

XML Diagnostics Description Standard

André Neto(1), Jo Lister(2), Horácio Fernandes(1), Izuru Yonekawa(3), Carlos Varandas(1)

1. Association EURATOM/IST Av. Rovisco Pais,1 1000-49 Lisboa Portugal

2. CRPP EPFL 1015 Lausanne Switzerland

3. Fusion Research and Development Directorate, Japan Atomic Energy Agency 801-1 Mukoyama 311-0193 Naka-shi Ibaraki-ken, Japan

A standard for the self-description of fusion plasma diagnostics will be presented, based on the Extensible Markup Language (XML). The motivation is to maintain and organise the information on all the components of a laboratory experiment, from the hardware to the access security, to save time and money when problems arises.

Since there is no existing standard to organise this kind of information, every Association stores and organises each experiment in different ways. This can lead to severe problems when the organisation schema is poorly documented or written in national languages. The exchange of scientists, researchers and engineers between laboratories is a common practice nowadays. Sometimes they have to install new diagnostics or to update existing ones and frequently they lose a great deal of time trying to understand the currently installed system. The most common problems are: no documentation available; the person who understands it has left; documentation written in the national language.

Standardisation is the key to solving all the problems mentioned. From the commercial information on the diagnostic (component supplier; component price) to the hardware description (component specifications; drawings) to the operation of the equipment (finite state machines) through change control (who changed what and when) and internationalisation (information at least in the native language and in English), a common XML schema will be proposed.

This paper will also discuss an extension of these ideas to the self-description of ITER plant systems, since the problems will be identical.