

# Reference Vessel Registry

## The conceptual approach

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## Problem definition

- SSN, LRIT, CSN, Thetis developed individual databases with different structures
- problems linked to quality of vessel identifiers, impeding correct identification of ships:
  - rejection of messages exchanged
  - retrieval of incorrect information
  - allocation of information to the wrong ships
- Similar problems encountered by MSs at national level
- Use of various sources including commercial to support the validation of own ship registries



# Can we do better?

- Beneficial position
- Huge number of messages received
- The first who know
- Access to various sources of information

The establishment of a reliable, common EU vessel database (used and fed by SSN and other maritime applications) has been identified as the appropriate way long time ago. Need to find an intelligent solution

## Background

- First attempt in 2008 by EMSA. Manual verification of ship particulars of incoming *notifications* comparing with external reference sources. Soon proved unrealistic
- Use of algorithms and validation tools implemented in mid-2009. Allowed automatic validation of ship particulars and facilitated human resolution of unresolved cases
- A vessel registry (four main ship particulars) at SSN central was created and used centrally.
- Quite satisfactory results; further improvement is needed. MSs expressed interest in using.
- SSN HLSG 7 decided the setting up of a work group to analyze a technical solution that will enable the exchange of reference data between the SSN central application and the MS.

## Definitions

- **Operational Vessel Registry (OVR):** particulars of all ships for which SSN receives notifications:
  - **Valid** entries concerning the ships providing notifications whose ship particulars can be verified against predominantly reliable resources
  - **Temporary** entries (related to ships with a still-to-be-verified status e.g. new buildings not registered in the RVR)
  - **Non-valid** entries for ships reported with notifications including invalid ship particulars (e.g. technically invalid IMO or MMSI)
- **Verification and Validation (V&V):** set of utilities , algorithms and processes necessary for the validation process
- **Reference Vessels Registry (RVR):** list of ships particulars produced as a result of the validation process

Around 90% of ships referred to in all types of SSN notifications are validated and stored in the RVR at EMSA

## Proposal - Basic principles

Ship data sources used for validation purposes:

- SSN notifications
- EU LRIT ship database
- THETIS ship database
- Commercial sources
- Others may be included at later stages (e.g. MS ship databases, the ITU MARS database, etc.)

## Proposal - Basic principles

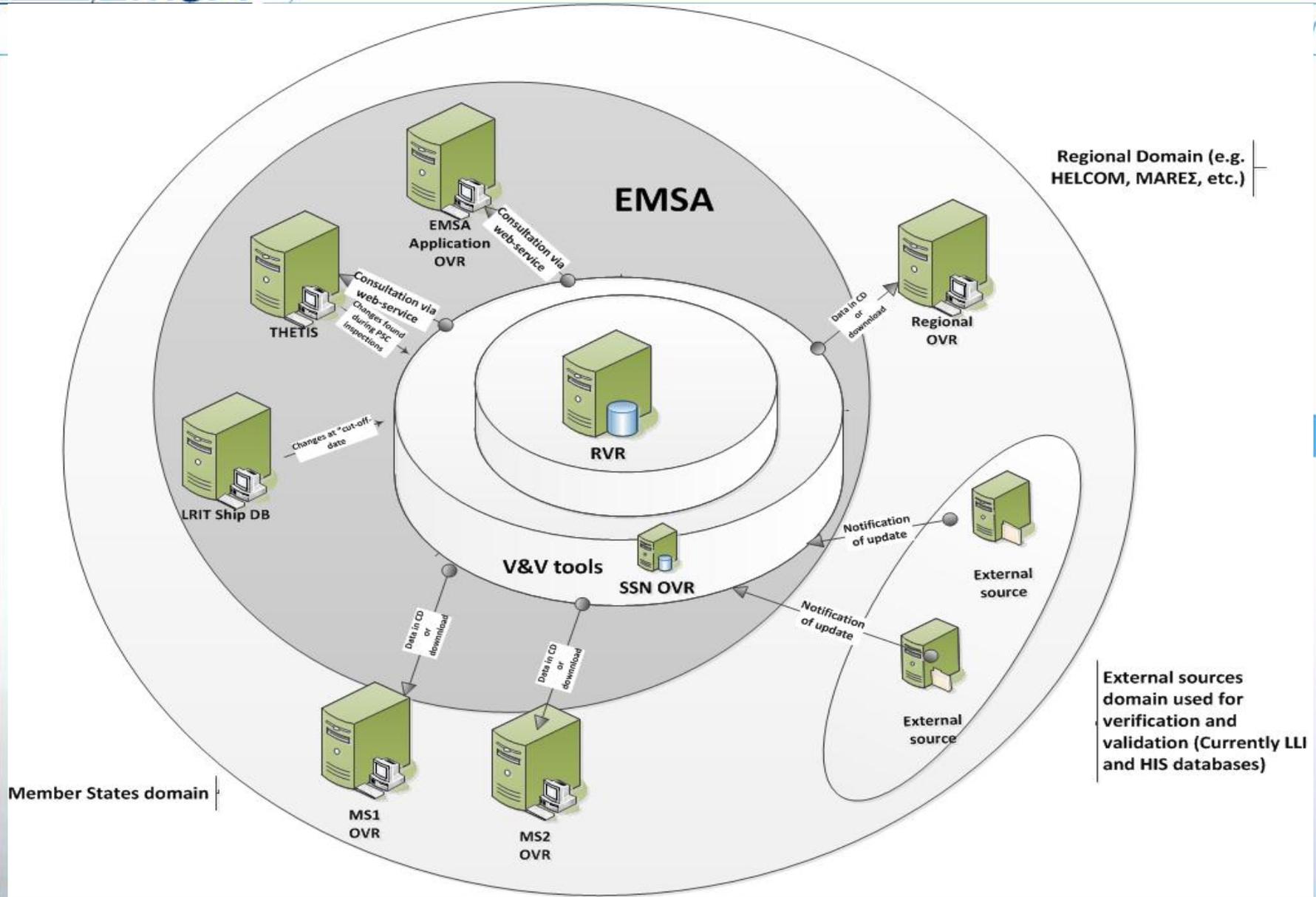
- RVR generated using V&V rules (follow a “result driven” approach)
- Define MSS involvement in the V&V process
- Ship particulars stored at RVR used by all EMSA application
- RVR will be made available to MSs who may use it for cross checking of data stored within their national registries
- Sharing additional ship particulars (length, tonnage etc) should be considered at a later stage

