A Modular Data Acquisition System for Reconstruction of Radiation Dose Spatial Distribution in Radiotherapy Treatment Planning

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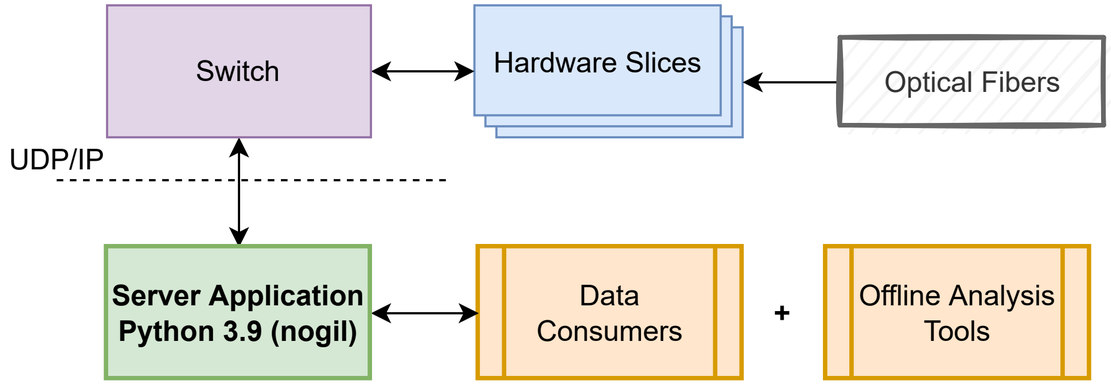
Poster Summary

We present a comprehensive Data Acquisition (DAQ) system for future 3-dimensional radiation dose deposition detector dedicated for improvement of cancer-diagnosed patients' treatment planning



- The hardware is based on fine-grained scintillator cells and extendable signal processing units (64-channel each) providing simultaneous and synchronous information about number of photons and their energy
- The DAQ framework eases communication between hardware and software layers and exposes UDP/IP protocol while software manages acquistion process and broadcasts data to consumer widgets
- We show preliminary results indicating possibility of reliable energy estimation and counting photons with the presented system