OVERVIEW OF THE DIII–D PROGRAM COMPUTER SYSTEMS*

B.B. McHarg, Jr.

General Atomics, P.O. Box 85608, San Diego, California 92186-5608

Computer systems pervade every aspect of the DIII–D program. This includes real-time systems acquiring experimental data from data acquisition hardware; cpu server systems performing short term and long term data analysis; desktop activities such as word processing, spreadsheets, and scientific paper publication; and systems providing mechanisms for remote collaboration. The DIII–D network ties all of these systems together and connects to the ESNET wide area network. This paper will give an overview of these systems, including their purposes and functionality and how they connect to other systems. Computer systems include seven different types of UNIX systems (HP-UX, Realix, SunOS, Solaris, Digital UNIX, Ultrix, and IRIX), OpenVMS systems (both VAX and Alpha), MACintosh, Windows 95, and more recently Windows NT systems. Most of the network internally is ethernet with some use of FDDI. A T3 link connects to ESNET and thus to the Internet. Recent upgrades to the network have notably improved its efficiency, but the demand for bandwidth is ever increasing. By means of software and mechanisms still in development, computer systems at remote sites are playing an increasing role both in accessing and analyzing data and even participating in certain controlling aspects for the experiment. The advent of audio/video over the internet is now presenting a new means for remote sites to participate in the DIII–D program.

*Work supported by U.S. Department of Energy Contract DE-AC03-89ER51114.

B.B. McHarg, Jr.
General Atomics
P.O. Box 85608
San Diego, CA 92186-5608
(619) 455-4249
FAX (619) 455-4190
e-mail: mcharg@gav.gat.com

Prefer:
Oral
✔ Poster

Category #15

If possible, please associate this paper with that of B.G. Penaflor, C. Campo, D. Piglowski, and K.L. Greene