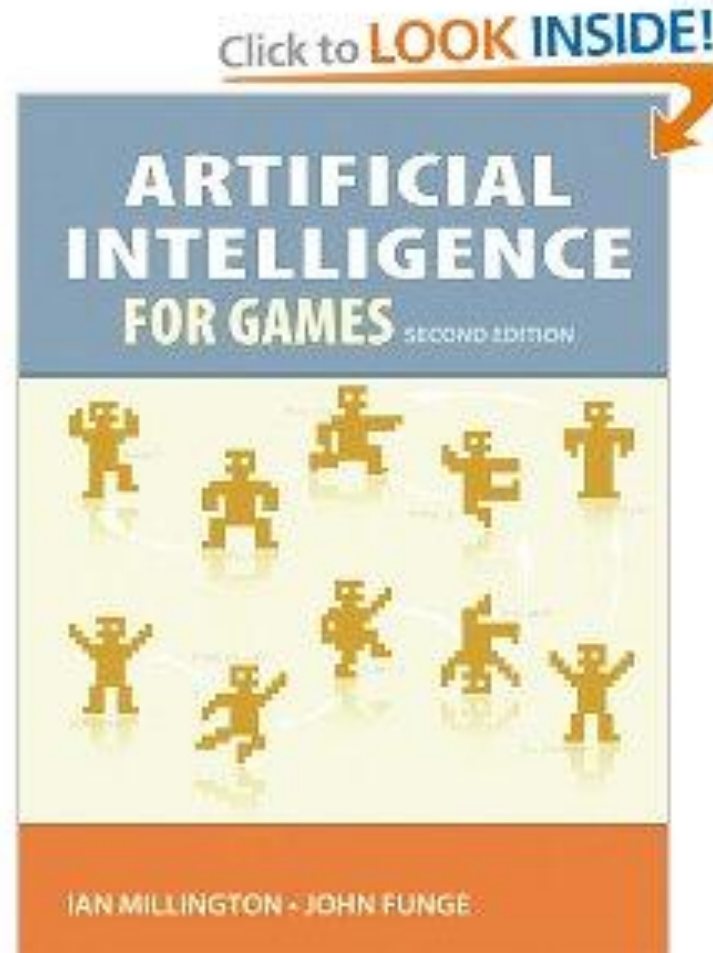


Framework pre multiplayer 3D RPG hry s podporou umelej inteligencie postáv

Prezentácia zdrojov

V.Jurenka

Artificial Intelligence for Games



AI Game programmers guild

<http://gameai.com/papers.php>

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Relevant Research, Papers, and Presentations

The following links are to items of interest that have been written or presented by members of the AI Game Programmers Guild. In them, you will find information that people have felt is very relevant to the advancement of game AI. In the future, we hope to begin offering peer-reviewed papers and articles as well.

Please note that *some* of these links may lead to content that is behind subscription or membership-only walls, and/or may be available for a fee. They are included here as a convenience to those who are either members of those sites or who are interested in purchasing access to that material. Because the AIGPG is not responsible for the content or availability of these links and how their status might change, we have not identified which are paid and which are free. We apologize for any confusion, inconvenience, or outright disappointment that may result in learning the status of this material after the jump.

Showing 174 papers or presentations.

