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## Time Synchronization Network for Poloidal Field Power Supply Control System Based on IEEE 1588

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This paper describes architecture and characteristics of time synchronization network of EAST poloidal field power supply control system. After analyzing the characteristics of IEEE 1588, the paper points out the advantages of IEEE 1588 and chooses it as the implementation protocol for time synchronization network in EAST poloidal field power supply control system. With this method, a master node with a hardware clock synchronizes time of the slave nodes on the private time network in each second, and the maximum offset time between the master and the slave is less than 50ns. This time synchronized method is evaluated and tested with its feasibility, and also met the requirements for the time synchronization network of EAST poloidal field power supply control system.

### Eligible for student paper award?

No

**Authors:** Mrs HE, Shiyong (Institute of Plasma Physics, CAS); Mr HUANG, Liansheng (Institute of Plasma Physics, CAS); Mrs GAO, Ge (Institute of Plasma Physics, CAS); Mr SHEN, Jun (Institute of Plasma Physics, CAS)

**Presenter:** Mrs HE, Shiyong (Institute of Plasma Physics, CAS)

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