MIMO-SAR radar, a radar imaging system allowing flexibility and scalability to meet user needs in terms of resolution and target identification

Over-the-horizon radar to extend the operation range of coastal assets

Passive radar exploiting existing communication signals, such as Automatic Identification System

JRC is exploring a modular sensor design to accommodate inside a unique system, active radar, passive radar and radio location capabilities.

To improve current EU maritime surveillance capability JRC is carrying out research in the field of innovative sensors and their usage.

The JRC research is developed at two different levels:

- Improvement of the sensors themselves
- Enhancing the detection capability by integrating the available sensors.

Integration of Sensors

Integration of different types of sensor is already used in several fields including in maritime surveillance, but JRC aims to raise the level of quality of applications through:

- Improved detection capability
- Better availability
- Better coverage

JRC proposes an innovative sensor networks approach connecting heterogeneous fixed (coastal) or moving (shipborne, air-borne, UAV) nodes to integrate data provided by all existing assets and to cater for easy accommodation of newly developed sensors and platforms.

The approach aims to provide optimal planning of sensor positioning to increase the capability of detecting small targets and to reduce the probability of false alarms.

www.jrc.ec.europa.eu

Contact
Thomas BARBAS
European Commission • Joint Research Centre
Institute for the Protection and Security of the Citizen
Maritime Affairs Unit • VESCOSUR action
Tel +39 0332 789512 • Email Thomas.Barbas@ec.europa.eu

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