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MeerKAT antenna positioner emulator test bench project

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The MeerKAT Antenna Positioner Emulator (APE) project is being built to imitate the functionality of the antenna positioner servo system (AP). The AP is the mechanical component mainly responsible for the mounting and pointing of the antenna structure on the MeerKAT radio telescope. The project aim is fault finding, obsolescence mitigation, software debugging, and technical training. APE will use existing MeerKAT AP building blocks with a new mechanical design. The project will be designed for remote access, this involves network configurations. Internal interfaces include monitoring with electrical and internal infrastructure. The external interfaces include connections to Control And Monitoring software, time and frequency reference (TFR), development servers, and on-site hardware. The project is also focused on electronics design review, cable manufacturing, power supply considerations, mechanical aspects such as load tests and weight distribution. Project management activities include discussions on asset transfers, procurement, foundation design, and remote access considerations. Systems engineering involves documentations, discussions around user interface, and coordination with various stakeholders.

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Footnotes

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