webODV - a tool for the online analysis of marine data

Sebastian Mieruch and Reiner Schlitzer
Ocean Data View (ODV)

- Developed by Reiner Schlitzer (AWI)
- Approx. 8,000 active users (>60,000 registrations)
- Oceanographic and other geo-referenced data
- Interactive exploration, analysis and visualisation
- Profiles, time series, trajectories, other sequence data
- Windows, Mac, Linux, Unix
- https://odv.awi.de
Sections
Maps

World Ocean Atlas 2013

Oxygen [ml/l] @ Depth [m]=500
Scatter plots
Quality Control
Future

● Continue ODV standalone development
  ○ Personal data
  ○ No Internet connection

● Develop webODV - a tool for the online analysis of marine data
  ○ Large community datasets
  ○ No copies of datasets
  ○ No installation of software
  ○ Available on all devices (PC, Laptop, Tablet, Smartphone)
  ○ Integration into Virtual Research Environments (SeaDataCloud)
webODV - Concept

Client

Frontend
- Responsive Web Design
- Touch-screen
- Modular

Services
- Data extraction
- Quality control
- Visualization

Server

Backend
- Linux, Apache
- Slim PHP controller
- Community datasets

Data
- secure WebSockets
- ODV
- ODV
- ODV
- Data

sdn-userdesk@seadatanet.org – www.seadatanet.org
● SeaDataCloud project
● EUDAT cloud infrastructure
● Virtual Research Environment (VRE)
● webODV
Quality control

Quality Control Services

Right click on the data windows or map window to open context menus and choose an options. Apply zoom by double left mouse click or enter key if zoom mode is active. Cancel zoom mode by ESC key. To assign a quality flag, right click on the value or flag of the respective variable in the “Sample” table at the bottom right of the page. Use the arrow buttons below to navigate from sample to sample within one station. Use double-clicking for larger stops.
Data Extractor

Select cruises from the Cruises menu. Click Zoom in to define a sub-region, Apply to select the sub-region, or Zoom out to return to global domain. Use the Required variables as a station filter.
ODV-online Visualization Server

- Provide ODV look-and-feel in the browser window
- Fully interactive (mouse or touch; context menus, ...)
- Fast response, low latency
- Easy to learn and operate
- Creates all ODV graphics types
Conclusions

● Concept works
● Desktop like user experience
● Fast, powerful, stable and efficient
● Scalable and modular

Next steps

● Implementation into the SeaDataCloud VRE in close collaboration with users and EUDAT partners
● Development of visualization services
Thank you for your attention.