

University of Tasmania CAPABILITY STATEMENT in relation to the ANDS (Australian National Data Services) Discussion Paper

The University of Tasmania hosts TPAC, BlueNet and eMII, each of which have a corpus of expertise both locally and in national working groups convened under their aegis. Both TPAC and BlueNet, of which the Australian Ocean Data Centre Joint Facility (AODCJF) is a partner, have a strong record of activity and delivery in data management and curation, data delivery mechanisms, data product development, and in the development of strategies to disseminate capacity in these areas.

Identifying and assisting researchers and their organizations to manage their data and resolve research data management issues has been a core focus of BlueNet, and is also a primary task for eMII. BlueNet and eMII contribute significantly to development of the technologies and practices supporting the Australian Ocean Data Network (AODN), which serves as a focus for all Australian marine science data, including all IMOS data.

BlueNet project office staff and BlueNet community members on AODCJF working groups are closely involved in the review and extension of data and metadata standards, strategies for their development and adoption, strategies and solutions for interoperability, and discoverability structures and services. The focus on standards covers collection and storage of data and metadata, identification of ISO-compliant metadata standards which can also meet the needs of the marine science research domain, and standards-of-practice to optimise data searching, data handling, curation and delivery, including web-service delivery. BlueNet has developed a process to meet workflow needs, and deliver relevant IP and use-constraint information. It has developed initial metadata translator and brokerage services. TPAC has played a lead role in developing tools and plugins to enhance discovery of and access to earth systems sciences data collections. Meeting these needs of the marine science community has required definition and development of appropriate architecture while also facilitating interoperability with related disciplines.

BlueNet and TPAC have also developed key technologies extensible to other domains. For example, TPAC has built a digital library offering content-stream access to self-describing file formats (e.g. NetCDF) of data from a range of sources, and BlueNet has led the development of the Metadata Entry and Search Tool (MEST), which is a core component of the AODN infrastructure. The MEST offers the capacity to create standards-based catalogue records, manages user-levels, provides direct links to data and related documentation and publications, web-mapping services and focused search capacity including federated searching.

A key part of this activity has been to develop expertise within the community, and this includes development and provision of a range of support materials, including toolkits, and feedback processes. BlueNet staff have taken a lead role in developing and delivering training and related support to both use the technologies of the AODN and in relation to standards awareness and adoption. BlueNet has broad experience in outreach to individual researchers, research groups and data-provider organizations in promoting good data management practice, integrating data management activities, and advising and providing tools to assist in automation of metadata creation, extension, maintenance and re-use.

BlueNet and TPAC develop and supply services to the marine domain, as outlined above, and play a leadership role within part of a broader consortium for aspects such as federation services and standards (data and metadata/ontology), and interoperability development. It would be efficient use of resources for these roles to continue within the marine community, and to assist other domains in a similar manner.

List of Acronyms

eMii	eMarine Information Infrastructure	Funded under the IMOS stream of NCRIS
IMOS	Integrated Marine Observing System	
BlueNET	Australian Marine Science Data Network – integrating the Higher Education Sector into the AODN	Now included in the AODN
TPAC	Tasmanian Partnership for Advanced Computing	APAC member
AODCJF	Australian Ocean Data Centre Joint Facility	Marine science data expertise and practice from 6 Commonwealth government agencies: Australian Antarctic Division, Australian Institute of Marine Science, CSIRO-Marine and Atmospheric Research, Bureau of Meteorology, Royal Australian Navy and Geoscience Australia
AODN	Australian Ocean Data Networks	