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Opendigitizer: digitizer modernisation using openCMW and GNU radio 4.0 for FAIR

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OpenDigitizer* is an open-source modernisation of FAIR's modular digitizer infrastructure and graphical user interface based on OpenCMW, WebAssembly, and the GNU Radio 4.0 frameworks.

Already used to provide generic monitoring and first-line diagnostics for accelerator-related devices, it further supports equipment experts, operation, and FAIR users in developing basic to advanced top-level measurement and control loops. Supporting hundreds of industrial digitizers with sampling frequencies ranging from a few MS/s to GS/s, the core relies on directed signal flow graphs to express arbitrary post-processing and feedback control loop logics that are both numerically highly efficient as well as provide an intuitive high-level yet detailed nuts-and-bolts representation to inspect and/or to reconfigure existing systems by accelerator-, control- or other system domain-experts alike with little to no prior required programming experience.

The diagnostics UI tools are compatible with WebAssembly (WASM) allowing their native deployment, on mobile as well as on any browser-based platform, facilitating their flexible use both in the accelerator tunnel during commissioning, trouble-shooting, as well as in the control room.

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Footnotes

*<https://github.com/fair-acc/opendigitizer>

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Yes

Primary author: STEINHAGEN, Ralph (GSI Helmholtzzentrum für Schwerionenforschung GmbH)

Co-authors: KRIMM, Alexander (GSI Helmholtzzentrum für Schwerionenforschung GmbH); ONDREKA, David (GSI Helmholtzzentrum für Schwerionenforschung GmbH); BALAZS, Bjoern (KDAB, Germany); CAMUFFO, Giulio (KDAB, Germany); CUKIC, Ivan (KDAB, Germany); OSTERFELD, Frank (KDAB, Germany)

Presenter: STEINHAGEN, Ralph (GSI Helmholtzzentrum für Schwerionenforschung GmbH)

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