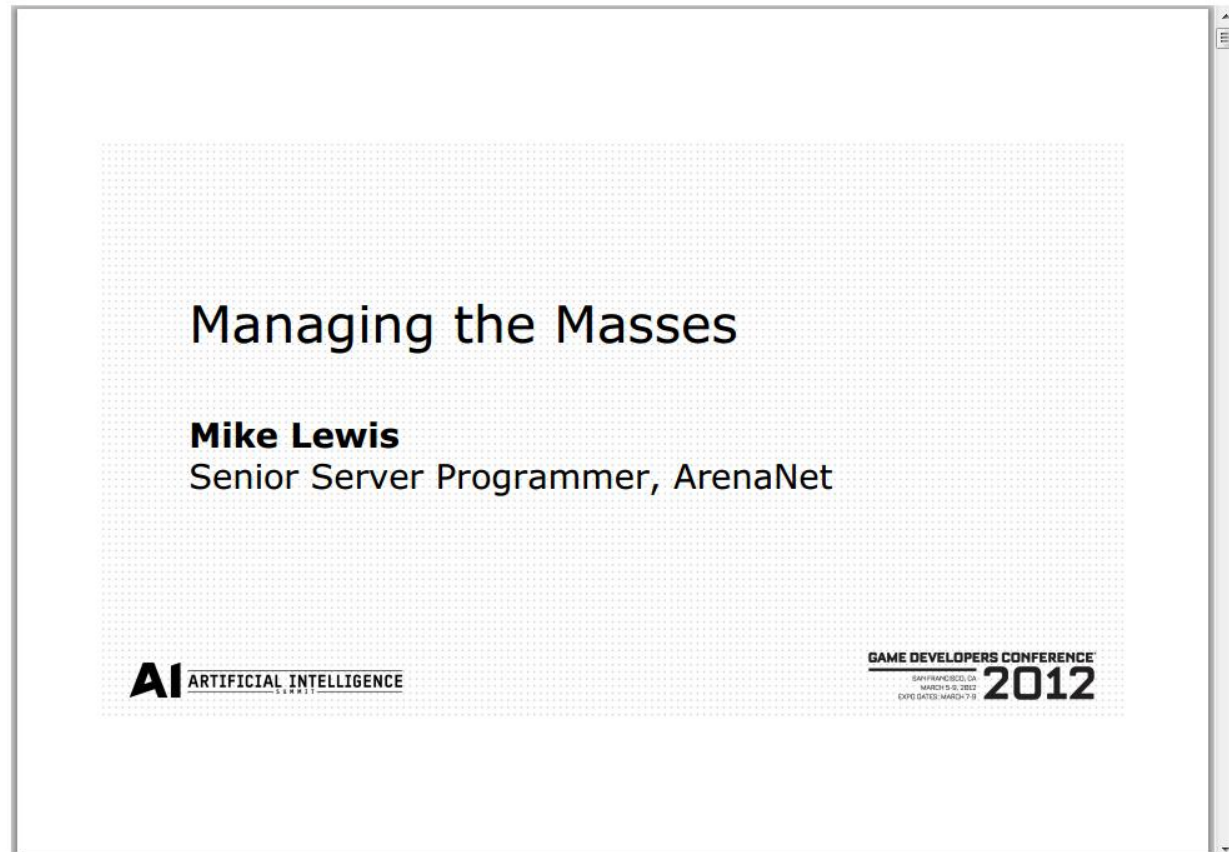
| Author/Speaker | Keyword | Event/Publication | Year | |
|----------------|----------------------|-------------------|--------------|---------------|
| (Show All) ▾ | <input type="text"/> | (Show All) ▾ | (Show All) ▾ | Apply Filters |

| Author/Speaker ⚡ | Name/Title ⚡ | Event/Pub. ⚡ | Year ⚡ | Links |
|------------------|--|--------------------|--------|---|
| James Anhalt | AI Navigation: It's Not a Solved Problem... Yet! | GDC AI Summit | 2011 |   |
| Arjen Beij | Killzone's AI : Dynamic Procedural Combat Tactics | GDC | 2005 |  |
| Igor Borovikov | An Orwellian Approach to AI Architecture | GDC | 2005 |  |
| Phil Carlisle | Breaking the Cookie-Cutter: Modeling Individual Personality, Mood, and Emotion in Characters | GDC AI Summit | 2009 |    |
| | Characters Welcome: Next Steps Towards Human AI | GDC AI Summit | 2009 |  |
| | Little Big AI: Rich Behavior on a Small Budget | GDC AI Summit | 2010 |  |
| | Suspending Disbelief: Bringing Your Characters to Life with Better AI | GDC AI Summit | 2010 |  |
| Alex Champandard | Animating in a Complex World: Integrating AI and Animation | GDC AI Summit | 2009 |   |
| | Behavior Trees for Next-Gen Game AI | Web Article/Column | 2008 |  |
| | Behavior Trees: Three Ways of Cultivating Strong AI | GDC AI Summit | 2010 |  |
| | Case Studies: AI in Recent Games | GDC AI Summit | 2010 |   |
| | Creating Your Building Blocks: Modular Component AI Systems | GDC AI Summit | 2011 |   |
| | Deciding on an AI Architecture: Which Tool for the Job? | GDC AI Summit | 2010 |  |

