

## Australian Roadmap from NTD to SKA

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### ABSTRACT

CSIRO has developed a large and well-planned roadmap with the goal of ensuring that Australia plays a major role in the next-generation radio telescope development and also remains at the forefront of astronomy research. The Australian astronomical community views participation in the SKA as a most important long-term priority for astronomy. Australia is well poised to play a major role; it has proposed a very attractive site in WA for the central 50% of the SKA; with the rest of SKA distributed as “stations” at selected sites across the Australian continent and in NZ. Australia has a 2-stage technology development plan, leading to its technology demonstrator:

**NTD (New Technology Demonstrator)**; funded from MNRF, 2002 – 2007, provides for initial R&D to exploit use of focal plane arrays with fully digital beamforming. The erection of two 13.7m antennas at Marsfield is part of NTD.

**xNTD (Extended NTD)** exploits the deliverables from NTD, with substantial extra funding from CSIRO and the WA Gov to provide a world-class scientific instrument, consisting of 20 antennas at Mileura in WA. To be completed in 2009, it is intended to influence the technology choice for the next stages of SKA development. SKA could consist of hundreds of stations; the xNTD would be an example of one of these stations.