Outline

- Problem Formulation
- Related work
- Our Approach
- Discussion
Introduction

- Video games
  - rapidly becoming the top form of entertainment
    - Avatar ($77M/ 24 hours)
    - GTA 5 ($800M / 24 hours)
  - artistically maturing
  - interactive storytelling
- Ballet
  - artistically rich
  - historically interesting
  - non-interactive
Problem Formulation

- Create an interactive experience
  - situated in a Romantic ballet setting
  - using video-game-like technology
- Scientifically
  - test benefits of the player’s emotion modeling
    - for dynamic narrative selection
- Artistically
  - critical analysis
  - ?
Three Different Players

Lost Operative

Lost Operative

Lost Operative

6

10

2

All screenshots from http://guides.ign.com
Related Work: Commercial

- No one seems to have addressed this specific problem
- Immersive technology in video games
  - moving away from game controllers
  - using more natural forms of interaction
    - Microsoft Kinect
    - Sony Eye
    - Nintendo Wiimote
Related Work: Academic

- Augmented reality
  - a video game inside the real-world
- fAR-play
  - Rockwell’s group at UofA
  - content accessible at certain physical locations
  - built a mini-game with ballet content
Related Work: Academic

- Additional ways to interact with the story
- Physical interaction with real objects
- Albrecht’s dagger
Related Work: Academic

- Facade
  - selects narrative content dynamically
    - to keep the player on an author-given dramatic curve
- Marriage drama
Summary of Related Work

- None solves our problem
- Can be useful to us as technology
Our Approach

- Internally
  - AI planner from PAST (Ramirez & Bulitko 2012)
  - play-style model from PaSSAGE (Thue, et al. 2012)
  - player’s emotion model from EMA/CEMA (Bulitko, et al. 2008)

- Externally
  - an innovative video game interface
  - suitable to the ballet setting
Our Approach: Domain Theory

- Describes the narrative space of a Romantic ballet accessible to Artificial Intelligence
- allows dynamic planning in it
- Annotated by authors
  - play style inclinations
  - player’s goals
  - per play style

Giselle:
- (person giselle)
- (woman giselle)
- (alive giselle)
- (weak-heart giselle)

Albrecht:
- (person albrecht)
- (man albrecht)
- (alive albrecht)
- (prince albrecht)

(action meets)
:constraints ((person ?p1) (person ?p2))
:preconditions ()
Our Approach: Domain Theory

- Describes the narrative space of a Romantic ballet
  - accessible to Artificial Intelligence
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  - player’s goals
    - per play style
Emotion Modeling

- Player modeling of PaSSAGE
  - predicts goals the player is pursuing
  - goals appraised by EMA/CEMA
    - emotions derived
- Narrative selected
  - consistent with authorial intents
  - to keep the player on the author-given emotional curve
Interface

- **Narrative** presented through
  - Video projection
  - clips from ballets
- **Player’s actions** via
  - Player body motion tracking
  - Kinect

![Diagram](image.png)

- Story engine plays video according to Kinect input:
- Narrative branch
- Options for player presented
- Player stance received
- Next narrative component launched

Installation Diagram
Game Interface

- **Narrative** presented through
  - Video projection
    - clips from ballets
    - questions
    - interface prompts
- **Player’s actions** via:
  - Player body motion tracking
  - Kinect
Evaluation

Scientific
- effects of player’s emotion modeling
  on interactive narrative

Artistic
- critical analysis
Recap

- iGiselle
- Using emotional modelling to build and explore narratives