EUMIS - an open portal framework for interoperable marine environmental services

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Outline

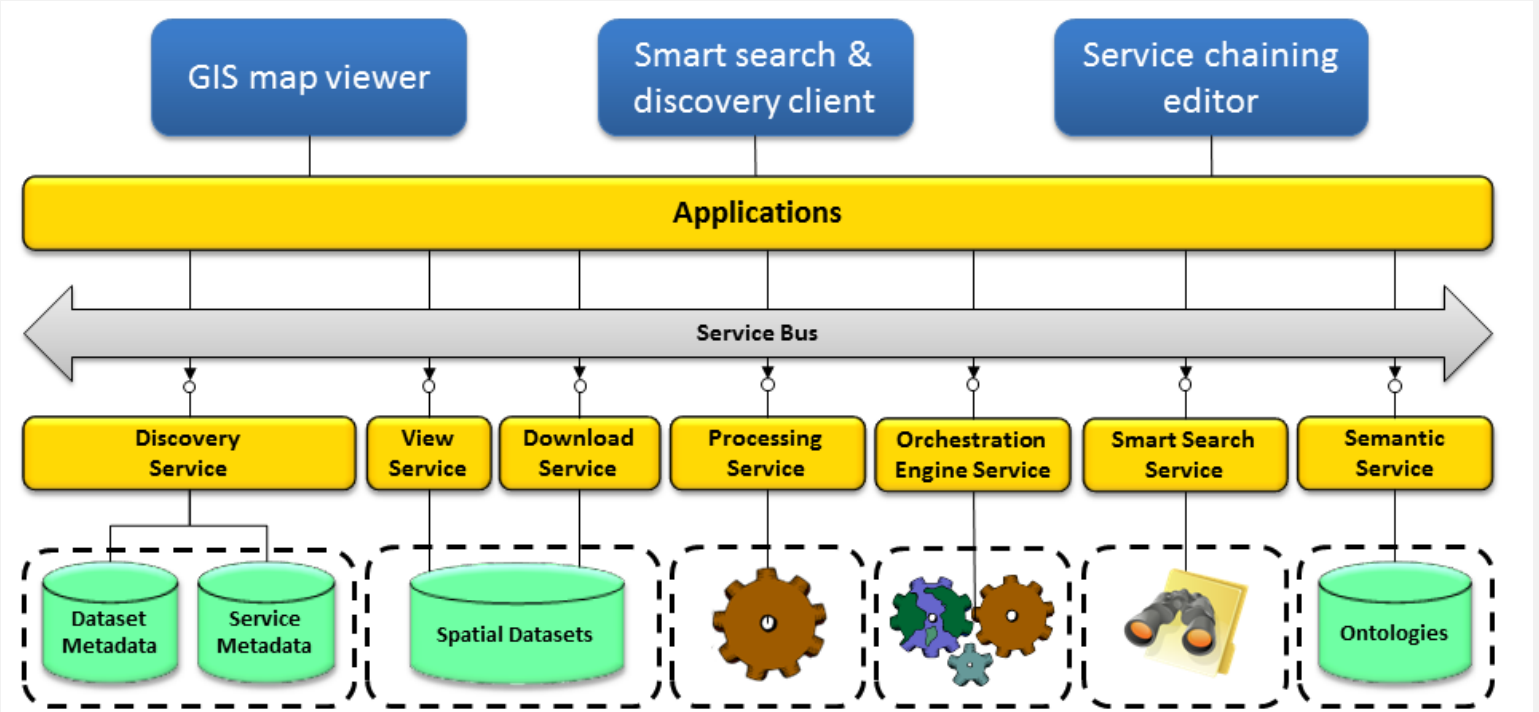
- Objectives and concepts
- Pilots
- Ontologies and semantic framework
- EUMIS portal and components
  - GIS Viewer
  - Discovery Client
  - Service Chaining Editor
- Conclusion

Objectives and concepts

- NETMAR aims to develop a ***pilot European Marine Information System (EUMIS)*** for searching, downloading and integrating satellite, in situ and model data from ocean and coastal areas. It will be a user-configurable system offering ***flexible service discovery, access and chaining facilities*** using OGC, OPeNDAP and W3C standards. It will use a ***semantic framework coupled with ontologies*** for identifying and accessing distributed data, such as near-real time, forecast and historical data. EUMIS will also enable further processing of such data to generate ***composite products and statistics*** suitable for decision-making in different marine application domains.

