

# Interfacing to Xilinx Alveo Accelerator Cards using caproto and pyOpenCL

Friday, 28 May 2021 11:40 (20 minutes)

Xilinx Alveo FPGA processing cards are used for DSP in beamformers for both CSIRO Parkes telescope CryoPAF and SKA-Low Telescope Correlator and Beamformer projects. The telescope control systems use EPICS and TANGO respectively. We have used pyOpenCL to create a control-system-independent layer to the beamformer firmware in the Alveo card then used caproto to create a Python IOC for interface to the Parkes control system. This talk will describe these systems with details of the caproto Python script

Primary author: TROUP, Euan (CSIRO Astronomy and Space)

Co-author: BOLIN, Andrew (CSIRO Astronomy and Space Science)

Presenter: TROUP, Euan (CSIRO Astronomy and Space)

Session Classification: Morning Session

Track Classification: Upcoming and Current Developments