Contents

AIIDE-12 Organization / ix

Sponsors / xii

Preface / xiii
    Mark Riedl, Gita Sukthankar, Arvind Jhala, Jichen Zhu, Santiago Ontaño

Starcraft Competition / xiv
    Michael Baro, David Churchill

Invited Talks / xv
    Rich Hilleman, Zoran Popovic, Marek Michalowski, Hannes Högni Vilhjálmsson

Oral Presentations

TRANSIT Routing on Video Game Maps / 2
    Leonid Antsfor, Daniel Harabor, Philip Kilby, Toby Walsh

RRT-Based Game Level Analysis, Visualization, and Visual Refinement / 8
    Aaron Bauer, Zoran Popovic

Reaching Cognitive Consensus with Improvisational Agents / 14
    Rania Hodbod, Brian Magerko

Fast Procedural Level Population with Playability Constraints / 20
    Ian Horswill, Leif Foged

Evaluating Competitive Game Balance with Restricted Play / 26
    Alexander Jaffe, Alex Miller, Erik Andersen, Yun-En Liu, Anna Karlin, Zoran Popovic

Sports Commentary Recommendation System (SCoReS): Machine Learning for Automated Narrative / 32
    Greg Lee, Vadim Bulitko, Elliot Ludvig

POMCoP: Belief Space Planning for Sidekicks in Cooperative Games / 38
    Owen Macindoe, Leslie Pack Kaelbling, Tomás Lozano-Pérez

Game-Based Data Capture for Player Metrics / 44
    Aline Normoy, John Drake, Maxim Likhachev, Alla Safonova

Adapting AI Behaviors to Players in Driver San Francisco Hinted-Execution Behavior Trees / 51
    Sergio Ocio

Understanding Speech in Interactive Narratives with Crowdsourced Data / 57
    Jeff Orkin, Deb Roy

Combining Search-Based Procedural Content Generation and Social Gaming in the Petalz Video Game / 65
    Sebastian Risi, Joel Leibman, David B. D'Ambrosio, Ryan Hall, Kenneth O. Stanley
Representing Morals in Terms of Emotion / 69
Margaret Sarlej, Malcolm Ryan

Evolving Personalized Content for Super Mario Bros Using Grammatical Evolution / 75
Noor Shaker, Georgios N. Yannakakis, Julian Togelius, Miguel Nicolau, Michael O’Neill

If Not Now, Where? Time and Space Equivalency in Strategy Games / 81
Baylor Wetzel, Kyle Anderson, Maria Gini, Wilma Koutstaal

Evolutionary Learning of Goal Priorities in a Real-Time Strategy Game / 87
Jay Young, Nick Hawes

A Temporal Data-Driven Player Model for Dynamic Difficulty Adjustment / 93
Alexander E. Zook, Mark O. Riedl

Poster Presentations
Spatial Game Signatures for Bot Detection in Social Games / 100
Titus Barik, Brent Harrison, David L. Roberts, Xuxian Jiang

On Case Base Formation in Real-Time Heuristic Search / 106
Vadim Bulitko, Chris Rayner, Ramon Lawrence

Fast Heuristic Search for RTS Game Combat Scenarios / 112
David Churchill, Abdallah Saffidine, Michael Baro

Plan-Based Character Diversity / 118
Alexandra Coman, Hector Munoz-Avila

Aesthetic Considerations for Automated Platformer Design / 124
Michael Cook, Simon Colton, Alison Pease

Enhancing the Believability of Character Behaviors Using Non-Verbal Cues / 130
Neesha Desai, Duane Szafron

Statechart-Based AI in Practice / 136
Christopher Dragert, Jörg Kienzle, Clark Verbrugge

TEAM-IT: Location-Based Gaming in Real and Virtual Environments / 142
Spencer Frazier, Alex Neivnan, Fotos Frangoudes, Yu-Han Chang, Rajiv Maheswaran

Mining Rules from Player Experience and Activity Data / 148
Jeremy Gow, Simon Colton, Paul Cairns, Paul Miller

When Players Quit (Playing Scrabble) / 154
Brent Harrison, David L. Roberts

Planning Is the Game: Action Planning as a Design Tool and Game Mechanism / 160
Rudolf Kadlec, Csaba Több, Martin Cerny, Roman Bartík, Cyril Brom

Glengarry Glen Ross: Using BDI for Sales Game Dialogues / 167
Tijmen Joppe Muller, Annerieke Heuvelink, Karel van den Bosch, Ivo Swartjes

Telling Interactive Player-Specific Stories and Planning for It: ASD + PaSSAGE = PAST / 173
Alejandro Ramirez, Vadim Bulitko
Player Profiling with *Fallout 3* / 179
  *Pieter Spronck, Iris Balemans, Giel van Lankeveld*

Simulating Adaptive Quests for Increased Player Impact in MMORPGs / 185
  *Emmett Tomai, Rosendo Salazar*

The Gold Standard: Automatically Generating Puzzle Game Levels / 191
  *David Williams-King, Jörg Denzinger, John Aycock, Ben Stephenson*

**Demonstrations**

RoleModelVis: A Visualization of Logical Story Models / 198
  *Sberol Chen, Andrew Duensing, Peter Kong, Arnar Jhala, Noah Wardrip-Fruin, Michael Mateas*

Index / 200