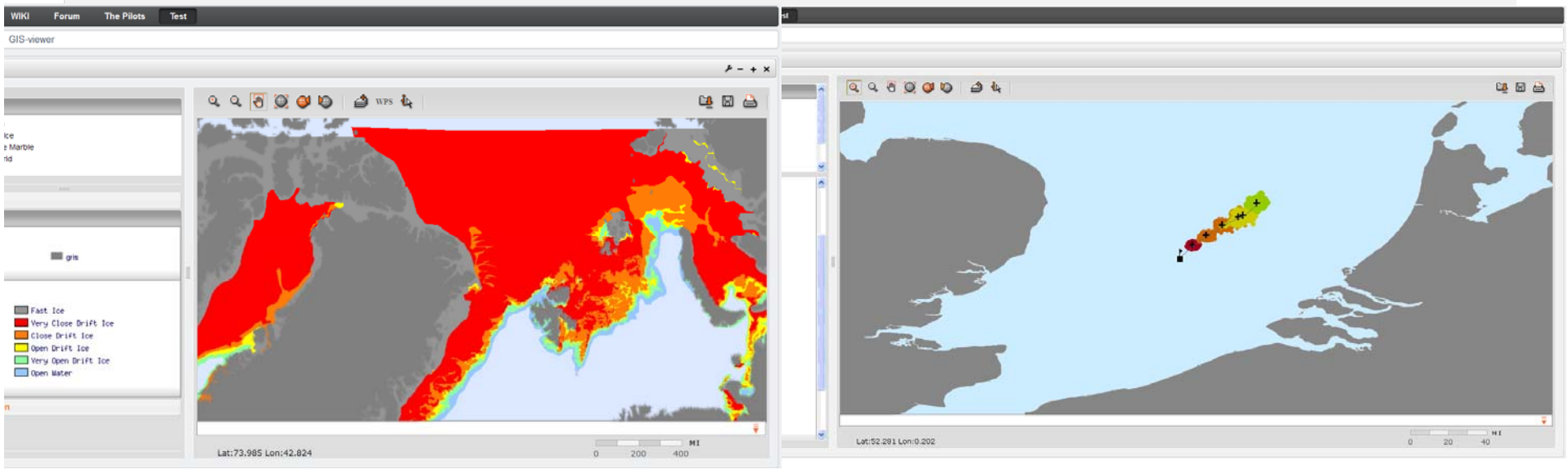
Objectives and concepts

- NETMAR Service Oriented Architecture
  - Portal and components by JSR-168 JSR-286
  - Services by OGC, W3C and OASIS standards

