



Contribution ID: 52

Type: **Poster**

Taking Control: Remote Pendants at ISIS

Wednesday, 22 October 2025 14:09 (1 minute)

At ISIS, many instruments with motion systems can only be operated from a fixed computer terminal that may have limited visibility of the experimental setup. For IMAT, this posed a challenge, as scientists often need to visually align hardware relative to the sample during setup. To address this, a mobile pendant was developed to allow safe and ergonomic remote control of the motion equipment from within the blockhouse.

The project involved identifying and evaluating potential solutions that could meet strict safety requirements, integrate seamlessly with the existing TwinCAT control environment, and provide a comfortable user experience. Regular meetings with end users throughout the design cycle, combined with independent research, ensure that the final solution will meet scientific needs while maintaining operational safety.

This poster presents the development journey, highlighting the key challenges and decisions involved, and demonstrates how the resulting remote-control solution for IMAT can be standardised and adapted for other beamlines in the future.

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Session Classification: POSTER SESSION