One facet of research at the Cleveland Clinic, an internationally recognized hospital and medical research institution, is the study of epilepsy by a team of neurologists. A digital signal processing test bed was needed to assist in this study. The Clinic would use such a test bed to develop diagnostic tools for the analysis of electroencephalograph (EEG) data. A DSP workbench that would allow rapid prototyping of signal analysis ideas was required. The project provided an X Windows based graphical interface, allowing the user to interactively construct a network of generators, function blocks, and display elements, which could be used to analyze EEG data. The system also allowed for the rapid construction of new DSP filters and their incorporation into the workbench. The workbench was implemented using OI, an object-oriented C++ based user interface toolkit developed by Solbourne Computer.