

# System design of the South African Lunar Laser Ranger

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The development of a Lunar Laser Ranging system for South Africa is progressing well. During the system design phase attention was given to incorporate ideas that worked at other laser ranging stations, as well as avoid things that proved to be problematic.

Implementing an industry-standard systems communications and interlink backbone is of utmost importance since it will reduce initial development time and should ensure long-term support and component availability. Central software control systems are being developed in-house to monitor and control the complete laser ranging system from the control room. These approaches allow us to place equipment directly where it must measure or provide signals, rather than in one large control room. This drastically cuts down on cabling, potential timing calibration problems and the number of different interfaces that must be interacted with.

An overview depicting the current state of systems is presented in the diagram below.