## Principles of the V&V

- Algorithms will prioritise sources based on the perception of the level of confidence of incoming information
- Keep track: indicate the “reason to update”, the “date of effect” and the dates of the initial creation and most recent update
- Manual V&V process could be performed when the ship identity cannot be definitely determined by the automatic rules
- Ship records waiting for verification will be stored in a separate database until an additional notification of vessel particulars from a different source will arrive.
- The automatic notification process will then be re-launched. Should the process succeed at this stage, the record will be stored in the RVR. If not, the process will be repeated when the next notification arrives.

## MSs involvement

- Correspondence group (validation of algorithms and procedures)
- RVR data could be provided to MS NCAs in CD form, or in files for download via FTP (for testing)
- A ship particulars notification web-service should be implemented
- Link between the central RVR and MS on a voluntary basis, using XML (SOAP web-services based interface)
- Implement a request/response mechanism allowing MSs to send requests and receive the content of a ship record in the RVR database
- Implement a notification service enabling MS to notify ship particulars fully verified at MS level



## **RVR work group/ Present status**

- EMSA disseminated on 28<sup>th</sup> of September a paper proposing :
  - The conceptual approach
  - The action plan for the group (target: conclude the work within 6 months maximum)
  - The business rules for RVR data registration and update
- On-going:
  - The collection of comments from MS
  - The further development of the improved business logic (in line with the rules presented in the paper)

# RVR working group/ Action plan

1	Action	Who	Deadline
2	Validate conceptual approach and associated action plan	RVR_WG members	Oct 12
3	Initial analysis of the RVR data quality by the WG based on samples shared via downloadable files.	RVR_WG members	Nov 12
4	Test implementation of the RVR as a horizontal service utilising SSN and to-be-selected EMSA applications	EMSA	Dec 12
5	Based on the conclusions of internal testing, present a proposal for an XML/ SOAP reference guide for ship particular exchange	EMSA	Dec 12
6	Second phase of analysis of the RVR data quality by the WG based on samples shared via downloadable files	RVR_WG members	Jan 13
7	Comment on/validate the proposal for the XML/ SOAP reference guide	RVR_WG members	Feb 13
8	Prepare RVR WG report	EMSA+ RVR_WG members	Feb 13
	Incorporate MS comments in the report	EMSA+ RVR_WG members	March13