AI in MMOs

<http://gdcvault.com/play/1015872/Managing-the-Masses-Crafting-AI>

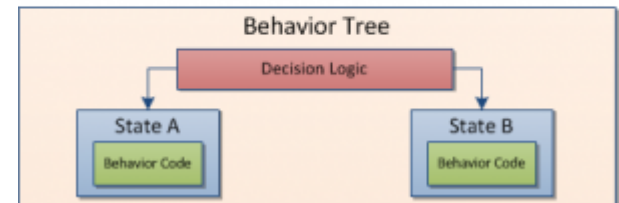
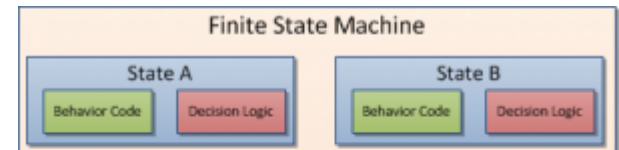
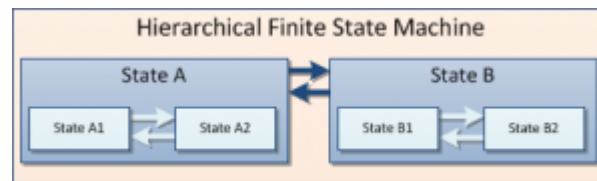
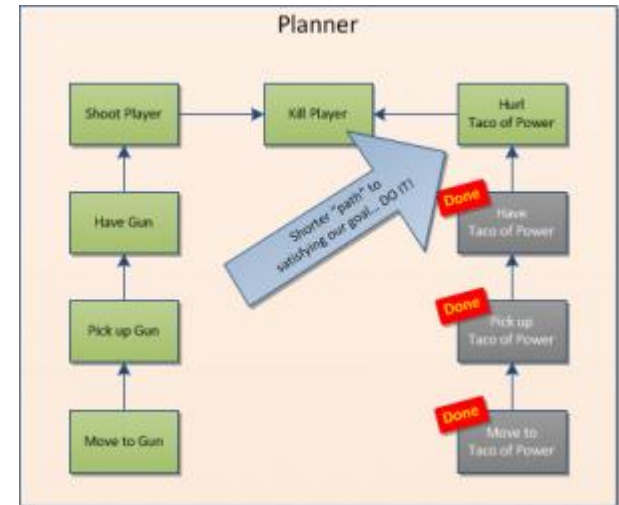
GDC Vault



AI Architectures

<http://intrinsicalgorithm.com/IAonAI/2012/11/ai-architectures-a-culinary-guide-gdmag-article/>
 (*Game Developer Magazine August, 2012*)

| AI Architectures Pros and Cons | | |
|--------------------------------|---|--|
| Architecture | Pros | Cons |
| Ad-hoc Rules | <ul style="list-style-type: none"> Minimal set-up | <ul style="list-style-type: none"> Gets unwieldy past the most basic behaviors |
| Finite State Machine (FSM) | <ul style="list-style-type: none"> Easy to understand, build | <ul style="list-style-type: none"> Transitions between states get hard to manage with more behaviors |
| Hierarchical FSM | <ul style="list-style-type: none"> Hierarchy helps cluster behaviors Easy to understand, build | <ul style="list-style-type: none"> Transitions still can get difficult to manage |
| Behavior Tree (BT) | <ul style="list-style-type: none"> Separates decision logic from state code Easy to understand, build, edit | <ul style="list-style-type: none"> Hard-coded priorities of behaviors |
| Planner | <ul style="list-style-type: none"> AI "discovers" solutions on the fly Handles unique situations better Easy accommodates new actions | <ul style="list-style-type: none"> Some loss of designer control "Replanning" can be processor-intensive |
| Utility-based System | <ul style="list-style-type: none"> AI constantly weighs <i>all</i> actions Handles unique situations gracefully Allows for variation in behavior | <ul style="list-style-type: none"> Some loss of designer control Harder to design, edit, and tune |
| Neural Network | <ul style="list-style-type: none"> Able to "learn" how to play Can be set up relatively quickly | <ul style="list-style-type: none"> Complete loss of designer control Nearly impossible to edit or tune |





