

# Event visualisation for the ATLAS experiment - the technologies involved

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We describe the design of Atlantis, an event visualisation program for the ATLAS experiment at CERN, and the other supporting applications within the visualisation project, mainly focusing on the technologies employed. The ATLAS visualisation consists of several parts with Atlantis being the central application. The main purpose of Atlantis is to help visually investigate and intuitively understand complete ATLAS events.

Atlantis is a stand-alone graphical application written entirely in Java, using Java/Swing 2D API, XML parsers and Apache/XMLRPC for network communication with Athena, the ATLAS software framework.

The event data, in XML format, is produced by a dedicated interface called JiveXML running within the Athena framework. Atlantis reads in the data either from files (offline mode) or via a network connection in the online mode of JiveXML. In the online mode, the data is transferred on request from a C++ XMLRPC server running within JiveXML to Atlantis acting as a XMLRPC client.

The Atlantis user is also able to steer the Athena framework over a network connection directly from Atlantis. Atlantis makes remote calls to a XMLRPC Python server started at the interactive Athena Python prompt. This server receives the Athena commands and executes them as if typed locally.

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