MULTI CHANNEL APPLICATIONS FOR CONTROL SYSTEM STUDIO (CSS)

K. Shroff, G. Carcassi, BNL, Upton, Long Island, New York, USA
R. Lange, HZB, Berlin, Germany

Abstract

With the development of the ChannelFinder[1][2] directory service and the PVManager[3] client library, a new set of applications have been developed for Control System Studio(CSS)[4]. These applications have simplified user interaction by requiring the user to provide them with only the criteria of the channels they are interested in, instead of the complete set of channels. They have improved performance with the use of PVManager to manage the collection of control system data.

Architecture

CSS Applications

ChannelViewer
The ChannelViewer is a simple graphical application which can be used to query the channel finder. The input consists of a query which can be based one or any combination of the criteria: Channel name, Property values, Tags. The figure 2. shows the result of a query for all the channels in the Storage ring associated with Beam Position Monitor (BPM) or Horizontal Correctors (HCOR) with the tag alpha.sys.SR. The resulting Channels can be sorted, grouped and tagged. They can be exported to any other CSS application as a set of process variables, thus the end user need not remember details of each process variable but can rather work with logical group determined by the query conditions.

MultiChannel Viewer
The MultiChannel Viewer application shown in Figure 3 is designed to plot the values of a group of channels which are ordered based on a user specified criteria i.e. s-position. The MultiChannel viewer accepts a query (similar to the one used in ChannelViewer) which represents a logical group of channels on the ChannelFinder server. The result of this query, a group of channels, is then plotted with their order along the x-axis being determined by the “Order By” property selected.

Conclusion

Use of the ChannelFinder service and client eliminates the need for configuring and remembering each individual channel.

PVManager simplifies and improves performance of applications by handling various problems associated with use of large number of channel.

References