Bachelor's thesis in computer science spring 2008

AI-controlled life in Role-playing games

by Bertil Jeppsson
DV1303

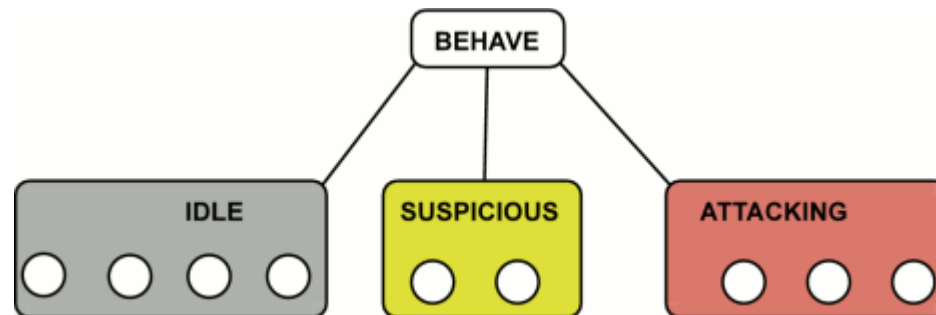
supervised by Johan Hagelbäck

[http://www.bth.se/fou/cuppsats.nsf/all/91f4ce512fb90b71c12574650047f273/\\$file/bachelor_thesis_revised_bertil_jeppsson.pdf](http://www.bth.se/fou/cuppsats.nsf/all/91f4ce512fb90b71c12574650047f273/$file/bachelor_thesis_revised_bertil_jeppsson.pdf)

Understanding Behavior Trees

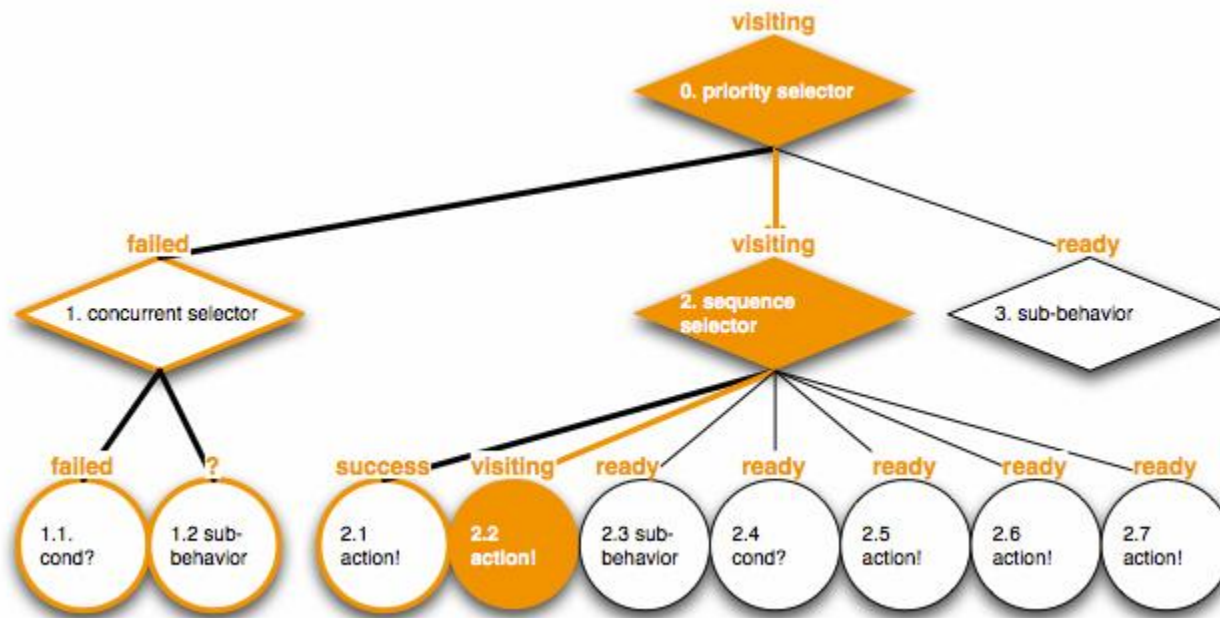
Alex J. Champandard on September 6, 2007