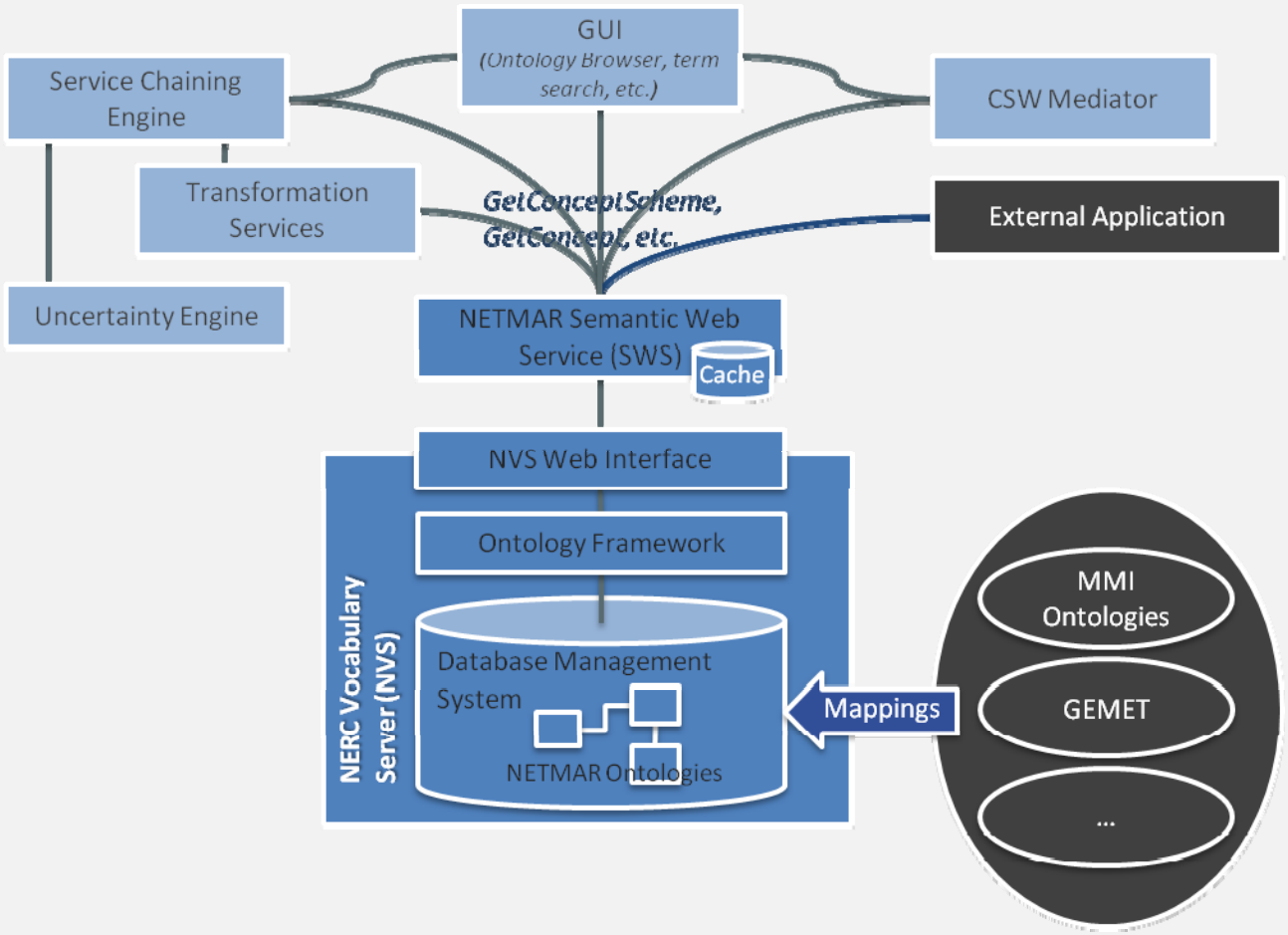


Pilots

- Pilots in NETMAR
  1. Arctic Sea Ice monitoring and forecasting
  2. Oil spill forecasting and shoreline cleanup
  3. Ecosystem monitoring and modelling
  4. ICAN (International Coastal Atlas Network)

