

## Paper 17: IMPLEMENTATION AND FURTHER DEVELOPMENT OF OSSM - 11

, (Quicker, more accessible, easier to use) ,

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Oil spill response plans are presently being upgraded to make use of newer "Mac" based versions of On-Scene Spill Model now available, and to take advantage of the proliferation of facsimile machines. Also **OSSM's** coverage is being expanded to include all major ports in Australia. On behalf of the Department of Transport and Communications (DOTC) VIMS and Swinburne are establishing a new **modus operandi** for OSSM, implementing the latest version (OSSM-1 **1**), and providing "user friendly" software so that officers of the SAR surveillance centre can operate OSSM. For the On Scene Co-ordinator the new system will be more accessible, easier to use, and will give output that is more readily interpreted in **the** field.

The essential features of these developments are:-

- The previous OSSM-9 that was on the CSIRONET system is being decommissioned and will be replaced by **OSSM-11** which runs on an "Apple Mac II" which will be based in **DoTC's** Canberra offices.
- As an interim measure intended to **provide** a short-term predictive capability for oil-spill movement during **the development** of this new system, **DoTC** will use their SAR **programs to** give some 'indication of the general direction of a spill. These programs cannot provide predictions the spread, evaporation, beaching, etc. that OSSM can.
- A database of **the bathymetry** and prevailing water currents for most Australian ports is being developed by VIMS for use **with OSSM**.
- OSSM-11 is having a "front-end" developed by VIMS that will tie-in the database to **the** general operation of OSSM and make it **easier** to use.
- Output from OSSM will be more graphically explicit than that previously available via the TI **S700** type terminals.

Densities of oil and the extent of the spill will be presented in a more intuitively readable form for the field response crews to interpret.

- The new implementation of OSSM is expected to be commissioned in the second quarter of 1989.

This new system will replace the previous requirement to log-in to a mainframe computer from the field and thus remove the access problems that were so often encountered using CSIRONET.

Access to a facsimile machine will now be the only **requirement** for use of OSSM in the field. To get predictions of the movement and spread of an oil spill, all the On Scene Co-ordinator will need to do will be to fax to **DoTC** a diagram/chart of the location and details of the spill, together with the prevailing meteorological conditions.

The typical procedure will thus be:-

1. The On Scene Co-ordinator will **need** to provide information of the following items to the **DoTC** 24-hour surveillance centre in Canberra;

- a) the time and location of the spill
- b) the quantity and type of oil
- c) whether the spill is **continuing or** one-time

also, if possible

- d) the prevailing wind and time of tide
- e) forecast wind conditions
- f) observations on water currents
- g) any other relevant information,  
eg. quantities already beached etc.

Ideally this information would accompany a photocopy of the relevant marine chart with the location of the oil spill **marked**; this information can be faxed directly to the **DoTC** operators.

2. Operators of OSSM at the **DoTC surveillance centre** will select appropriate databases for the spill location and oil-type, and will **commence** running OSSM to provide predictions of the path and spread of the oil at **appropriate time** intervals. Output is faxed directly back to the On Scene Coordinator.
3. During the clean-up, periodic **updates** of the **prevailing** winds and movement of the spill are faxed back to **DoTC** for inclusion as necessary in the continuing OSSM simulations.
4. Debriefing of the On Scene Co-ordinator and **review** of the response data take place soon after the clean-up is completed.

It is intended that **VIMS** will train a number of **DoTC** operators who will be responsible for the day-to-day operation of **OSSM**. These operators will be **rostered** on a 24 hour basis at the **surveillance centre**.

**VIMS** will provide technical **maintenance** and an update service, for **OSSM** to ensure that operators remain well trained, and that the best software support is available.