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otsdaq for Users at the Fermilab Test Beam Facility

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The Real-time Systems Engineering Department of the Scientific Computing Division at the Fermi National Accelerator Laboratory is participating in a test beam run for the CMS phase II upgrade at the Fermi Test Beam Facility. The goal of the test beam run is to allow different CMS sub-detectors to use the same test beam facility precision tracking and data acquisition infrastructure, which is enabled by *otsdaq* (Off-the-Shelf Data Acquisition System). *otsdaq* is a highly scalable, flexible data acquisition system that the Scientific Computing Division is developing for a wide range of experiments and test beam studies. The system is based on XDAQ, a generic data acquisition framework developed for the CMS experiment (for the user interface), and *artdaq*, a data acquisition toolkit developed at Fermilab (for the data handling). The web-based *otsdaq* graphical user interface is built using HTML5 and JavaScript. The web interface allows users to run the system from any platform and device through a web browser. The newly-developed system will serve as a common framework at the test beam for CMS Phase II sub-detectors such as the Outer Tracker, the Forward Pixels, and the High Granularity Calorimeter. This paper will discuss the results from the project, highlighting the computing and data handling ability of the *otsdaq* system.

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