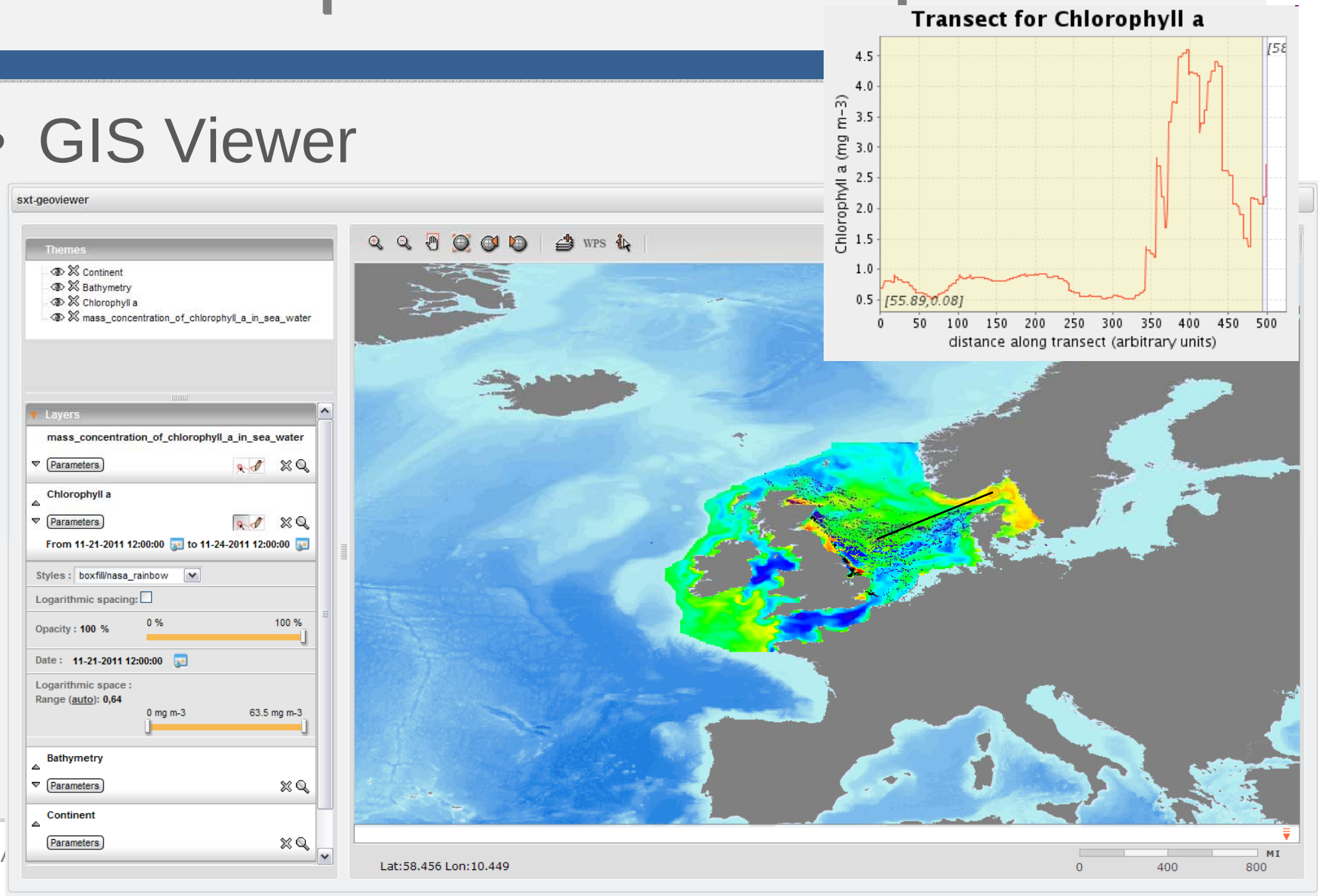


Ontologies and semantic framework



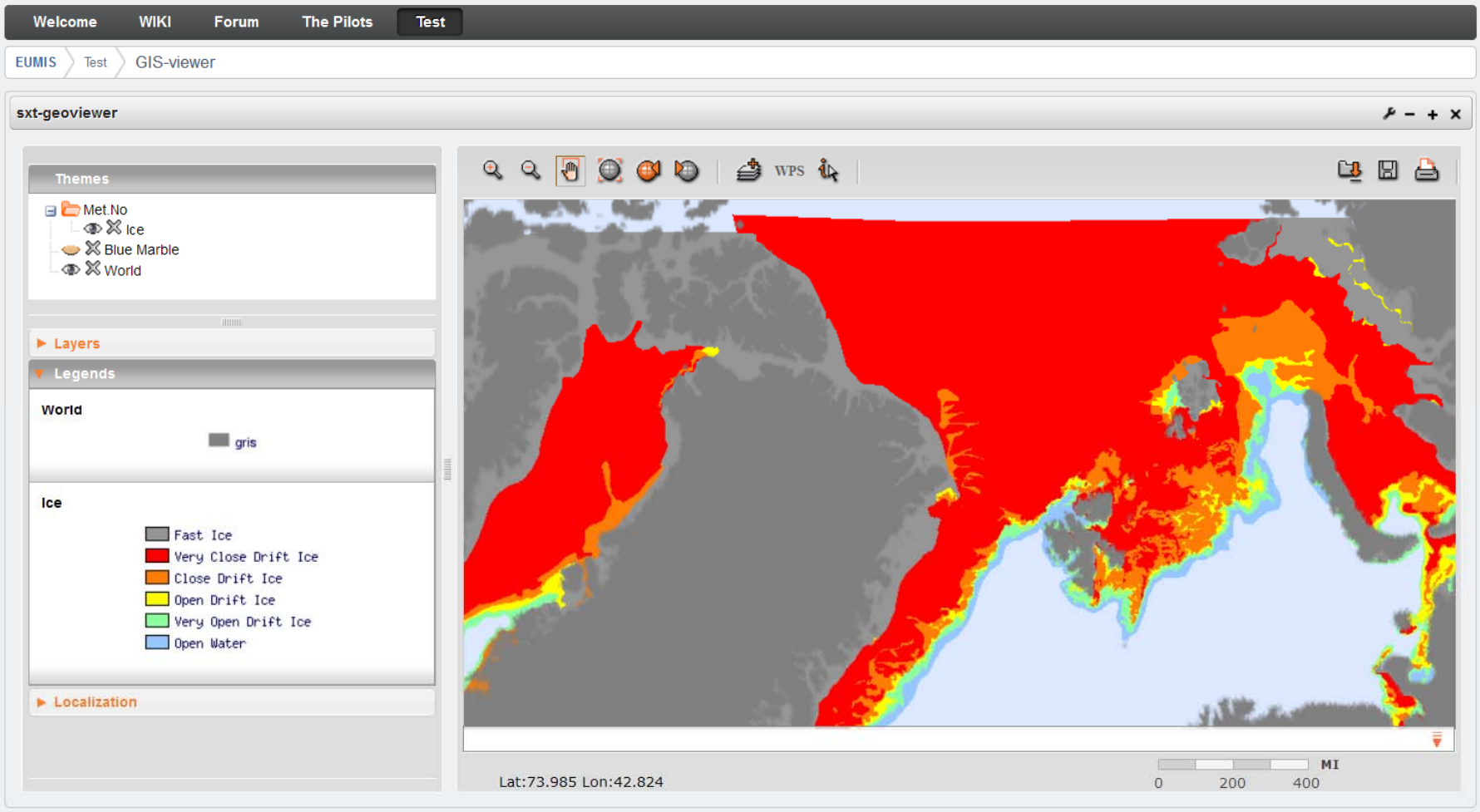
EUMIS portal and components

- GIS Viewer



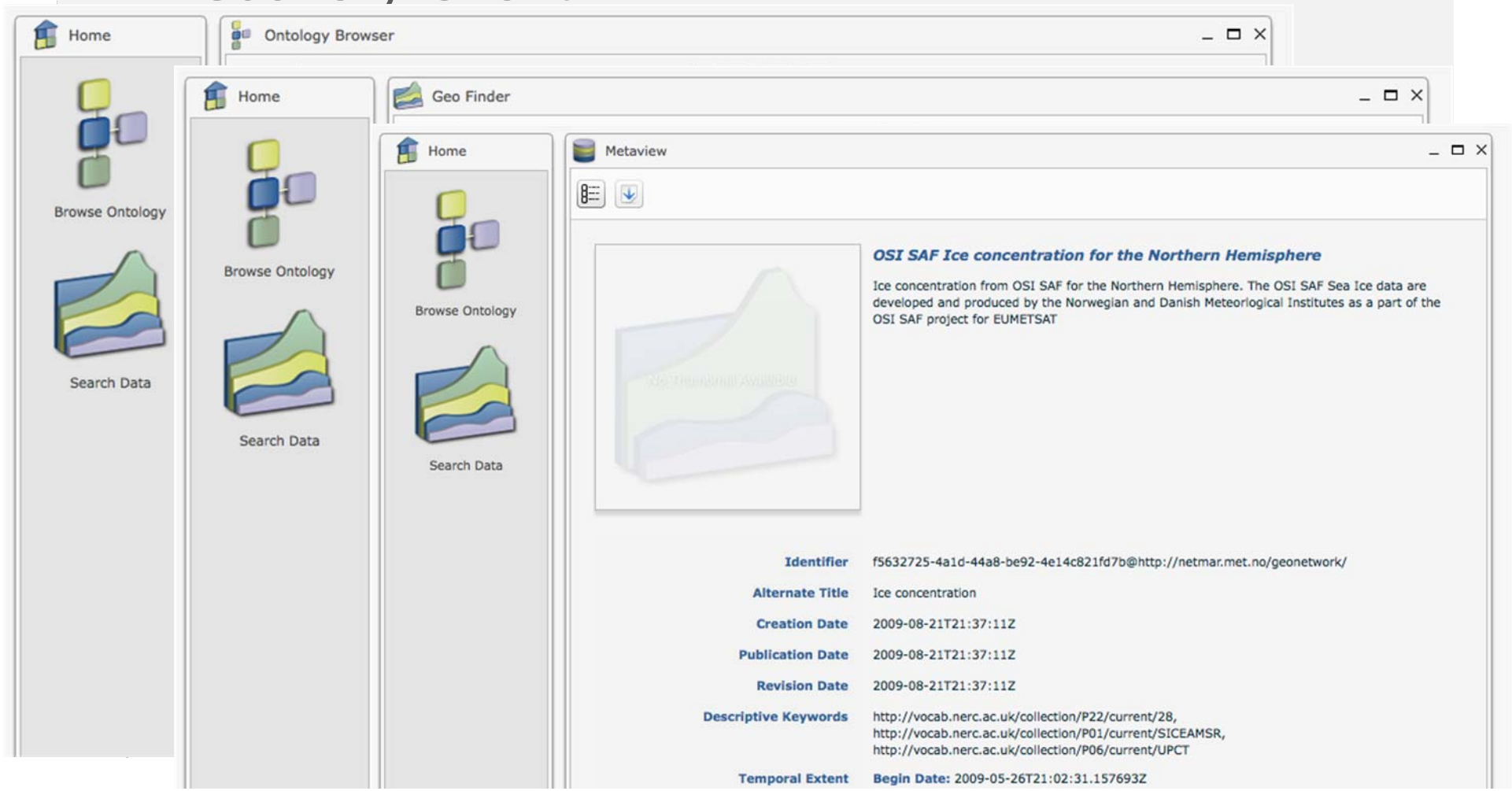
EUMIS portal and components

- GIS Viewer



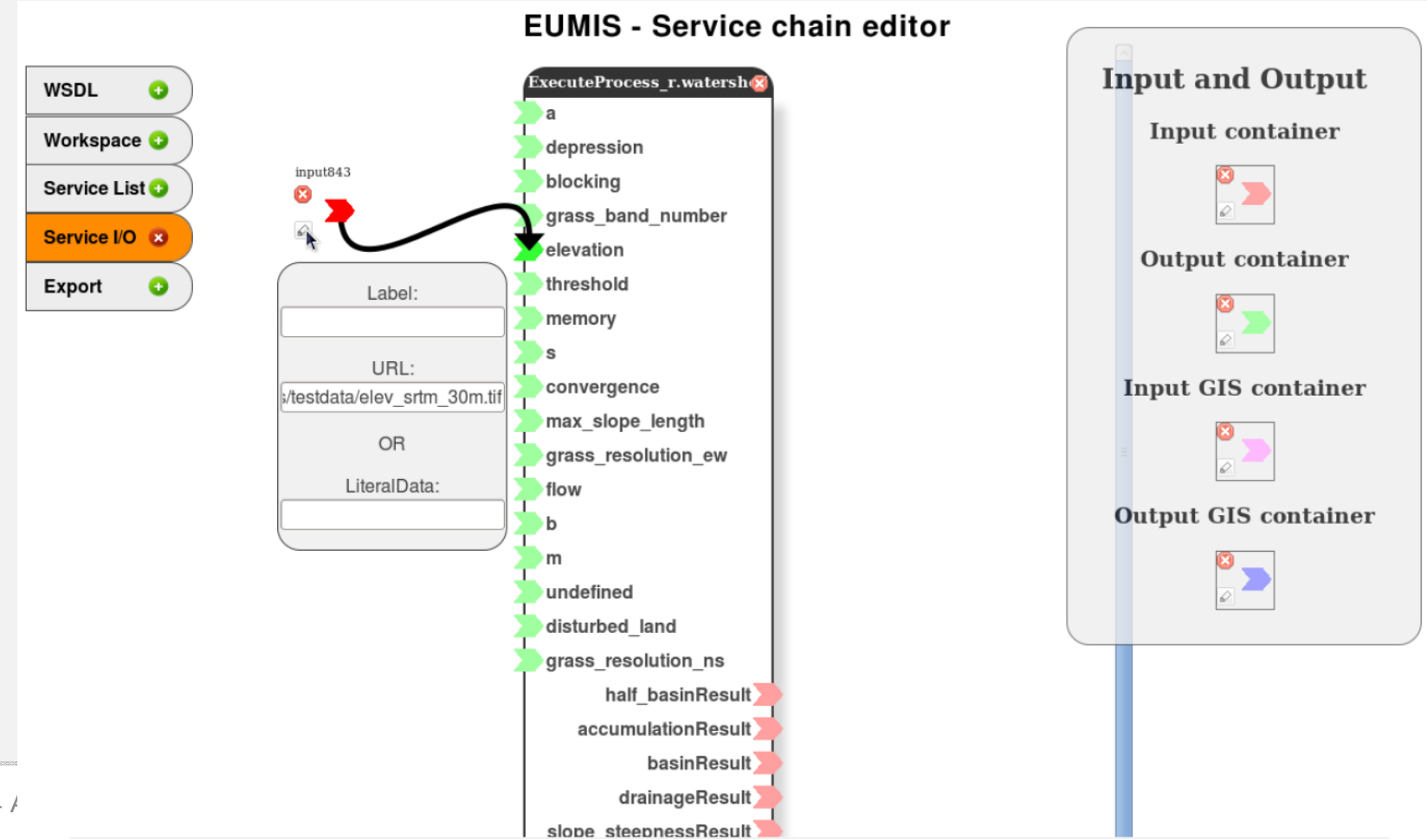
