

## **F4E starts connecting the ITER systems together**

**A contract has been signed between F4E and GTD Sistemas de Informacion for a maximum period of four years and a total budget of five million EUR to deliver services in the areas of software and control in order to integrate the ITER plant systems.**

**The services may vary from implementing standard data exchanges between systems to the development of more complex software required for plasma diagnostics. GTD Sistemas de Informacion will collaborate with JMP Ingenieros and the United Kingdom's Atomic Energy Authority- Culham Centre for Fusion Energy (CCFE) in three main areas: diagnostics, cryoplant and buildings.**

Connecting the different systems of ITER and ensuring their smooth operation is not an easy task. The glue, otherwise known as the Control Data Access and Communication (CODAC) system, that holds firmly the systems of ITER together, and allows them to 'talk' between them, is a building block for securing the success of the project.

Europe is responsible for 13 systems in the field of diagnostics covering magnetics, reflectometry, spectroscopy, neutron cameras, X-ray detectors. Magnetics stands out as the area of pivotal importance and by far one of the most challenging ones that will be tackled by the contractors. ITER will operate with at least 2,000 high frequency sensors, which is roughly four times the number of sensors operating in the Joint European Torus (JET), the largest magnetic confinement facility today. The long pulses will require high availability and reliability in order to keep the machine operational for one hour.

Another area that the contractor will have to work is the integration of the ITER buildings to CODAC and the development of a plant system and graphic user interfaces, which in simple terms can be understood as platforms that will translate data between CODAC and the ITER central systems such as heating, ventilation and air conditioning; power distribution and fire detection.

Similarly, the integration of the European cryoplant systems will also be carried out through this contract. The integration activities in this domain include the design and implementation of plant system integration into ITER CODAC and the development of a human machine interface for this system. In the area of buildings, one of the first deliverables will be the development of a temporary alarm system that will be needed for the operation of the buildings during the construction phase.

### **Background:**

#### **MEMO: Fusion for Energy signs contract for instrumentation and control integration services**

#### **Fusion for Energy (F4E):**

Fusion for Energy (F4E) is the European Union's Joint Undertaking for ITER and the Development of Fusion Energy. The organisation was created under the Euratom Treaty by a decision of the Council of the European Union in order to meet three objectives:

F4E is responsible for providing Europe's contribution to ITER, the world's largest scientific partnership that aims to demonstrate fusion as a viable and sustainable source of energy.

ITER brings together seven parties that represent half of the world's population – the EU, Russia, Japan, China, India, South Korea and the United States.

F4E also supports fusion research and development initiatives through the Broader Approach Agreement, signed with Japan – a fusion energy partnership which will last for 10 years. Ultimately, F4E will contribute towards the construction of demonstration fusion reactors. F4E is established for a period of 35 years from 19 April 2007 and is located in Barcelona, Spain.

For more information visit:

<http://fusionforenergy.europa.eu> <http://www.youtube.com/user/fusionforenergy>  
<https://twitter.com/fusionforenergy>

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