A Model for Stream-based Interactive Storytelling

Tese de doutorado

Thesis presented to the Programa de Pós-Graduação em Informática, of the Departamento de Informática do Centro Técnico Científico da PUC-Rio, as partial fulfillment of the requirements for the degree of Doutor.

Advisor: Prof. Bruno Feijó

Rio de Janeiro
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Prof. Bruno Feijó
Advisor
Departamento de Informática - PUC-Rio

Antonio Luz Furtado
Departamento de Informática - PUC-Rio

Angelo Ernani Maia Ciarlini
UNIRIO

Luis Paulo Santos Valente
PUC-Rio

Sean Wolfgang Matsui Siqueira
UNIRIO

Prof. José Eugenio Leal
Coordinator of the Centro Técnico Científico da PUC-Rio

Rio de Janeiro - April 11th, 2014
Marcelo de Mello Camanho

Graduated in Information Systems in UNIRIO (Universidade Federal do Estado do Rio de Janeiro) in 2005 and obtained a degree of Mestre em Informática at UNIRIO in 2009. He has participated in multiple congresses on Digital Entertainment and studies the interactive storytelling area since graduation.

Bibliographic Data

Marcelo de Mello Camanho

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Abstract


In this thesis we present a highly scalable architecture for massive multi-user interactive storytelling systems based on video streams. The proposed architecture can support different demands for interactivity, generation, and visualization of stories in digital television environments, which include TV set-top boxes, tablets, smartphones, and computers. In this architecture, the same story adapts itself to the spectator’s device in terms of rendering and interface processes automatically. Also a model for sharing massive interactive stories is presented. Moreover, the proposed system preserves the logical coherence of the story that unfolds while keeping it interactive.

Keywords

Interactive Storytelling, Massive Digital Entertainment, Streaming, Cross-media games, TV.
Resumo


Nesta tese é apresentada uma arquitetura altamente escalável para storytelling interativo em massa baseado em streams de vídeo. A arquitetura proposta pode suportar diferentes demandas para interatividade, geração e visualização de histórias em ambientes de televisão digital, que inclui set-top boxes de TV, tablets, smartphones e computadores. Nesta arquitetura, a mesma história se adapta ao aparelho do espectador em termos de renderização e processo de interface automaticamente. Também é apresentado um modelo para compartilhar histórias interativas em massa. Além disso, o sistema proposto preserva a coerência lógica da história que se desenrola enquanto a mantém interativa.

Palavras-chave

Storytelling Interativo, Entretentimento Digital em Massa, Streaming, Jogos multiplataforma, TV.
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