

878-1-2000-1231-2/10/\$31.00 ©2010 IEEE

in context of the project FlexMoT, funding grant no. 032X343D

Economic Affairs and Energy, passed on a decision of the German Bundestag

This work has been sponsored by the German Federal Ministry for

immediate environment of their platforms [1]. The overall environment and can monitor or supervise changes in the

FlexMoT is a monitoring system for underwater

# I. INTRODUCTION

data analysis; sensor data management; environmental monitoring

sensor data; software design; sensor data exploration; interactive

Keywords— data management; data visualization; profiling

data in environmental monitoring and marine research.

improve visualization-based work with heterogeneous sensor

leakage situations. It is proposed as a universal approach to

analytics of marine environmental data and visual forecast of gas

management, operational near real-time monitoring, visual data

present the complete software stack of FlexMoT for data

utilizing a direct-touch interaction metaphor. In this paper, we

technologies and linked interactive 2D and 3D data presentations

implemented visualization solution combines recent web-

explorative data analysis with interactive displays. The

attention to critical events or striking data and support

quickly and intuitively into helpful information, to draw

system utilizes human perception to transform lots of data

reconfiguration to different use-cases. The designed visualization

the software uses a plugin approach to foster the simple

and well-informed. Similar to the modular hardware approach,

was already discussed in detail in [3], together with first results

of the developed views, the „FlexMoT Explorer View.“ (FEV)

presentations utilizing a direct-touch interaction metaphor. One

technologies and linked interactive 2D and 3D data

The implemented visualization solution combines recent web-

and support explorative data analysis with interactive displays.

information, to draw attention to critical events or striking data

transform lots of data quickly and intuitively into helpful

designed visualization system utilizes human perception to

foster the simple reconfiguration to different use-cases. The

hardware approach, the software uses a plugin approach to

initiated swiftly and well-informed. Similar to the modular

draw the right conclusions and (2) appropriate actions can be

personnel of offshore installations and marine researchers can

presenting the gathered sensor data in a way that (1) operator

environmental monitoring by organizing, preparing and

situational awareness and advanced decision support in

software stack developed within FlexMoT offers a solution for

visualization of complex (e.g. multivariate) and big data. The

handling of the data lifecycle or software innovation for

platform and sensors integration standardization, better

and improved software integration approaches. Examples are

can be solved or mitigated by newly developed software tools

with current sensor development [2]. Several of those issues

MTS Tech2mge Ocean Sensors 2014 lists many open issues