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Beam diagnostics control system upgrade of IPM LINAC

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A series of upgrades has now begun to industrialize the applications of the experimental IPM electron LINAC. This includes upgrading the control system of the diagnostics tools and adding new tools and equipment to the system as well.

The aim is to build an integrated control system to collect and manage all diagnostics signals. This will allow us to continuously monitor and archive all of the beam parameters for LINAC performance analysis and improvement. It is hence decided to migrate from LabVIEW to an EPICS-based control system which has many advantages in this regard. In the meantime, it is also required to employ more modern equipment with better control interfaces and add some extra diagnostics tools to the system as well. So during this upgrade, most of the job would be developing new control interfaces and high-level applications accordingly.

In this paper, after a brief summary of the current diagnostics tools and our motivation for this upgrade, the scheme of the new control system and how different parts are integrated to the EPICS framework will be described.

Footnotes

Funding Agency

I have read and accept the Privacy Policy Statement

Yes

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