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Trigger and beam monitoring system of BM@N and SRC experiments

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The report describes a Trigger unit control and monitoring system used at experiments BM@N and SRC held in JINR. These both experiments require very good trigger time resolution therefore the trigger equipment must be located in the beam area to provide small cable length. This applies restrictions to the access to the trigger equipment during the experiment and the trigger control and adjustments should be done remotely.
The trigger processor is built using FPGA and all trigger logics and delay lines are located inside this FPGA. The control of trigger logics, trigger adjustment and monitoring is performed with a set of programs with graphical user interfaces. This set includes HV power supply server, the trigger unit manager also providing front-end electronics LV power supplies, a web-server publishing the spill summary information and the beam data server providing publishing in real time mode the experiment-relevant curves like an actual beam intensity and counts.
A beam spill summary information and trigger-relevant data are published by TCP/IP server and it is transferred to the experiment slow control system as JSON data blocks. In addition to this the trigger unit manager provides beam information archiving to the local log file. This file could be browsed with the GUI-based application.
The system was successively used during more than three years.

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