Contents

AIIDE-12 Organization / ix

Sponsors / xii

Preface / xiii
  Mark Riedl, Gita Sukthankar, Arnav Jhala, Jichen Zhu, Santiago Ontañón

Starcraft Competition / xiv
  Michael Buro, David Churchill

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

Oral Presentations

TRANSIT Routing on Video Game Maps / 2
  Leonid Antsfeld, 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 Hodhod, 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 Normoylle, John Drake, Maxim Likhachev, Alla Safonova

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

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 / 63
  Sebastian Risi, Joel Lehman, 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 Buro

Plan-Based Character Diversity / 118
  Alexandra Coman, Héctor Muñoz-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 Newnan, Fotos Frangoudes, Yu-Han Chang, Rajiv Mabeswaran

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 Tóth, Martin Cerny, Roman Barták, Cyril Brom

Glengarry Glen Ross: Using BDI for Sales Game Dialogues / 167
  Tijmen Joppe Muller, Annemieke 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 Lankveld*

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
*Sherol Chen, Andrew Duensing, Peter Kong, Arnab Jhala, Noah Wardrip-Fruin, Michael Mateas*

Index / 200