

# **PDGPS and Multi Beam Echosounder Systems for Precise Surveying of Waters in the FRG**

**Dr.-Ing. Joachim BEHRENS, Germany**

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## **ABSTRACT**

In the surveying of waters mainly the geometrical information about the morphologic-topographical structure of any kind of offshore and inshore waters is recorded. This is necessary for passing on detailed information e.g. for the safety of trade vessels or tourist ships on rivers, canals and coastal waterways.

The Federal Waterways and Shipping Administration (WSV) is responsible for coastal and inland waterways in the Federal Republic of Germany (FRG). Within the last 30 years not only the developments in surveying systems but also the reorganization of the WSV with its 7 directorates and 39 offices led to an optimization in the surveying of waters.

It will be demonstrated how the WSV is working today in managing the surveying of waters, mostly for monitoring the riverbeds of the Federal Waterways in FRG. The use of precise differential GPS (PDGPS) for positioning the surveying vessels, leads to the best results in surveying. On the other hand there is a change from multi channel to multi beam echosounder systems with a mass of information, which is referred as digital terrain model. Some examples for managing the data flood will be shown.

The increasing transportation of goods by inland navigation makes it necessary to have more information for ship navigation in marked narrow river channels, which are normally supervised more often than the riverbanks. Therefore it is necessary to have a special river information system for the Rhine river called ARGO.

## **CONTACT**

Dr.-Ing. Joachim Behrens, Head of Department Geodesy  
Federal Institute of Hydrology  
Bundesanstalt für Gewässerkunde  
Kaiserin-Augusta-Anlagen 15 – 17  
D-56068 Koblenz  
GERMANY  
Tel. + 49 261 1306 (0) 5230  
Fax + 49 261 1306 5280  
E-mail: behrens@bafg.de , BfG Internet: <http://www.bafg.de/>

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Joachim Behrens  
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