

**OSART Good Practices**  
**CORP. TECHNICAL SUPPORT**  
Organization and functions

**EDF corporate, France**

Mission Date; 24 Nov.-5 Dec., 2014

Digital engineering simulator to prepare and validate the modifications and training procedures.

**Description:**

Given the number, the new character and the strong impact on operation of the changes that will be implemented for the third 10 yearly outages (VD3) for 1300MW plant series, it is necessary to train operators more quickly to anticipate on these outages. This is made possible thanks to this innovation that provides a digital (touch screen) simulator, which technical data are compliant with the design stage of the third 10 yearly outage. Digital CIPN training control room has been launched to focus on safety issues and proper site full scope simulators upgrade in order to comply with plant status after modifications – it allows to get feedback from instructors, operators and maintenance prior to site implementation.

This simulator will be deployed on all the NPPs of the EDF fleet. It will then be available in French or English.

The system will have two configurations: VD2 and VD3. It will represent a complementary training means to the existing VD2 hardware full scale conventional simulator.

A digital simulator provides for flexible use:

It enables to reproduce different configurations (VD2 and VD3, and later on VD4) and thus facilitates training of operators working on the units in different configuration situations (VD2 and VD3);

**Advantages:**

1. It is a state of the art device: desks are fitted with digital, touch and haptic (sensorial feedback when handling IT tools) screens. They enable to conduct operation activities (handling of a command system, reading of information, recording....).
2. With its full scale design, the simulator reproduces exactly the lay-out of a real control room: the lay-out of the facilities, the size of the equipment, and even the surrounding acoustic.
3. Through a simple software modification, this customized device enables to update rapidly and easily, the configurations simulated, in line with the modifications implemented on the units;  
It offers new teaching functions (image wall, access to files, films and presentations projection);  
It requires limited and simplified remote maintenance.
4. The construction time of a digital simulator is half that of a conventional « hardware » simulator.

**Operating results:**

The CIPN simulator provides the possibility to adjust the simulator in compliance with plant modifications. Instructors, operators and maintenance staff are supporting the simulator modifications in order to validate the modifications and also the training procedures.

Based on this the local NPPs' simulator adjustment is very effective and allows operators' timely training