DEVELOPMENT OF IMPROVED METHODS FOR REMOTE ACCESS OF DIII–D DATA AND DATA ANALYSIS*

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The DIII–D tokamak is part of a national fusion research facility. There is an increasing need to access data from remote sites in order to facilitate data analysis by collaborative researchers at remote locations, both nationally and internationally. In the past, this has usually been done by remotely logging into computers at the DIII–D site. With the advent of faster networking and powerful computers at remote sites, it is becoming possible to access and analyze data from anywhere in the world as if the remote user were actually at the DIII–D site. The general mechanism for accesssing DIII–D data has always been via the ptdata subroutine. Substantial enhancements are being made to that routine to make it more useful in a non-local environment. In particular, a caching mechanism is being built into ptdata to make network data access more efficient. Studies are also being made of using Distributed File System (DFS) disk storage in a Distributed Computing Environment (DCE). A data server has been created that will migrate, on request, plasma shot data from the DIII–D environment into the DFS environment, thereby making that data appear to be local to any computer that is part of this Distributed Computing Environment.

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