

PUBLIC WORKS COMMITTEE

- 1 SEP 2008

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a.m.  
p.m.

Submission no. 12  
(SKA Pathfinder Radio Telescope)

SUBMISSION TO

*M.R. 01/09/08*

PARLIAMENTARY STANDING COMMITTEE  
ON PUBLIC WORKS

ON

AUSTRALIAN SKA PATHFINDER RADIO TELESCOPE IN  
GERALDTON-GREENOUGH AND IN MURCHSION SHIRE, WA

BY

MID WEST DEVELOPMENT COMMISSION

(STEVE DOUGLAS, CEO)

## **1. THE MID WEST REGION**

1. The Mid West comprises 18 local government authorities covering around 470,000 kms and is home to 52,000 people. Around 32,000 of these live in the new City of Geraldton-Greenough. The Mid West economy is predominantly based around the export of primary commodities including minerals, agriculture and fishing.

## **2. THE MID WEST DEVELOPMENT COMMISSION**

2. The Mid West Development Commission (MWDC) is a Western Australian statutory authority responsible to the Minister for the Mid West. Its charter is the social and economic development of Western Australia's Mid West region. Further information on the Commission and the Mid West region can be found at [www.mwdc.wa.gov.au](http://www.mwdc.wa.gov.au)

## **3. SKA**

3. MWDC has strongly supported the SKA project since 1999 when CSIRO began investigating potential radio quiet sites within the Mid West Gascoyne regions. It was clear the Mid West and in particular the Murchison area, had numerous advantages for the SKA project including:
  - World competitive radio quietness
  - Stable, flat geology
  - Arid and not prone to cyclonic activity
  - Political stability
  - Proximity to infrastructure – particularly roads
  - Proximity to a major regional city - Geraldton
  - Community interest
4. Since that time MWDC has developed a very strong and positive relationship with CSIRO. Through the ten years that since have passed, CSIRO, with MWDC and other State Government support has built up a good relationship with the broader Mid West community and in particular the Indigenous community. Regular updates continue to be provided to the Wadjjarri Native Title Working Group. This and other initiatives mean that today there is a very strong awareness of and support for the ASKAP and SKA projects throughout the Mid West region.

## **5. SMART MID WEST**

5. The MWDC has been pursuing a SMART Mid West policy for a decade. It involves a holistic approach to the development and integration of education, training and research institutions within the Mid West, together with the technology, processes and infrastructure by which they operate,

and the transfer and involvement of this learning to industry and community. SMART Mid West involves:

- encouraging innovation and creativity across all sectors to:
  - value add and diversify
  - identify and pursue new opportunities
  - address challenges
  - establish new enterprises
- encouraging entrepreneurship
- developing collaborative advantage through clusters
- embracing R&D and education/training
- supporting business retention & expansion
- using our natural assets wisely - for now and future generations (NRM)

6. SMART Mid West institutions and projects include:

- Geraldton Universities Centre
- Separation Point Marine Precinct
- Murchison Radio-astronomy Observatory
- ASKAP and SKA international radio telescopes
- Enhanced post compulsory secondary education
- Renewable energy - wind / solar / geothermal / wave
- Ocean2outback - Internet portal for MW
- Enhancing regional telecommunications
- Combined Universities Centre for Rural Health (CUCRH)
- Central West TAFE

7. To date the policy has seen the establishment in Geraldton of the Combined Universities Centre for Rural Health, Geraldton Universities Centre, the Separation Point Marine Precinct (both opened officially in 2006) and the soon to be established Murchison Radio-astronomy Observatory (MRO) within the Murchison Shire. Other initiatives listed above are either established and / or progressing.

8. In addition MWDC, in partnership with the Western Australian Department of Industry and Resources has secured funding from the Federal *Clever Networks* program to appoint a Broadband Development Officer to identify opportunities, including those related to radio astronomy projects at the MRO, to enhance the region's poor broadband capability.

9. On August 13 2008, the Commission, in partnership with the WA Chief Scientist Professor Lyn Beazley, held an inaugural Mid West Science Summit in Geraldton. Apart from raising awareness of science amongst students (who were invited to participate), the summit sought to identify challenges and opportunities facing the Mid West into the future and what the science response to these may be. It is planned to use the workshop information as the basis for developing a Mid West Science Plan.

10. A key outcome of the Science Summit was to identify how the Mid West community could lend even further support to the ASKAP and SKA projects.

## **5. COMMUNITY SUPPORT**

### **5.1 The Murchison Shire**

11. The Murchison Shire covers approximately 50,000<sup>2</sup> kms. It serves 29 pastoral stations and has a total population of around 140 people. It is the only shire in Australia without a gazetted townsite, though Murchison Settlement is the site of the Council offices and there are also a few facilities available here (shop/petrol bowser, small museum, sporting ground).
12. The Murchison Shire has strongly supported the SKA and now ASKAP project from the outset and continues to do so. The President of the Shire of Murchison is also a MWDC Board Member.

