baltrad + Newsletter

January 2014

An advanced weather radar network for the Baltic Sea Region.

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

Back in time

The original BALTRAD proposal was written in 2008, for the first programme call, when it became clear that the potential partnership's vision was aligned with that of the BSR. Our main driver was discontent with the outdated functionality in the existing radar networking and data processing technology, and the desire to create a modern state-of-the-art solution ourselves. Building a system together was something several of us had on our scopes for several years, and now we had the chance to secure funding for it. The rest, as they say, is history; the main-stage and extension-stage projects have brought this dream to fruition.

BUF IV in Berlin

Forth BALTRAD+ User Forum was held in Berlin 21st to 22nd November 2013. The BUF IV provided a comprehensive overview about the main achievements of the project and the features of the BALTRAD software system (articles below). After the general discussion, began DIY workshop. It focused on technical training, especially on aspects related to installing, configuring and running BALTRAD+ software. Definitely the central focus was on demonstrations of products for end-users that have been developed and international cooperation that projects has established. For an example participants had change to hear presentations from WMO and OPERA.

baltrad+ developments

During the extension-stage BALTRAD+ project, development of the core system has continued yet played a secondary role to other tasks. Operational deployment has been a major objective, as has been the addition of more data processing tools in the BALTRAD toolbox, such that the quality of data can be improved and used better.

End use of high-quality data from BALTRAD+ has been a key focus. With our extended thematic scope, the transfer of our technology to higher-frequency radar and an urban setting has resulted in exciting and useful applications. Partnering with Dutch company HydroLogic, Ålborg University set up a real-time BALTRAD node as a "back-end" that feeds radar data from Århus to HydroLogic's HydroNet suite of applications, providing users with high-resolution and high-quality precipitation information and alerts at the neighbourhood level.

A similar application supporting urban water management was set up for the greater Copenhagen area through BALTRAD and the Copenhagen Development Cooperation, involving Ålborg University, Krüger, and Veolia Water. Rainfall data from BALTRAD are used to optimize sewer storage and treatment capacity, providing also a dynamic assessment of various risks. These end users were also very pleased with the improved precipitation information from BALTRAD.

During 2013, we have welcomed two new BALTRAD partners: the Ukrainian Hydrometeorological Center and the Central Aerological Observatory of the Russian Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet). We are also proud that EUMETNET OPERA has deployed the BALTRAD toolbox operationally, improving the quality of European weather radar data before generating continental-scale products.

The future of baltrad

BALTRAD and BALTRAD+ have brought together a critical mass of knowhow in our partnership that is set to carry on with the momentum that has built up over the past five years. One of the biggest challenges for any partner is to keep its expertise. With BALTRAD, however, we offer the incentive

to contribute as part of a community, where the contributors together own the system we have created. The future of radar networking in our region is thus firmly in our own hands.

We have made great progress with the development of our system, but it is by no means complete. We have identified many more ways of improving radar data quality in the BALTRAD Cookbook roadmap, and we look forward to tackling them.

Operational deployment is a notoriously difficult task in government. While some partners have succeeded in making their BALTRAD nodes fully operational, other partners are still underway with this process. In this context, the BALTRAD network and system are well positioned to supersede the current outdated operational network NORDRAD.

The link with EUMETNET OPERA will continue to momentum and a focus on improving data quality for the benefit of the users

An exciting development to look forward to is the integration of data from our new partners from Ukraine and Russia into the BALTRAD network.

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