



Ocean Model Analysis and Prediction System

Science and Technical Implementation Plan Workshop

26th-27th October 2005

Bureau of Meteorology Research Centre

6th Floor Conference rooms 1&2

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BLUElink>

Ocean Forecasting Australia



The science and technical implementation plan (STIP) workshop is an opportunity to review and refine the plan for the trial Ocean Model Analysis and Prediction System (OceanMAPS) being developed under the BLUElink contract. The STIP is intended to be a detailed plan for each of the system components including the namelist/parameter configuration, I/O, diagnostics and supporting scientific and technical documentation. The STIP also includes a plan for the operational infrastructure. The STIP was first initiated in June 2005 and covers the period from configuration through to the scheduled operational implementation in December 2006.

The draft STIP is under development. A small portion of the plan is available online for all contributors to review at <http://www.bom.gov.au/bmrc/ocean/BLUElink/OceanMAPS/>. The online document will be regularly updated leading up to the workshop. All contributions to the document and during the workshop are restricted to topics relevant to OceanMAPS.

OceanMAPS will make use of several components being developed and tested by scientists from BMRC and CSIRO as part of the BLUElink project. These components include: (a) Ocean Forecast Australia Model (OFAM), (b) BLUElink Ocean Data Assimilation System (BODAS), (c) NWP forecast fluxes, (d) Quality control system, (e) Data management system, (f) near real-time satellite observations, (g) near real-time profile observations and (h) SST analyses. OceanMAPS will integrate these components into a single system and prepare the schedule for operational forecasting.

The implementation of the trial system will consist of three phases each of approximately 6 months duration:

Phase 1 Infrastructure: Implement the trial system configuration as defined by the STIP. The implementation is further divided into two sub-systems each of 3 months duration:

1. Analysis cycle
2. Forecast cycle

The conclusion of the first three-month period coincides with this workshop. The analysis cycle will be demonstrated at the workshop and the forecast cycle plan reviewed.

Phase 2 Tuning: At the conclusion of Phase 1 a complete operational configuration will be available for trials. Phase 2 will conduct and report on the trial schedule defined by the STIP. This phase is also divided into two sub-components of 3 months:

1. Robust configuration
2. Extended configuration

The robust configuration will form the backbone of the forecast system and will include only those components tested and likely to be robust. The robust configuration might include the GASP fluxes only and an "aggressive" QC system. The extended configuration will include features that are potentially less robust and need to be tested within the robust configuration. Extensions might include blended GASP/LAPS fluxes, optimised QC and symmetric and asymmetric analysis cycles.

Phase 3 Monitoring: Based on the results of the operational trials in Phase 2 the "best" configuration for operational implementation in December 2006 will be adopted. The "best" configuration of the system will be "static" and assessed for robust delivery of forecasts throughout the monitoring period.

The specific goals for the monitoring period will include: (a) Monitoring, (b) Routine diagnostics, (c) Validation and skill assessment, (d) Ocean briefings and (e) Documentation complete.

