VISIT – Virtual visits to nuclear power plants

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For more than twenty years, EDF's Communication Division has conducted a policy of opening its generation sites to the general public. Around 300,000 people visit a nuclear power plant every year. However, for the security of persons and the safety of facilities, those parts of the plant situated in controlled areas are not accessible to visitors. For the sake of transparency, EDF has taken an interest in the technologies offered by virtual reality to show the general public what a nuclear power plant is really like, so as to initiate dialogue on nuclear energy, particularly with young people.

VISIT has been developed with virtual reality technologies. It serves to show the invisible (voyage to the core of fission), the inaccessible and to immerse the visitors in environments which are usually closed to the general public (discovery of the controlled area of a nuclear power plant).

VISIT is used in Public Information Centres which receive visitors to EDF power plants and during international exhibitions and conferences.

VISIT allows a virtual tour of the following controlled areas:
> locker room hot area/cold area, a necessary passage before entering the controlled areas
> reactor building
> fuel building
> waste auxiliary building (liquid, solid and gaseous effluents)

It also includes a tour of the rooms or equipment usually accessible to the general public:
> control room
> turbine hall
> transformer
> air cooling tower.
COMMUNICATION METHODS

VISIT combines different media so as to make the tour as attractive as possible:

- **Activity video sequences**: auxiliary operator, pipe fitter, control engineer, laboratory technician, industrial computer specialist, environmental engineer, etc.

- **Technical video sequences**: installation of the reactor vessel, reactor refuelling, transport of spent fuel, whole-body gamma measurement, waste encapsulation, etc.

- **Sound effects**: reproduction of the sound environment of a nuclear power plant, with the noise of machines and loudspeaker announcements

- **3D objects**: reactor vessel, primary system, steam generator

- **Computer animations**: voyage to the core of fission, neutron moderation, fuel assembly, thermodynamic cycle, generator

The VISIT virtual reality simulator has the following features:

- **Flexible**: the breakdown into modules enables the person handling the simulator to adapt his or her presentation according to the requests of the public.

- **Transparent**: VISIT enables one to see controlled areas that are usually inaccessible.

- **Transportable**: the simulator can be moved around easily during international events, conferences and exhibitions.