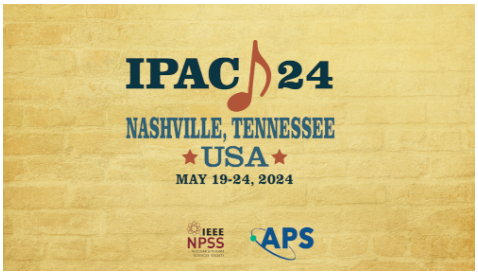

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ALS-U accelerator motion design and realization

Thursday, 23 May 2024 16:00 (2 hours)

Transitioning from the aging ALS Geo MACRO motor controller, this paper details the meticulous selection process for a new, cost-effective standard to fulfill the diverse motion requirements of the upcoming ALS-U project. Targeting primarily simple stepper motors with varying current demands, the chosen solution seamlessly integrates into the existing ALS-U EPICS environment while preserving the established ALS motion architecture and EPICS IOC support. Notably, the solution maintains independence from Delta-Tau technology while comprehensively accommodating the project's required range of servo/stepper motor types and offering dedicated support for critical subsystems like Beam Scraper and Cold Finger motion. This document delves into the exhaustive selection process, from comprehensively summarizing the current architecture and ALS-U requirements to meticulously analyzing the results of a year-long evaluation of diverse vendor offerings.

Footnotes

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