

**Marcelo de Mello Camanho**

**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

April, 2014



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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

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### **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

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## **Abstract**

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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

Camanho, Marcelo; Feijó, Bruno. **Um modelo para storytelling interativo baseado em streaming de vídeo**. Rio de Janeiro, 2014. 92p. DSc Thesis - Departamento de Informática, Pontifícia Universidade Católica do Rio de Janeiro.

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, Entretenimento Digital em Massa, Streaming, Jogos multiplataforma, TV.

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