

Remote Visualization of Big Data: VisIVO as a Visualization Prototype for SKA Regional Centres

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Radio astronomy is evolving toward ever larger and more accurate datasets.

As soon as the SKA telescopes are fully operational, hundreds of petabytes of data will be produced each year with unprecedented resolution and detail.

This rapid evolution drives toward the development of Big Data analysis and visualization tools and services, which will necessarily need to be supported by suitable infrastructure and computational capabilities to sustain this immense flow of data. This is being implemented in the context of SKA through the creation of a distributed global network of so-called SKA Regional Centres (SRC). In this talk, we will discuss the most recent developments of an interactive visualization tool that is a part of the VisIVO suite and is proposed as one of the visualization prototypes for SRCs.

In particular, we will discuss the transition from a local visualizer to a remote visualizer based on client-server architecture that was required as a basis for engaging with such large data. We are going to also discuss the challenges and advantages of remote visualization and/or parallel visualization, as well as the viability of running interactive visualization pipelines on HPC clusters.

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