<http://aigamedev.com/open/article/bt-overview/>



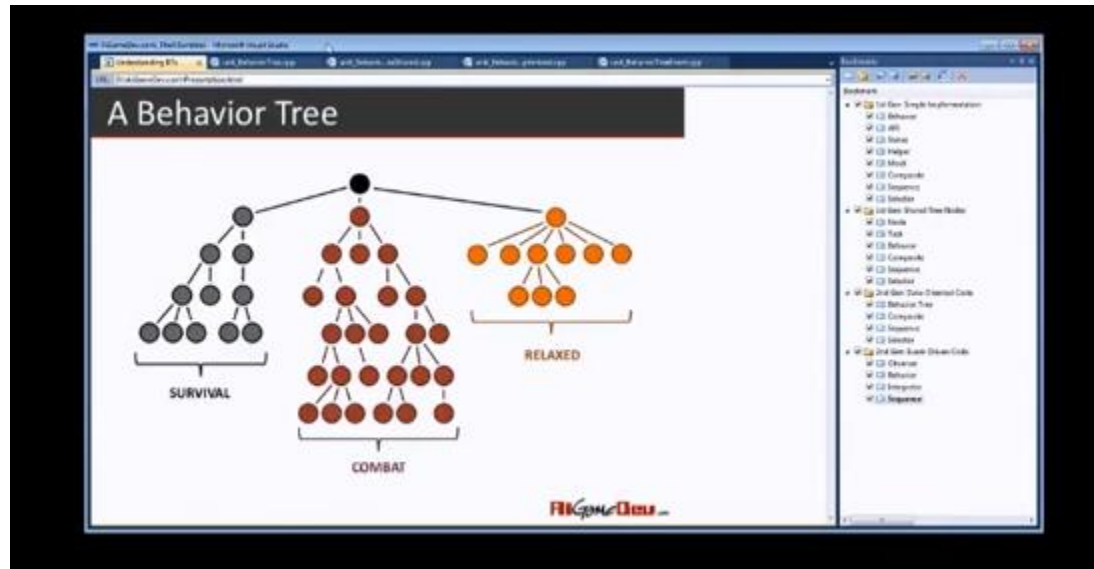
Introduction to Behavior Trees

<http://bjoernknafla.com/introduction-to-behavior-trees>



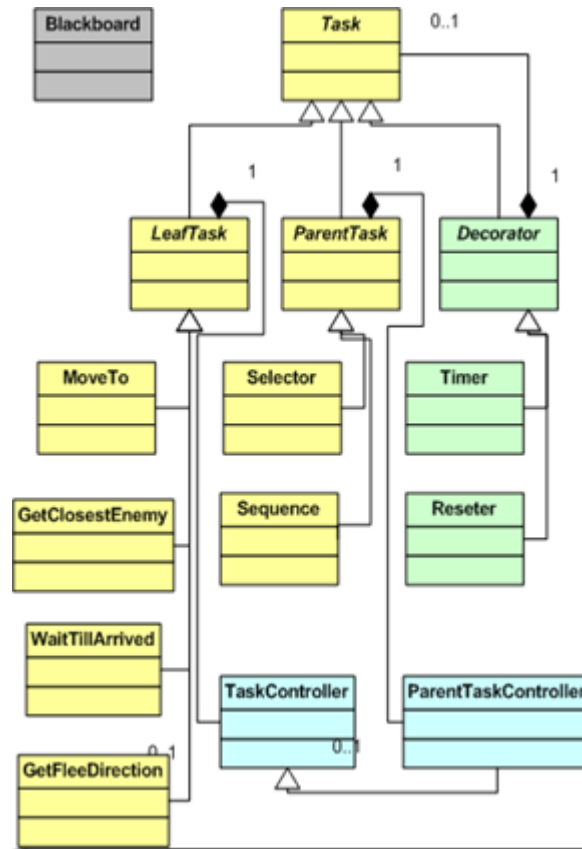
Understanding the Second Generation of Behavior Trees and Preparing for Challenges Beyond

