The HTTP ‘Black Box’ protocol & the JetFsm Framework

Authors: P. Heesterman & C. Hogben

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The world’s largest nuclear fusion facility.
Fusion pulses ~50s duration.
Data acquisition controlled remotely.
Collaborative systems development.
ITER (successor to JET) is being built.
The HTTP ‘Black Box’ protocol

- Intended to allow parallel, collaborative developments.
- Uses HTTP to control and monitor data acquisition.
- Is being used on a variety of platforms, Windows, Linux, VME, and PLC.
The JetFsm Framework

- A Windows® C++ framework.
- Based on the JET pulse sequence and HTTP ‘Black Box’ communication.
- Used extensively for external collaboration projects.
- Various types of CCDs.
- High speed & infra-red cameras.
- Spectrometers.
- Could easily be used at locations other than JET.
Summary

• HTTP is being used effectively for data acquisition and control.
• Existing Windows applications could be used elsewhere.
• Experience of collaborative development.
• ITER-relevant.