IPAC '23

Contribution ID: **1007** Contribution code: **THPA068**   Type: **Poster Presentation**

New event based timing system for the taiwan light source

Thursday, 11 May 2023 16:30 (2 hours)

The Taiwan Light Source (TLS) is a third generation of synchrotron light source, and it has been operated since 1993. Legacy timing system of the Taiwan Light Source was delivered in early 1990s. To deal with obsolete com-ponents and improve functionality, upgrade to event-based timing system for TLS is under way. The system need coordinate the operation the linac, White Circuit based booster synchrotron, and the storage ring for beam genera-tion, injection, extraction, and beam accumulation. Sup-port top-up operation of the storage ring is needed. Due to more experiences on EPICS related framework, the cPCI (CompactPCI) based EPICS IOC (Input Output Control-ler) and expandable Fanless Embedded Computers have been adopted for new TLS Timing system to replace the existed VME based ILC (Intelligent Local Controller) to be as an easy-to-maintain control environment. Scheme deal with resonance excitation of the booster magnets with the event system need special care. Design ideas and implementation will be summarized.

Funding Agency

Footnotes

I have read and accept the Privacy Policy Statement

Yes

Primary author: WU, Chunyi (National Synchrotron Radiation Research Center)

Co-authors: CHEN, Jenny (National Synchrotron Radiation Research Center); CHENG, Yung-Sen (National Synchrotron Radiation Research Center); HSU, Kuo-Tung (National Synchrotron Radiation Research Center); HU, Kuo Hwa (National Synchrotron Radiation Research Center); LEE, Shu-Hwa (National Synchrotron Radiation Research Center); LIAO, Chih-Yu (National Synchrotron Radiation Research Center)

Presenter: WU, Chunyi (National Synchrotron Radiation Research Center)

Session Classification: Thursday Poster Session

Track Classification: MC6: Beam Instrumentation, Controls, Feedback and Operational Aspects: MC6.T24: Timing and Synchronization