<http://www.youtube.com/watch?v=n4aREFb3SsU>



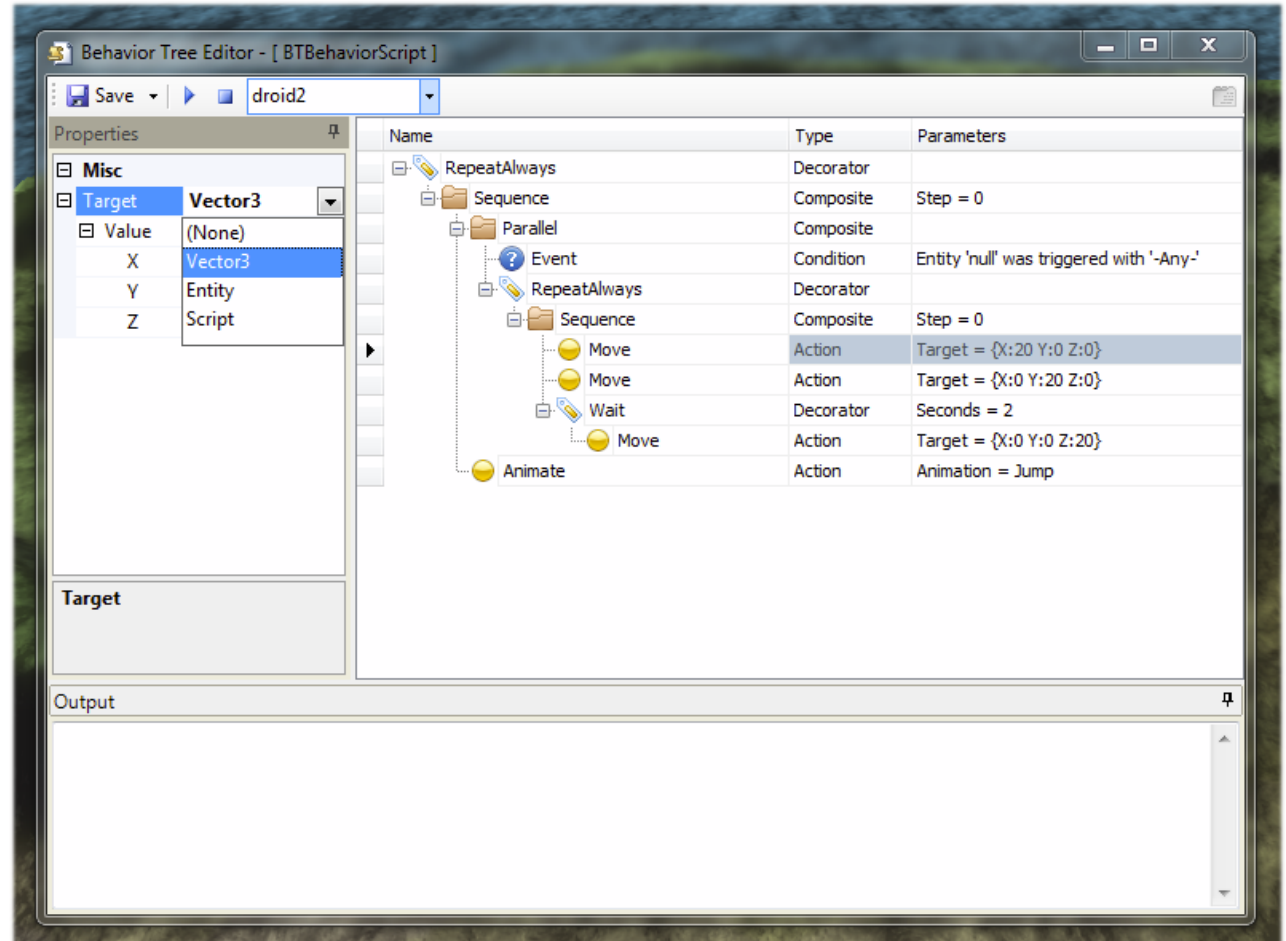
BT Implementation

<http://magicscrollsofcode.blogspot.sk/2010/12/behavior-trees-by-example-ai-in-android.html>



Visual3D

<http://game-engine.visual3d.net/wiki/behavior-tree-editor-state-machines-and-sequences>



Neural network

<http://lbms03.cityu.edu.hk/studproj/ee/2007eecyk362.pdf>

FINAL YEAR PROJECT REPORT



Department of Electronic Engineering

BEngCE-2006/07-SYY-31-BECE

AI Role Playing Game Development

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Student ID:

Supervisor: Dr. S.Y. Yuen

Assessor: Dr. H.C. So