### **5.2 City of Geraldton-Greenough**

13. The City of Geraldton-Greenough came into place on 1<sup>st</sup> July 2007 following the amalgamation of the City of Geraldton with the surrounding Shire of Greenough. It is the Mid West region's service, administrative and commercial centre.
14. Over the past 5-8 years there has been a significant injection of public funds into socio-economic infrastructure including the establishment of Separation Point marine Precinct, Geraldton Universities Centre, new Geraldton regional Hospital, upgrades to public schools, a new transport corridor into the City and the redevelopment of Geraldton's Foreshore. The latter is a \$35M project which is now entering its sixth and final year. All these projects are stimulating significant private sector investment, making Geraldton a very attractive place to live and work. This should in turn make this a very attractive community for scientists to visit and to live.
15. The City has now developed a new Strategic Initiatives and Projects document (July 2008). The first part of the Strategic Vision states:

*A Smart City which has a prosperous, sustainable and creative community all within a uniquely Western Australian setting and lifestyle.*

*Geraldton-Greenough will utilise the wealth of natural resources as the foundation to become a centre of global significance in the new economy.*
16. The Strategic document outlines 5 key 2020 Vision Outcome Statements:
  - A creative City
  - A Sustainable City
  - A Smart City

- A Network City
- A working City

17. The Smart City Statement states:

*To become a centre for the new economy with a focus on learning and technology.*

*The City will enhance its educational resources with a present focus and priority of supporting and assisting the development of the Square Kilometre Array (SKA) project to ensure it progresses and importantly that the location of its key functions such as the proposed super-computer is located in Geraldton.*

*By 2020, the City will have capitalised on the development of the SKA and the location of the super-computer to create the base for new industries and technologies creating a new technology and economy hub of global significance. Opportunities will abound for our future generations to participate in the new economy*

## **6. WESTERN AUSTRALIAN RADIO ADVISORY GROUP**

18. MWDC has been involved with planning for the SKA since 1999. This includes membership of the Western Australian Radio Astronomy Committee and more recently the Western Australian Regional Advisory Group (WARAG). The latter includes representation from CSIRO, local, state and federal government.
19. WARAG determined at its recent (August 2008) meeting in Geraldton to hold a planning workshop to identify ways in which the Mid West community could add value to the ASKAP project and also identify opportunities to capture regional and Indigenous outcomes. This has since been followed by a meeting to plan for that workshop which is tentatively set for October 2008. This meeting will enable WARAG and key regional stakeholders to better understand the various components of the ASKAP project in order to add value to it and to identify opportunities and synergies for regional development outcomes.
20. The strong view of the Board of the MWDC and the broader Mid West community is that clearly articulated regional outcomes will strengthen Australia's bid for the SKA project.
21. As it is understood by the MWDC, the SKA Pathfinder (ASKAP) project is an incredibly important radio-astronomy instrument/project in its right and will strengthen Australia's capacity to undertake key radio-astronomy work. The project will also demonstrate the site capability and advantages prior to the announcement of the site selection for the \$2BN SKA project.

## 7. REGIONAL OUTCOMES

22. Build on MWDC's SMART Mid West policy and the City of Geraldton-Greenough's SMART City focus to create a more diversified regional economy which values innovation and creativity in its quest to remain internationally competitive across all industry sectors.
23. Location of the ASKAP Facility Support Centre (which will also accommodate a 'super computer') at the Geraldton Universities Centre will lend considerable weight to the further development of this relatively new and small entity (ie GUC). GUC was the first Universities Centre in Australia where university places were reserved (allocated) to a specific locality.
24. There are significant education benefits to be gained as already, through various school and community visits by a number of players, there is growing awareness and interest amongst youth of the value of science, radio-astronomy and its contribution to the future of the planet.
25. There will be significant opportunities for local businesses to undertake work on the project. There are also likely to be some employment and training opportunities for Indigenous people including those at the Pia Wadjari community.
26. There may be opportunities to synergise off the optic fibre link between Boolardy and Geraldton to enhance the region's broadband capability. This could also benefit the proposed technology/enterprise park in Geraldton, though it is understood by regional stakeholders that a number of good suggestions and ideas may not be viable or feasible from the ASKAP perspective.
27. There would be significant regional and community benefit if the Facility Support Centre was designed in such a way that it was expandable to perhaps serve other public and private needs for high speed data processing. This may require a bigger space for the computer, ability to expand its capacity in a 'bolt on' manner (whilst protecting data integrity), additional power points and a higher specification cooling system. This initiative could support the Geraldton technology park discussed above.
28. MWDC is implementing the Mid West Indigenous Arts Strategy it prepared in 2007. The juxtaposition between the Indigenous explanation of the skies (through Dreamtime stories) and that of the scientific community through the world's most power radio-telescope presents a unique and exciting opportunity to progress Indigenous art to another level.
29. It is fundamental to the ASKAP and SKA projects that the MRO remains radio-quiet. It is important to keep tourists and visitors away and this challenge presents another unique opportunity to capture some local economic benefit from interpretive centres at Murchison settlement and in Geraldton. The former would add value to the existing Gascoyne

Murchison Outback Pathways (self drive trails) which keeps visitors well away from the MRO.

## **8. CONCLUSION**

30. The Mid West Development Commission has strongly pursued a Smart Mid West policy for nearly a decade and it is very apparent that other key regional stakeholders and the broader community support this thrust to become part of the new economy.
31. MWDC and the Mid West community have been supporting the SKA project for nearly ten years and strong partnerships have been established with key stakeholders and in particular CSIRO. Interest and support remain very strong.
32. There is the potential to derive even further community support for the ASKAP project as WARAG seeks to identify opportunities for the community to add further value to the projects.
33. There are also considerable regional development opportunities, a number of which are already being pursued. Australia's bid for the SKA project will be enhanced if these outcomes were clearly communicated to the international community.
34. MWDC is fully committed to supporting this exciting project in whatever way is deemed appropriate and which enhances Australia's bid for the SKA.

end

