Research project proposal Bobbie Ware id:17962233

**Title**

Imaging pipeline Software

**Purpose**

Implement software to carry out image synthesis using Java. The software will use data from a technique developed to use smaller telescopes “arranged in such a way to gather information equivalent to that obtained from one of much greater size” (Ryle & Hewish, 1960). This technique takes visibilities and uses three techniques, Gridding, Fourier Transform, and Deconvolution, to produce an image of a region of the sky. The software will mimic pipelines that will be used for the Square Kilometre Array (SKA).

**Literature Sources**

The software will use data in the form of visibilities that are generated at AUT as well