F Lamarche, and S Donikian (2001). The Orchestration of Behaviours using Resources and Priority Levels. In: Computer Animation and Simulation 2001, edited by Cani, M.P. and Magnenat-Thalmann, N. and Thalmann, D.. Springer-Verlag, Manchester, UK, pages 171-182.

Abstract: Reproducing daily behaviours requires the ability to schedule behaviours depending on resources (body parts for example) and priority (intentions or physiological parameters) constraints. A simple way is to say that behaviours which are using the same resources are mutually exclusive. This approach is not sufficient to achieve realism purpose, as in real life, humans are able to combine them in a much microscopic way. All day long, humans mix different behaviours, as for example reading a newspaper while drinking a coffee and smoking a cigarette. If all behaviours using common resources were mutually exclusive, an agent could not reproduce this example, except if a specific behaviour is created. This solution becomes rapidly too complex and has motivated the work presented in this paper. It consists in an extension of HPTS, our behavioural model, by the introduction of resources and priority levels. In the contrary of some previous approaches, it is not necessary to specify exhaustively all behaviours that are mutually exclusive; this is done implicitely by attaching resources to nodes and a priority function to each state machine, and by using a scheduler.

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