

# Kognitive Modellierung für animierte Agenten

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- **25.4.2003** Seminar Planung, Verteilung der Themen

## Kognitive Architekturmodelle

- **2.5.2003** Soar - Unified Theory of Cognition
  - Jill Fain Lehman, John Laird, Paul Rosenbloom, „*A Gentle Introduction to Soar, an Architecture for Human Cognition*“, in S. Sternberg & D. Scarborough (eds.) *Invitation to Cognitive Science, Volume 4*.
  - **Soar Tutorial** <<http://www.eecs.umich.edu/~soar/tutorial.html>>
  - “*The Soar Cognitive Architecture and Human Working Memory*” by Richard M Young & Richard L Lewis. Chapter 7 of: A. Miyake & P. Shah (eds), *Models of Working Memory: Mechanisms of Active Maintenance and Executive Control*, 224-256. Cambridge University Press.,
  - R.L. Lewis, “**Cognitive Theory, Soar**”, in *International Encyclopedia of the Social and Behavioral Sciences*. Amsterdam: Pergamon (Elsevier Science), 2001
- **9.5.2003** ACT-R – Cognitive Architecture
  - J. R. Anderson, D. Bothell, M. D. Byrne, M. D., Douglass , C. Lebiere, Y. Qin,. “*An Integrated Theory of Mind*”, *Psychological Review*, 2002
  - T.R. Johnson, “*Control in Act-R and Soar*”, *Proceedings of the First European Workshop on Cognitive Modeling* (pp. 201-208): Technische Universität Berlin, 1996
- **16.5.2003** BDI (Belief-Desire-Intention)
  - M. Georgeff, B. Pell, M. Pollack, M. Tambe, M. Wooldridge, “*The Belief-Desire Intention Model of Agency*”, Proceedings of the 5th International Workshop on Intelligent Agents V : Agent Theories, Architectures, and Languages (ATAL-98), Volume 1555, Springer-Verlag: Heidelberg, Germany
  - A. Rao, M. Georgeff, “*BDI Agents: From Theory to Practice*”, in Proceedings of the First Intl. Conference on Multiagent Systems, San Francisco, 1995
  - J. Thanagarajah, L. Padgham, J. Harland :“*Representation and Reasoning for Goals in BDI Agents*”, in Twenty-Fifth Australasian Computer Science Conference (ACSC2002), Melbourne, Australia , 2002
  - F. Brazier, B. Dunin-Keplicz, J. Treur, R. Verbrugge: “*Modelling Internal Dynamic Behavior of BDI Agents*”, in: D. Gabbay and Ph. Smets (editor), *Dynamics and Management of Reasoning Processes*, Series in Defeasible Reasoning and Uncertainty Management Systems, Vol. 6, pp. 339-361 1997
- **23.5.2003** PECS (Physis-Emotion-Cognition)
  - B. Schmidt, “*Die Modellierung menschlichen Verhaltens*”, SCS Publication, 2000, Kapitel 4-6
  - C. Urban, „*PECS: A Reference Model for the Simulation of Multi-Agent Systems*“, in: Suleiman, R., Troitzsch, K. G., Gilbert, G. N. (ed.): *Tools and Techniques for Social Science Simulation*. Physica-Verlag, Heidelberg New York (2000)
  - C. Urban, “*PECS – A Reference Model for Human-Like Agents*”, in: Magnenat-Thalmann, N., Thalmann, D. (eds.): *Deformable Avatars*. Kluwer academic publishers, Boston (2001)
  - C. Urban, B. Schmidt, “*PECS – Agent-Based Modelling of Human Behaviour*”, in: Saam, N. J., Schmidt, B. (eds.): *Cooperative Agents*. Kluwer academic publishers, Boston (2001)

- **30.5.2003 FX-PAL (Embodied Conversational Agents, Rea)**
  - J. Cassell, „*More Than Just Another Pretty Face: Embodied Conversational Interface Agents*“, Communications of the ACM 43(4): 70-78. 2000
  - J. Cassell, T. Bickmore, M. Billinghurst, L. Campbell, K. Chang, H. Vilhjalmsson, H. Yan, “*An Architecture for Embodied Conversational Characters*”, in *Proceedings of the First Workshop on Embodied Conversational Characters*, Tahoe City, California, 1998
  - J. Cassell, T. Bickmore, L. Campbell, K. Chang, H. Vilhjalmsson, H. Yan, “*Embodiment in Conversational Interfaces: Rea*”, in Proceedings of the CHI'99 Conference, pp. 520-527. Pittsburgh, PA, 1999
  - J. Cassell, T. Bickmore, M. Billinghurst, L. Campbell, K. Chang, H. Vilhjalmsson, H. Yan: “*Requirements for an Architecture for Embodied Conversational Characters*”, 10th Eurographics Workshop on Animation and Simulation. September 6-8, Milan, Italy. 1999

