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# baltrad Newsletter

January 2012

## An advanced weather radar network for the Baltic Sea Region

*The innovation lies in the development of an ICT network architecture which allows real-time data exchange and processing of weather radar data using common methods according to local needs in each country.*

**Highlights:** BALTRAD now,  
Final Seminar in Tallinn, BALTRAD+

### baltrad now

After 3 years of close cooperation the BALTRAD project now reaches its end. We can look backwards on a good and efficient cooperation. Fortunately this cooperation will continue within the framework of the BALTRAD+ project that will allow us to seamlessly continue and even expand our developments.

BALTRAD is by no means the first weather radar networking project. The Nordic countries have a proud legacy behind them with the NORDRAD network, and NORDRAD is in many ways the template for BALTRAD. There have also been other networks and research projects, but BALTRAD is the first time money from the European Union has been used to create a weather radar network not as a prototype of proof-of-concept, but as real-time element of regional infrastructure. To meet this objective and create a sustainable solution it has been necessary to build from the bottom-up and learn from past experiences.

The last three years have been busy and exciting. We have developed a well-designed operational system using the outstanding talents of the international team in the best manner. We have the mechanisms for data exchange developed in Poland, supporting database technology and software development excellence from Estonia, software engineering expertise from Sweden, world-class algorithms for improving data quality from Finland, Denmark, Poland and Sweden, and dedicated testing resources in Belarus and Latvia. The BALTRAD system as it stands now significantly reduces the time it takes for weather radar products to reach the consumer.

And these products have higher resolution, and are more detailed and more user-friendly than their predecessors.

This was all possible because we had the opportunity to form an international team that established the cooperation and worked together well. The team and the successful developments will be the solid foundation for the coming two years in the BALTRAD+ project.

### Final Seminar

On December 7th, the BALTRAD Final Seminar was held in Tallinn, Estonia. The seminar was attended by nearly 60 persons from 13 countries and was hosted by the Estonian Meteorological and Hydrological Institute. Jaan Saar, Director General, opened the seminar and welcomed all participants. The Project Manager Daniel Michelson from the Swedish Meteorological and Hydrological Institute introduced the project, its developments and achievements.

The Seminar concentrated on areas where the BALTRAD system has had impact, either now or in the near future. Several presentations that were followed by discussions highlighted domains where the BALTRAD system has the potential to contribute: the role of weather radar to improve weather forecasting, the added value BALTRAD delivers to radiation and nuclear safety, flood and disaster management, urban hydrology, and aviation including pilots briefing. In addition to the advantages BALTRAD offers to these areas, we received valuable feedback to our developments of the system and have got ideas for improvements and new or better functionalities from practitioners.

In addition to these domain-specific presentations the links, from BALTRAD to other international initiatives have been presented and discussed. The way BALTRAD can contribute to the WMO's Information System (WIS), how it could be addressed in the context of WMO's Commission for Instruments and Methods of Observations (CI-MO), and the on-going cooperation with EUMETNET OPERA were part of this session. Last but not least, a presentation of the INCA-CE project offered the potential for future co-operation.

At the end of the seminar all weather services of the Baltic Sea Region signed the BALTRAD Cooperation Agreement. Through it, the partners commit to sustain the BALTRAD system beyond the project lifetime, and it sets the framework for using and exchanging the weather radar data in the region.



Figure 1:  
Jaan Saar and Daniel Michelson at the Final Seminar



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## BALTRAD+

Due to our success thus far, the partnership has received renewed confidence in the form of an extension-stage project called BALTRAD+ that will start in January 2012 and will last 2 years with a budget of 1.9M€.

This new project will see an enlarged partnership. We welcome the weather services in Germany, Lithuania, and Norway, along with the University of Aalborg and Århus Water A/s in Denmark. The new partnership will comprise all weather services of the Baltic Sea Region, and the enlarged thematic scope will include using the BALTRAD system with local-area weather radars supporting municipal activities such as water management. The main scope of BALTRAD+ is the transformation of the developments in BALTRAD to fully-operational regional infrastructure, in some cases replacing existing production systems as well as to further improve the products and the services for end-users. Ultimately the BALTRAD systems should provide cost-effective tools for making informed decisions such as:

- Will the roads need clearing after this snowfall? If so, which roads should be prioritized?
- Can I fly my airplane through that rain, or should I fly around it?
- Can I pour concrete today, and if so when exactly?
- Should I plough my field today? Do I need to irrigate?
- Will this downpour cause my cities' sewer system to breach?
- Can I leave work early and go golfing?

The involvement of end-users will be facilitated by four events, the so-called User Forum that will specifically address the services offered by the BALTRAD system.

## Announcements

The 1st BALTRAD+ User Forum will be organised in spring 2012, please consult the project website for further details

Release of BALTRAD software. Information will be posted on the project website which will continue to be [baltrad.eu](http://baltrad.eu).



Figure 2:  
Signing of the BALTRAD Cooperation Agreement