F Devillers, S Donikian, F Lamarche, and J- Taille (2002). A Programming Environment for Behavioural Animation . The Journal of Visualization and Computer Animation 13:263-274.

Abstract: The Journal of Visualization and Computer Animation 13:263-274Behavioural models offer the ability to simulate autonomous agents like organisms and living beings. Psychological studies have shown that human behaviour can be described by a perception–decision–action loop, in which the decisional process should integrate several programming paradigms such as real time, concurrency and hierarchy. Building such systems for interactive simulation requires the design of a reactive system treating flows of data to and from the environment, and involving task control and preemption. Since a complete mental model based on vision and image processing cannot be constructed in real time using purely geometrical information, higher levels of information are needed in a model of the virtual environment. For example, the autonomous actors of a virtual world would exploit the knowledge of the environment topology to navigate through it. Accordingly, in this paper we present our programming environment for real-time behavioural animation which is compounded of a general animation and simulation platform, a behavioural modelling language and a scenario-authoring tool. Those tools has been used for different applications such as pedestrian and car driver interaction in urban environments, or a virtual museum populated by a group of visitors.

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