTK shall be distributed to the Steering Committee by Andreas. **Action carried out:** It has been distributed.
- A Danish report about height and GPS measurements shall be distributed by Casper to the Steering Committee. **Action carried out:** It has been distributed.
- A CD from the GPSNet workshop in Gävle in March shall be distributed by Andreas to Denmark (ITEM 5). **Action carried out:** It has been distributed.
- A CD from the GPSNet workshop in Munich in July shall be distributed by Bo J to Denmark and Norway (ITEM 5). **Action carried out:** It has been distributed.
- Bo J and Rune shall try to find out before next meeting what is happening in the DARC-area (ITEM 9). They shall also have contact in between each other when they find something interesting about it. **Action carried out:** Not especially much has happened here. See ITEM 7.



- The long list (Appendix A) we wrote on the 17th meeting in Klekken will be checked through on the 19th meeting. **Action carried out:** It was checked on the meeting.

Notice that a reason for that nothing has happened in many of the Actions is depending on that the computer network, Nordnet, is not working (see ITEM 4).

ITEM 3: REVIEW OF THE "KLEKKEN LIST"

We read through the list and almost everything was included in the subject NordNet, so we handled the matters in ITEM 4 instead.

ITEM 4: ONGOING ACTIVITIES

Nordnet and NorDPOS

The main issue for this meeting was to make a project plan for Nordnet and NorDPOS.

Nordnet is still not working and on the latest Meeting of the Steering Committee it was decided that a new sub-project about the computer network should start in week 44 (2004), but no action has been carried out with it. We also found that this is the big bottleneck in our co-operation business, so it has to be solved as soon as possible, why we decided to make a draft for a new project plan for the work to get an operational computer network.

This draft of the project plan was recorded by Rune in the software Microsoft Projects (at the same time when we came up with the ideas and went through the plan).

When the draft of the plan was finished Rune got the mission to send it to the Steering Committee as a pdf-file (see Appendix A) as well as the original Microsoft Projects file. All partners then got the mission to discuss the plan within its organisation to find out if it was realistic and appoint personnel for the work. A telephone meeting about the approval of the plan is planned for Thursday 28 January at 13.00. Andreas is responsible for the set-up of the telephone meeting.

NordRTK

A meeting was held in Gävle on January 20-21 between Per Erik, Casper, Peter and Andreas, see Appendix B. Rune and Björn also attended the second half day of the meeting. It was a fruitful meeting and the subjects "RTK tests" and "Agreements" from that meeting were lifted up to the agenda of this meeting of the Steering Committee (see ITEM 9 and 10). The next meeting will take place between June and August this year, if possible in Denmark and if possible in connection to a meeting of the Steering Committee (which in that case will be the second next meeting, probably in September or October).



The national GPS services in each country

This item was postponed to the next meeting. We did not speak about this during the meeting.

ITEM 5: REPORTS FROM THE LATEST PRESIDIUM MEETING AND PREPARATION FOR NEXT PRESIDIUM MEETING

From the latest Presidium Meeting there was nothing special to report. The next meeting of the Presidium will take place on 7-8 April, 2005. Then the NKG Working Group, Positioning and Reference Frame, will present the Nordic ETRS campaign solution with transformations between the Nordic ETRS solution and the National implementation of ETRS.

ITEM 6: PREPARATION FOR THE NEXT DIRECTORS GENERAL MEETING

We decided to make the preparations for the next meeting of the Directors General in early August on the Faeroe Islands on our next meeting in May.

ITEM 7: DARC/GLOBAL STAR

Bosse reported about the Swedish efforts about DARC and Global Star. On the DARC side it has not happened so much since our previous meeting. Bosse has not yet been in contact with Teracom who owns the channel. On January 19, there was a meeting in Gävle between Lantmäteriet, Elsacom – an Italian company which are the owners of Global Star, and Netton – the Swedish sales company of Global Star. That meeting was promising and Global Star looks like a possible solution for the areas with bad GSM coverage. A test will be carried out during the winter/spring 2005.

ITEM 8: FUTURE ACTIVITIES

RTCM version 3.0

Gunnar Hedling will participate in the next meeting of the RTCM committee on 27-28 January in San Diego.

