# VIRTUAL REALITY FACILITY FOR ANALYSIS AND VALIDATION OF ITER MAINTENANCE SCENARIOS

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## Abstract

Maintenance operations in the ITER Hot Cell will be carried-out by multi-disciplinary teams of Remote Handling (RH) operators. Maintenance operations on in-vessel components are complex tasks, with many interfaces and decision moments, which have to be executed according to well-structured and traceable procedures by well-trained operators using licensed tooling and processes.

Various software tools and data management systems support the RH operators, helping them with the work-flow, the control of hot-cell equipment and tooling, and the interfacing with other RH teams.

ITER-NL is implementing an ITER-like RH Control Room work cell using novel Virtual Reality simulation technology to simulate the execution of complex maintenance tasks in a virtual ITER Hot Cell environment. In this representative and realistic RH control room setting, a team of up to five RH operators will test remote maintenance scenarios on port plugs using VR. The operators' interaction with software to support Operations Management, Equipment Management, Virtual Reality Simulation, and Command and Control modules will be investigated and validated. Task performance is measured at individual and at team level.

The paper gives an overview of the development status of the RH Control room. First analysis results are presented.

References:
[1]  B.S.Q. Elzendoorn et al. Maintenance of the ITER Upper Port Launcher using Remote Handling, SOFT 2008
[2]  "ITER Remote Handling Code of Practice", ITER_D_2E7BC5 v1.2

Session: G Remote Handling. Preferred format: Poster

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