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Leveraging software simulators in SKA Dish LMC development and testing

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The Square Kilometre Array (SKA) project employs the TANGO Controls framework to manage its telescopes. Within SKA MID, the Dish Local Monitoring and Control (LMC) software integrates dish sub-components into the overall control system. Because hardware availability is often limited, Dish LMC development and validation are heavily based on software simulators derived from Interface Control Documents (ICDs) and system-level requirements. These simulators emulate the behaviour of the respective devices for requirement verification. Their use has enabled iterative testing in both staging and integration environments, accelerated development, and reduced risks ahead of hardware integration. This paper presents the design and implementation of Dish LMC simulators, their role in supporting system-level validation and advancing software maturity.

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Footnotes

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