

**Western Australian Satellite Technology Applications Consortium
(WASTAC)**

April 8, 2010

Committee Secretary
Parliamentary Standing Committee on Public Works
Department of House of Representatives
PO Box 6021
Parliament House
CANBERRA ACT 2600

Submission No. 013

(Pawsey Centre)

Date: 09/04/2010

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Dear Secretary

Re: The Pawsey High Performance Computing Centre for SKA Science

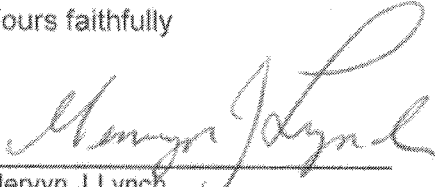
The WA Satellite Technology and Applications Consortium (WASTAC) operates under a legal agreement with membership comprising the Bureau of Meteorology, CSIRO, Geoscience Australia, Landgate (WA Govt. Corporation), Curtin University of Technology and Murdoch University. Since 1987 the Consortium has operated satellite reception facilities in Western Australia. Prior to 1987 (since 1981) a less formal arrangement between CSIRO and Curtin collected and archived datasets from the NOAA series of satellites. The datasets currently collected and archived are transmitted to ground by polar orbiting satellites to both L-band and X-band facilities in Perth operated and maintained by WASTAC.

These satellite datasets are transmitted in close-to-real-time to members' processing centres both locally via microwave and fibre optic communication links and nationally using AARNET. WASTAC actively encourages its members to utilise the products derived from these datasets for research, public good (including weather forecasting; sea surface temperature monitoring; flood, fire and drought monitoring), and education and training purposes. An increasingly important requirement for monitoring long term change in the natural environment is the maintenance of climatological length records. To this end, WASTAC has maintained its 30-year long archive of down-linked satellite datasets. The processing (geolocation, calibration, metadata extraction) storage, maintenance and realtime access to this large digital data record (currently of the order 70 terabytes) requires access to state-of-the art communications and computing infrastructure and the associated professional support staff. Currently, IVEC provides these foregoing IT services to WASTAC. WASTAC presently is the largest user of the IVEC petabyte store.

WASTAC welcomes the creation of the Pawsey Centre and supports the view that its existence will prove an impressive stimulus to the level of activity in eResearch both locally and nationally. WASTAC, with three national and three State partners will continue to be a willing contributor in this process and looks forward to ongoing activities in research and application using remotely sensed information in areas such as monitoring the impacts of climate change particularly on the state of the marine and terrestrial environments. . With two of its members being from the university sector, WASTAC will ensure that the Pawsey Centre will stimulate new thrusts in eResearch and, of course, in education and training.

It is pleasing to report that linkages through WASTAC's partners to national research initiatives, including ARCS, ANDS, NeAT, NCRIS IMOS and NCRIS TERN involve iVEC as a key participant. In particular, the efficient access to remotely sensed datasets and the supercomputing facilities to enable the production and delivery of research products to the above array of projects and the associated stakeholders are key contributions that the Pawsey Centre will continue to support. The foregoing research is particularly important with respect to the handling of the very large climatological length datasets that will be critical in not only monitoring climate change signals but also in the tuning of numerical models that will enable future climatic scenarios (both oceanic and terrestrial) to be predicted.

Yours faithfully



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WASTAC