EUMIS portal and components

- Discovery Client



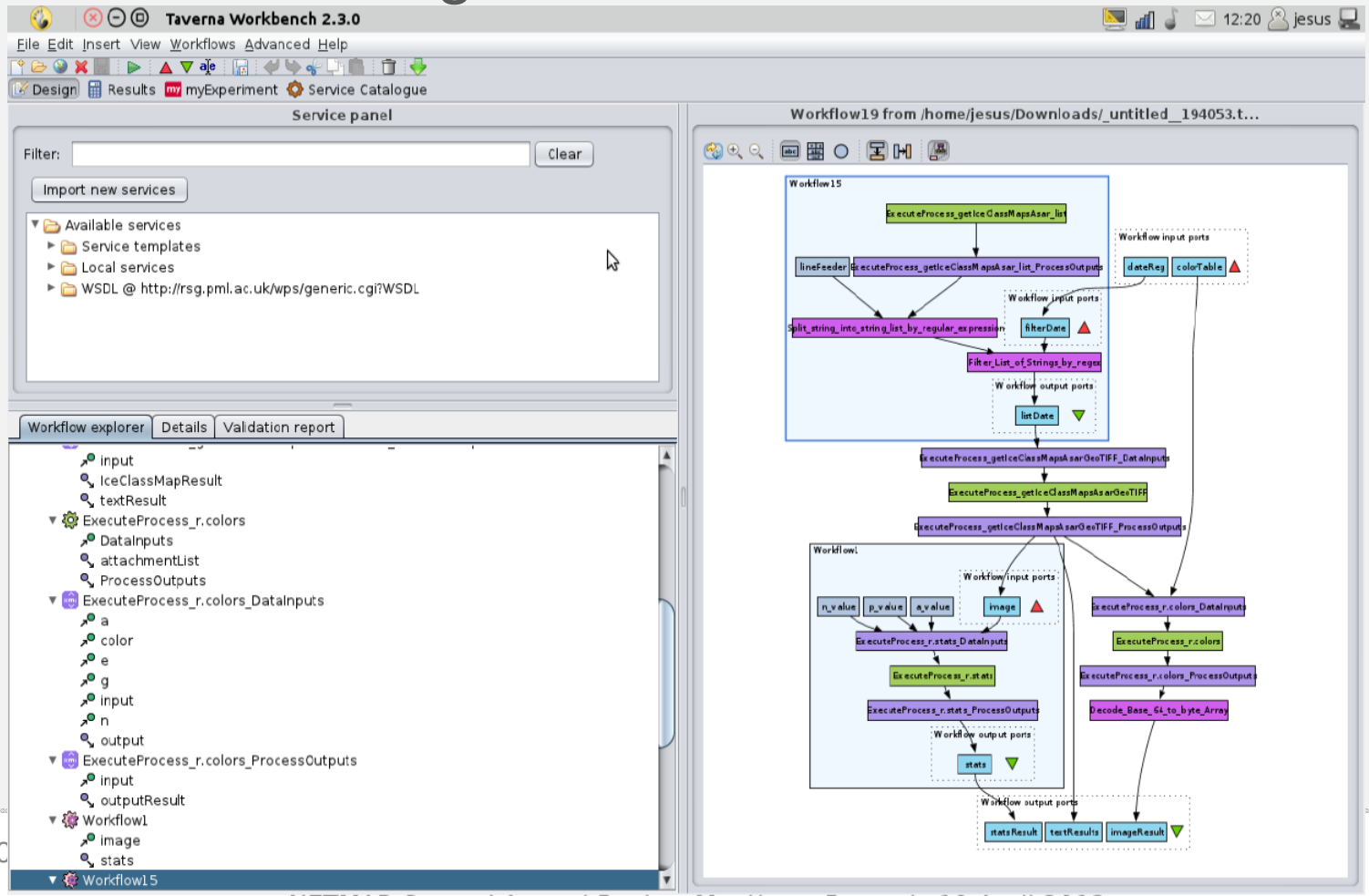
EUMIS portal and components

- Service Chaining Editor



EUMIS portal and components

- Service Chaining Editor



Conclusion

- We have implemented a SOA for the EUMIS portal with a set of components
  - GIS Viewer - Discovery Client
  - Service Chaining Editor - Wiki, Forum, RSS feeds

  using multiple programming languages, and deployed them within the Liferay platform.
- The first version of EUMIS was tested for the four pilots in different marine application domains. User feedback was used to improve services and components.
- Positive experience with the Java Portlet Specification standard and the portal framework. With further work EUMIS can be developed into a sustainable system.

More information

- NETMAR Public Splinter Meeting
  - Wednesday 25 April, 13:30-15:00, Room SM5
  - Presentations + Demonstrations
- NETMAR web site: http://netmar.nersc.no
- Contact Torill Hamre (torill.hamre@nersc.no)

Thank you!

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