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## Future detector readout

*Tuesday, 7 November 2023 17:00 (20 minutes)*

Evolution of the ATLAS detector readout is driven by the rapid development of COTS network and computing systems. The Front-End Link eXchange (FELIX) system takes advantage of the new COTs components to reduce complexity and life-cycle effort. FELIX is an interface between the trigger and detector electronics and commodity switched networks for the ATLAS experiment at CERN. This rapid improvement in commodity computing enables triggerless readout of the future experiments that maximizes their discovery potential. On-detector data processing and availability of radiation-hard and cryogenic-capable fast data links will be key to enabling the triggerless readout. In this talk we will discuss link technologies, on-detector data processing, and where to find the balance.

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