

## Section 3

# Chapter 14 - From Videogames to Work: Interactive Languages and Three-Dimensional Environments as Reference Models in Tomorrow's Professions.

## Case Scenario 1

**Title: Firefighting course in Virtual Reality: SAEF**

Description:

The virtual reality fire-fighting course developed by Carraro Lab for Saef, a company dedicated to professional training, is used in Italy in the institutional courses required for companies. It uses extremely realistic images, adopts sound effects to reproduce situations and behaviors, and returns *feedback* and results to the user.

The subject of the VR module is the evacuation of an environment where a fire occurs; the objective is to find the emergency exit, activate the alarm and reach the point of collection. Thanks to a series of virtual reality viewers, the technology is introduced as a *test* after the linear course phase. After the learning phase in the classroom, in fact, carried out in the classical way, participants are invited to wear a virtual reality viewer and headphones. Looking around 360 degrees, you are inside a company reproduced with a high level of realism thanks to spherical photographs in high definition. A fire develops inside the room, reconstructed in animated computer graphics. The fire is started randomly but in plausible places such as electrical equipment, cardboard boxes, burners, heating systems.

When the fire simulation starts and the alarm sounds, it is necessary to put into practice the information received during the course, to evacuate the environment, activate the alarm, and



reach the designated assembly point. Audio also plays an important role in the simulation. A *timer* indicates the user's time in the simulation: the time factor is also important in the event of fire.

At the end of the allotted time (or if the user reaches the exit before the time limit) the application carries out an evaluation of the user's behavior. The first thing to do is to indicate whether the objective of completing the evacuation has been achieved. In addition, correct or incorrect behavior is reported during the simulation (for example, the alarm was not activated or if the alarm was already working and "you lost time activating the alarm when it was already activated"). At the end of the simulation, each participant receives a message that describes the result of his behavior; finally, everyone is shown a video that summarizes what were the correct steps to be taken, particularly useful for those who did not manage to conduct the procedure correctly.

