

D23.3 Simulation Demonstration

PUBLIC SUMMARY ONLY (PS)

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1 Public summary

This technical report presents the work performed in setting up and running a demonstration of a distributed simulation model. The context of the demonstration was set up to mimic the situation where the consequences of a gas release in a large metro station is studied by security officers tasked with updating security plans. The basic scenario was taken from one of the main demo activities to be performed in WP43.

The simulation model was built using distributed simulation technology, HLA/IEEE 1516. It contains separate models that simulate the gas dispersion in the metro station, how passengers move around in the station and how they are affected by exposure to the toxic gas. The outcome from a simulation run is obtained in terms of number of passengers affected, wounded or dead.

Using the scenario control component, it is possible to study the effects of simple interventions, e.g. regulating the flow of passengers by opening or closing off certain areas or passages.

The purpose of the demonstration was to provide a proof-of-concept, by way of a practical example. The outcome shows that the selected simulation technology provided a stable and effective platform for solving the problem. Several technical issues were encountered in adapting the (pre-existing) models to the specific scenario, especially regarding the gas dispersion calculations.

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