



5. Workshop: Modernisierung HKR UNILAC

BTM – Status und Ausblick

The primary scope of the Beam Transmission System (BTM) is to detect and act upon beam intensity and transmission measurements that are considered operationally unacceptable.

In order to do so, the BTM system collects, calculates and aggregates beam current measurements along the beam line and apply transmission checks on aggregated values and publishes the results.

Implementation Details

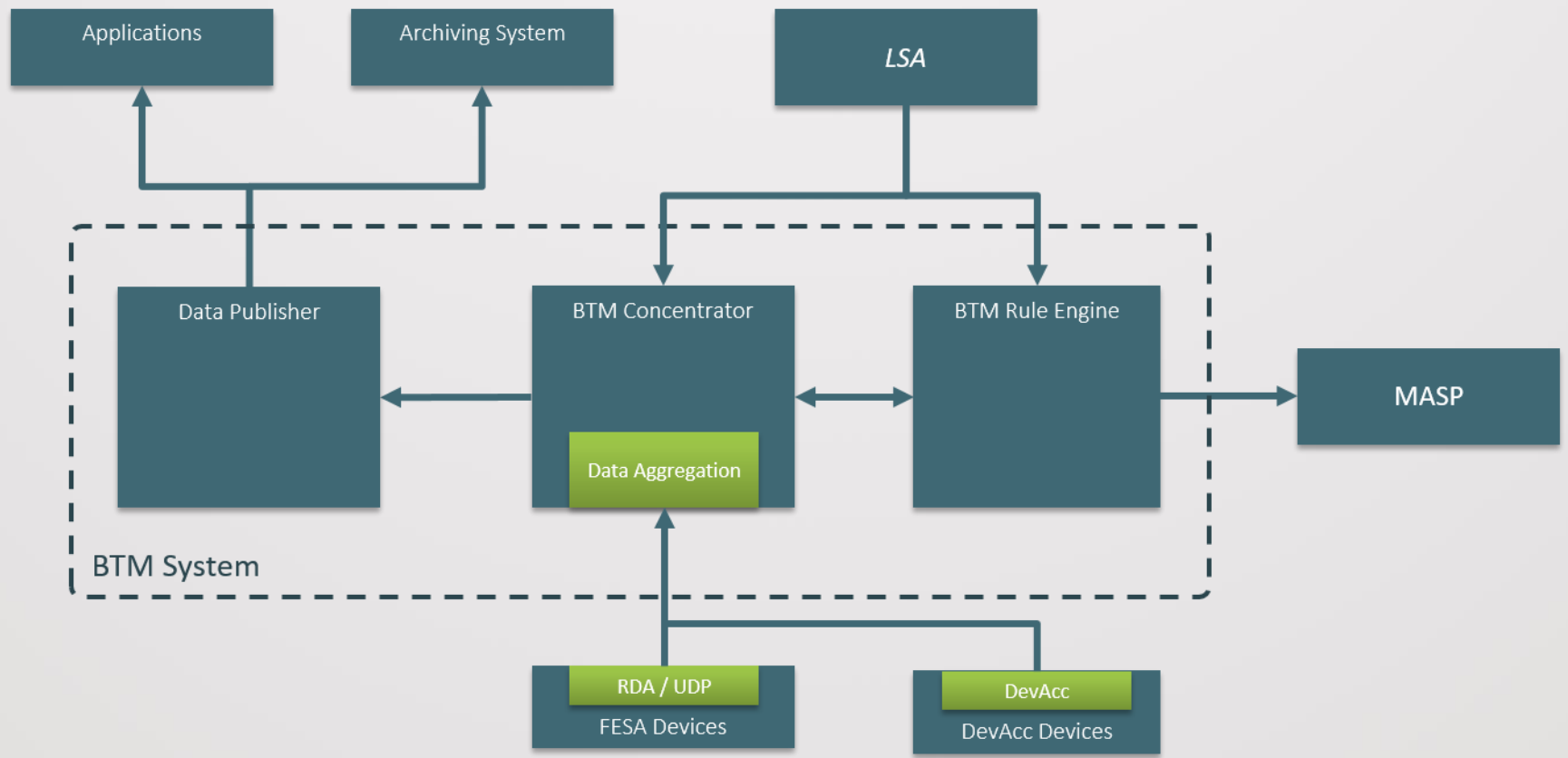
- Implemented as FESA Class
- Can be executed on standard hardware (SCU or SuperMicro)
- Requires devacc framework
- Currently requires 2 timing cards to access UNILAC and SIS timing

Interfaces

- Requires configuration data from LSA
- Communicates with MAPS to prevent BPCs from executions in case of rule violations



Architectural overview



- Main development from COSYLAB side finished 2022
- Tested with archived data collected during the 2022 beam time
- A couple of features could not be clarified during the development and hence missing
 - Setup-Beam-Flag
 - Modes other than Instant
- System is deployed at GSI in production and development environment but currently not running
- A GUI is missing
 - Will be developed at GSI in the future
- Current activity status: *on hold*

Open Points

- Adjustments required to be able to run the system on acc9
- Development of the BTM GUI
- Integration of new MAPS
- Integration of movable beam measurement devices like cups etc.
 - Functionality is implemented but not integrated, nor tested properly
- Currently no resources available to work actively on the topic
 - First steps towards MAPS integration planned for November
 - Presumably new COSYLAB Budget next year



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Rule Engine

