Contribution ID: **447** Type: **Poster**

VARID: Virtual and Augmented Reality Integrated Development Facility for Research in Remote Handling and Maintenance of Tokamaks

Wednesday 7 June 2017 13:40 (2 hours)

An efficient remote handling (RH) and maintenance scheme is the immediate requirement to ensure the maximum availability of the tokamak devices for the plasma operations. Virtual and augmented reality provides resourceful data to the RH operators for achieving the accurate control over the RH equipment and helps in time optimization of the RH operations.
The VARID facility established at IPR, India aims at research and development in the various areas of virtual and augmented reality that may prove extremely beneficial for the RH operators to have precise control of the RH operations without being physically present. The major research areas include computer vision, position tracking, 3d visualization, VR based real-time monitoring, haptic force feedback control system, kinematics & physics modelling etc. The facility also aims to act as a training facility for RH engineers to advance in the field of remote handling and robotics for future needs. The paper presents the design, layout and system configuration of the VARID facility. The initial results and achievements from the prototype experiments and trials are also highlighted.

Eligible for student paper award?

No

Authors: Mr DUTTA, Pramit (Institute for Plasma Research); Mr RASTOGI, Naveen (Institute for Plasma Research); Mr GOTEWAL, Krishan Kumar (Institute for Plasma Research)

Presenter: Mr DUTTA, Pramit (Institute for Plasma Research)

Session Classification: W.POS: Poster Session W

Track Classification: Operations and maintenance