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LESSONS LEARNED FROM PREPARING DECOMMISSIONING OPERATIONS WITH VIRTUAL REALITY

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After having operated numerous nuclear facilities since the 1950s, the CEA (French Atomic and Alternative Energies Commission) must now manage the dismantling of those which have reached the end of their lifetime. These high priority actions have led to the creation of an R&D dismantling division which aims at providing innovative tools, including intervention scenario simulation. Simulation is a good means of visualizing highly radioactive environments where humans cannot enter, of testing different technical alternatives, and of training workers prior to interventions. For a few years, the CEA has developed a generic simulation platform based on virtual reality (VR) technologies, usable on any decommissioning project. On this platform, different kinds of simulation can be run: physics, kinematics, virtual human simulation and dose-rate calculation. All these modules are embedded in a software called iDROP, taking into account the whole aspects involved in nuclear operations in a single simulation. This paper describes the different application cases where VR simulation has been used to design dismantling operations, presents the lessons learnt from these different implementations.

Country or International Organization

CEA

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