Classification of reference stations

In this matter issue nothing has happened since last meeting, so we decided to change our strategy. Every country shall make a test classification of at least two different types of their reference stations. In the document prepared by the working group there are a lot of criterias for the classes A, B1, B2 and C. As it seems now no station that any of the countries have can fill all demands to be an A-station. Therefore some criterions shall be



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mandatory for each type of stations and the remaining criterions in the list shall be optional. The test classifications and the development of a proposal for the revision of the document shall be done by Gunnar Hedling, Bo Madsen and Svein Ola Thorsen. Bo Madsen was appointed chair of the working group. Andreas will contact them about the task. The test classification shall be finished on 1 April.

PROJECT C1A - Test of distribution channels for RTK

See ITEM 7.

Postponed projects

PROJECT A0 - A Nordic standard for reference stations

Nothing new in particular was mentioned here.

PROJECT A1 - A Nordic Web-site for download of reference station data for post-processing purposes

Nothing new in particular was mentioned here.

C1B - Evaluation of available RTK algorithms

Nothing new in particular was mentioned here.

PROJECT A2 - An Automated Computation Service

Nothing new in particular was mentioned here.

ITEM 9: RTK TESTS

On the NordRTK meeting right before this meeting, Casper came up with an idea to gather information about how to find reports about test measurements with RTK / Network RTK in a document. It was decided that Casper start to design such an Excel document and that he fills in the Danish reports there. After that the document shall be sent to Per Erik who fills in the Norwegian reports there. After that the document shall be sent to Andreas who fills in the Swedish reports there and distributes the final document to the rest of the Steering Committee.

ITEM 10: AGREEMENTS

On the NordRTK meeting right before this meeting it was spoken about how we can protect ourselves in case of someone will sue us for not giving the specified accuracy. Lantmäteriet has since long time had distribution agreement forms that the user shall sign before he gets a password to the service. Andreas handed out two documents with



agreements to the participants (see Appendix C and Appendix D). It was decided that we should study those documents until the next telephone meeting and it was also decided that Casper should investigate how the distribution agreements of GPSNet.dk looks like.

ITEM 11: EGNOS

Rune gave a presentation about EGNOS. Quite soon there will be a 14-days test for EGNOS. For more information see www.esa.int and Appendix E.

ITEM 12: SUMMARY OF ACTION LIST

ACTION LIST from the meeting 2005-01-20 - 2005-01-21

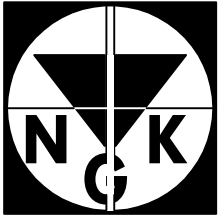
Action	Responsible	Status	Important dates
1 The project plan shall be mailed to the SC in a pdf-file and a mpp-file	Rune	Written on the meeting	ASAP
2 Every country shall discuss the project plan and decide who will do what	Casper Björn/Rune Bosse		Before the telephone meeting (see below)
3 A telephone meeting about the project plan	Andreas		2005-01-27, 13.00
4 Station data availability report shall be delivered to the SC each month	Per Erik	Delivered for December	Next one in early February
5 Örjan Z and Anders F shall go to Hönefoss for a meeting with Mohammed O			2 February
6 Two stationtypes from each country shall be classified	Bo M Svein Ola T Gunnar H		Before 1 April Before 1 April Before 1 April
7 Global Star will be a subject also on the next meeting	Bosse	A meeting was held in January	
8 The old SWEPOS agreements shall be read through	All of us	Not started	Before next telephone m.
9 Check how the agreements of GPSNet.dk looks	Casper		Before next telephone m.
10 A report list shall be performed	C, P E and A	Not done	
11 The result from Pos & Ref Fr WG shall be presented			On next meeting
12 Next telephone meeting	Andreas		On 14 March 2005, 9.00
13 Second next telephone meeting	Andreas		On 25 April 2005, 9.00
14 Next meeting	Norway		On 25-26 May 2005

ITEM 13: NEXT MEETINGS AND CLOSING

A number of future meetings were decided.

The next two meetings of the Steering Committee will be telephone meetings, on March 14, 09.00-10.00 and on April 25, 09.00-10.00.

The next "real" meeting will take place in Norway (location not decided yet) on May 25, 12.00 - May 26, 12.00, 2005.



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Bjørn thanked all the participants for their contribution to a fruitful meeting. Stampe was also celebrated , because this was his last meeting with the Steering Committee for the Nordic Positioning Service, he has got another position in the administration of KMS. The members of the Steering Committee wished Stampe Good Luck in his new job and looked forward to meet him again in other types of Nordic co-operation