WEB-BASED DISTRIBUTED SYSTEMS FOR COLLABORATIVE REMOTE EXPERIMENTS.

E. Garcia, TCPSI; J.A. Rodriguez, TCPSI; J. Rejas, TCPSI; M.A. Duran, TCPSI

DYNACORE, an EU funded project, will provide scientists and astronomers with a powerful tool for remote collaborationin experiments or observations requiring one or more remote facilities.One of the main objectives of DYNACORE is to develop a Tele-operation system which can be easily adapted and optimised for a particular instrument.To achieve this objectives, we are using an object-oriented, component-based approach. The user access DYNACORE services through a standard, web-based man machine interface. The client software is based on Java applets which directly interact with DYNACORE servers using IIOP protocol. OMG-CORBA is used as a high-level infrastructure for component interaction, including remote java applets. The benefits of CORBA are extended to system design: object oriented paradigms are used in the definition of a distributed environment, which allows to hide details about process location, operating systems and programming languages. The system is used for remote operation of large plasma-physics experiments and telescopes.