

Radar based bridge clearance solution to support European river information services harmonisation project

Dorgeville Emilie¹, Gergely Mezo²

¹ Miros, Norway

² RSOE, Bulgaria

Emilie.dorgeville@miros-group.com

The large-scale European River Information Services Enabled Corridor Management Execution (RIS COMEX) project aims to implement and operate cross-border river information services based on the operational exchange of RIS data. The river information-based corridor services allow the authorities and logistics sector to manage traffic and transport; improve the safety, efficiency, and reliability of inland navigation; and increase environmental protections.

To supply a state-of-the-art management system, the Hungarian National Association of Radio Distress-Signaling and Infocommunications, RSOE, has chosen to implement a bridge clearance solution as part of a pilot project. The chosen solution is a dry-mounted, radar-based sensor that measures airgap, tide, water level, draught, and waves. With millimetre accuracy in all weather conditions, it provides highly reliable bridge clearance data for the project requirements. Relevant information is supplied to the agreed corridor services as part of an installation on the historical Margaret Bridge, the second-oldest public bridge in Budapest.

The Margaret bridge is a key point of navigation on the Danube River and the provided data is critical for the waterway management authorities to calculate the accurate distance from the bridge to the water surface, thus ensuring safe navigation as well as allowing the vessel operators to make informed decisions as to whether they can pass under the bridge.

As the depth of the Danube under the bridge is approximately 3,6m and can increase up to 11,8m with high tide, the distance from the water surface to the bridge can diminish to less than 10m which can be critical to some vessels.

This presentation will detail the methods used in this pilot project and the benefits for the European river system harmonization.