OceanMAPS Science and Technical Implementation Plan Workshop Wednesday 26th October 2005			
Session Times	Discussion Times	Chair/speaker	Topic
9.00	Introduction		
	9.00-9.15	Gary Brassington	Workshop welcome and scope
	9.15-9.30	Andreas Schiller	BLUElink introduction
9.30	Ocean services / user community		
	9.30-9.45	Rick Bailey	Bureau Ocean Services
	9.45-10.00	Robert Woodham	METOC services
10.00	Ocean Forecast Australia Model (OFAM)		
	10.00-10.15	Andreas Schiller	Design and scientific performance
	10.15-10.30	Russell Fiedler, Tim Pugh	OFAM performance on HPCCC and implementation issues
	10.30-10.55	Gary Brassington (Chair)	OceanMAPS component STIP <ul style="list-style-type: none"> • Trial configuration • Trial schedule and monitoring
11.00	BLUElink Ocean Data Assimilation System (BODAS)		
	11.00-11.30	Peter Oke, Pavel Sakov Konstantin Belyaev	Design, performance based on BRAN implementation and performance
	11.30-11.55	Gary Brassington (Chair)	OceanMAPS component STIP <ul style="list-style-type: none"> • Trial configuration • Trial schedule and monitoring
12.00	Lunch		
1.00	Ocean Model Analysis and Prediction System (OceanMAPS)		
	1.00-1.15	Gary Brassington	System design
	1.15-1.30	Gary Brassington, Tim Pugh	Implementation phases: <ul style="list-style-type: none"> • Infrastructure • Tuning • Monitoring
	1.30-1.55	Gary Brassington (Chair)	OceanMAPS system STIP <ul style="list-style-type: none"> • Trial configuration • Trial schedule and monitoring
2.00	Operational infrastructure		
	2.00-2.15	Graham Warren	NMOC systems: path to operational implementation
	2.15-2.30	Tim Pugh	SMS and operational scheduler
		Gary Brassington (Chair)	OceanMAPS infrastructure STIP <ul style="list-style-type: none"> • Trial configuration • Trial schedule and Monitoring
3.00	High performance infrastructure		
	3.00-3.15	Phil Tannenbaum	HPCCC infrastructure for operations
	3.15-3.30	Tim Pugh	HPCCC infrastructure for OceanMAPS
	3.30-3.55	Gary Brassington (Chair)	OceanMAPS infrastructure STIP <ul style="list-style-type: none"> • Trial configuration • Trial schedule and monitoring

OceanMAPS Science and Technical Implementation Plan Workshop Thursday 27 th October 2005			
Session Times	Discussion Times	Chair/speaker	Topic
9.00	Data management system		
	9.00-9.15	Graham Warren	Infrastructure
	9.15-9.30	Mikhail Entel, Tan Le	MARS
	9.30-9.55	Gary Brassington (Chair)	OceanMAPS infrastructure STIP <ul style="list-style-type: none"> • Trial configuration • Trial schedule and monitoring
10.00	Satellite observations		
	10.00-10.15	Mikhail Entel, David Griffin	Satellite altimeters, sea level anomalies and coastal tide gauge
	10.15-10.30	Mikhail Entel	Near real-time observations (Servers)
	10.30-10.55	Gary Brassington (Chair)	OceanMAPS component STIP <ul style="list-style-type: none"> • Trial configuration • Trial schedule and monitoring
11.00	Profile observations		
	11.00-11.20	Claire Spillman	Argo and duplicate checker
	11.20-11.30	Oscar Alves, Gary Brassington	Quality control
	11.30-11.55	Gary Brassington (Chair)	OceanMAPS component STIP <ul style="list-style-type: none"> • Trial configuration • Trial schedule and monitoring
12.00	Lunch		
1.00	Surface fluxes		
	1.00-1.15	Eric Schulz	GASP/LAPS
	1.15-1.30	Helen Beggs	Surface temperature relaxation
	1.30-1.55	Gary Brassington (Chair)	OceanMAPS system STIP <ul style="list-style-type: none"> • Trial configuration • Trial schedule and monitoring
2.00	Monitoring/evaluation		
	2.00-2.15	Peter Oke	GODAE metrics
	2.15-2.40	Gary Brassington (Chair)	OceanMAPS STIP <ul style="list-style-type: none"> • Trial configuration • Trial schedule and Monitoring
2.45	Servicing infrastructure		
	2.45-3.00	Tennessee Leeuwenburg	OPeNDAP: Internal/external access to archived datasets
	3.00-3.25	Gary Brassington (Chair)	OceanMAPS STIP <ul style="list-style-type: none"> • Trial configuration • Trial schedule and Monitoring
3.30	Workshop review		
	3.30-4.00	Gary Brassington	Workshop summary and close