S·T·R·E·S·S

SIMULATION-BASED TRAINING OF RESILIENCE IN EMERGENCIES AND STRESSFUL SITUATIONS

RESEARCHERS

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WEBSITE

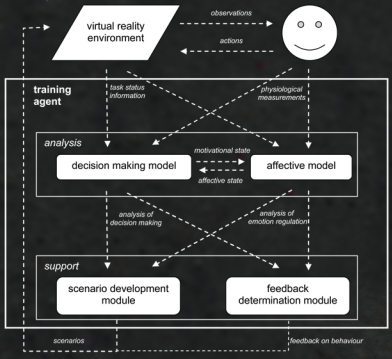
http://**stress.few.vu.nl/**

Emergency workers and other professionals (e.g. in public transport) regularly face **stressful situations** in which **negative emotions** and **time pressure** often cause suboptimal decision making! !

PUBLIC TRANSPORT: Aggression, threats, accidents

POLICE: Violence, crisis, trauma, chaos

Is it possible to improve (1) security worker's **decision making behaviour** in, and (2) **resilience to stress** induced by, crisis situations by means of an **intelligent VR** based training environment? ?



VIRTUAL ENVIRONMENT

The **trainee** will be engaged in a 3D **virtual reality** environment, while being monitored by an intelligent **training agent**

PHYSIOLOGICAL MEASUREMENTS

The trainee is connected to various **HCI devices** to measure **(physiological) states** related to **arousal** and **stress**

ANALYSIS

Data measured is used in the **affective model** to assess the trainee's **mental state**, while the **decision making model** monitors whether (and why) certain **mistakes** are made.

SUPPORT

With this information, the **scenario development module** modifies the **running scenario** to ensure optimal learning, while the **feedback determination module** generates **explanations** of mistakes and **advice** to improve performance.

An **iterative** approach is used, interchanging **development** and **validation** per module. ...

DEVELOPMENT

A **training environment** is created to develop each of the **modules** separately, after which they are integrated into a single **training agent**

VALIDATION

Each module, as well as the overall environment, is **validated separately** using **three different groups** of people to ensure genericity

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