



Graphical Nuclear Data Viewer

Nuclear data is held at the Atomic Weapons Establishment (AWE) in proprietary-format binary data files.

IT challenge

There was a need to be able to quickly and easily interrogate these files and display graphically various aspects of the nuclear data, such as:

- cross-sections
- scatter matrix rows and columns
- angular distributions

The chosen solution was to use Java for the interface, with GUI panels for selecting the desired data and setting the graph details, and a canvas for actually drawing the graph.

This solution allowed cross-platform portability and easy access via the company intranet - and the program could also be run as a stand-alone application.

The Java program passes its data requests (via a cgi-bin directory) to a FORTRAN program, which returns the requested information back to the Java. Recent enhancements (utilising the JDK 1.1) also allow the printing of the graphs, and the saving and reloading of sessions. The Java is written in a modular manner, allowing it to read a variety of file formats and data structures, plugging in the appropriate GUI panels for any specific application. NDVIEW can be accessed via:

- A web browser
- A stand alone Java Engine

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