## Artificial Life in der Computeranimation

- **6.6.2003 Terzopolous, Tu (Artificial Fishes)**
  - D. Terzopolous, T.F. Rabie: “*Animat Vision: Active Vision in Artificial Animals*”, *Videre: Journal of Computer Vision Research*, 1(1), September, 2-19, 1997
  - X. Tu, D. Terzopolous: “*Perceptual Modeling for Behavioral Animation of Fishes*” 1994
  - X. Tu, Terzopolous : “*Artificial Fishes: Physics, Locomotion, Perception, Behavior*”, *Proc. ACM SIGGRAPH'94 Conference*, Orlando, FL, July, in *Computer Graphics Proceedings*, Annual Conference Series, 1994, 43-50.
- **13.6.2003 Blumberg, ALIVE**
  - P. Maes, T. Darrell, B. M. Blumberg, A. Pentland “*The ALIVE System: Wireless, Full-body Interaction with Autonomous Agents*”, to be published in a *Special Issue on Multimedia and Multisensory Virtual Worlds*, ACM Multimedia Systems, ACM Press, Spring 1996
  - B. M. Blumberg, T. Galyean “*Multi-level Control for Animated Autonomous Agents: Do the Right Thing..., Oh, Not That*” in *Workshop Notes of the 95 AAAI Symposium on Interactive Story Systems*, 1997
  - K.B. Russell, B. M. Blumberg “*Behavior-Friendly Graphics*”, *Computer Graphics International* 1999
  - B. Blumberg “*Multi-level Direction of Autonomous Creatures for Real-Time Virtual Environments*”, *SIGGRAPH* 1995: 47-54
  - B.M. Blumberg, P.M.Todd, P. Maes “*No Bad Dogs: Ethological Lessons for Learning in Hamsterdam*” in *Proceedings of the Fourth International Conference on the Simulation of Adaptive Behavior*, MIT Press/Bradford Books, Cape Cod, MA, September 1996
  - B. M. Blumberg “*Old Tricks, New Dogs: Ethology and Interactive Creatures*” ,1997 *PhD Dissertation*, MIT Media Lab.

## Kognitive Modellierung virtueller Agenten

- **20.6.2003 Funge (Cognitive Models, Mermen)**
  - J. Funge, “*Cognitive Modelling for Computer Games*” 1999, <<http://citeseer.ist.psu.edu/article/funge99cognitive.html>>
  - J. Funge, X. Tu, D. Terzopolous “*Cognitive Modelling; Knowledge, Reasoning and Planning for Intelligent Characters*”, *SIGGRAPH* 99, Los Angeles, CA, August 11-13, 1999
  - L. Zhao “*Cognitive Modelling for Computer Animation: A Comparative Review*”, *Communications of the ACM*, Volume 43 , Issue 7 (July 2000), pp. 40 – 48, 2000
  - J. Funge “*Making Them Behave – Cognitive Models for Computer Animation*” *PhD University of Toronto*, 1998

- **27.6.2003** Soar Training Expert for Virtual Environments (STEVE)
  - J. Rickel, W. Lewis Johnson “*Steve: An Animated Pedagogical Agent for Procedural Training in Virtual Environments*”, *Proceedings of Animated Interface Agents: Making Them Intelligent*, pp. 71-76, 1997
  - W. Lewis Johnson, J. Rickel, R. Stiles, A. Munro “*Integrating Pedagogical Agents into Virtual Environments*” in *Proceedings of the first international conference on Autonomous agents 1997*, pp.30 - 38
  - J. Rickel, W. Lewis Johnson “*Task-Oriented Collaboration with Embodied Agents in Virtual Worlds*” in J. Cassell, J. Sullivan, and S. Prevost (eds.), *Embodied Conversational Agents*, MIT Press, 2000.
  
- **4.7.2003** AI in Computer Games
  - Game AI Resources 2000
  - Laird, Assanie, Bachelor, Benninghoff, Enam, Jones, Kerfoor, Lauver, Magerko, Sheiman, Stokes, Wallace “*A testbed for developing intelligent synthetic characters*” 2001
  - Lent, Laird “*Developing an Artificial Intelligence Engine*”, *Proceedings of the Game Developers Conference*, March 16-18, 1999, San Jose, CA, pp. 577-588
  - Laird, “*Research in Human-level AI using Computer Games*”, *Communications of the ACM* in January 2002
  - Laird “*Using Computer Game to Develop Advanced AI*”, *Computer*, 34 (7), July 2001, pp. 70-75.
  - Laird “*It Knows What You’re Going To Do: Adding Anticipation to a Quakebot*”, in AAAI 2000 Spring Symposium Series: Artificial Intelligence and Interactive Entertainment: AAAI Technical Report SS-00-02
  - Laird, Lent “*Human-level AI’s Killer Application: Interactive Computer Games*”, invited talk at the National Conference on Artificial Intelligence (AAAI) on August 2, 2000 with Michael van Lent 2001
  - Lent, Laird, Buckman, Hartford, Houchard, Steinkraus, Tedrake “*Intelligent Agents in Computer Games*”, *Proceedings of the National Conference on Artificial Intelligence*, July 1999, Orlando, FL, pp. 929-930
  
- **11.7.2003** Bates, Oz, Hap (Broad Agents)
  - A. B. Loyall, J. Bates, “*Hap – A Reactive, Adaptive Architecture for Agents*”, Carnegie Mellon University, Pittsburgh, Pennsylvania Technical Report CMU-CS-91147, June. 1991
  - A. B. Loyall, J. Bates, “*Personality-Rich Believable Agents That Use Language*”, *Proceedings of the first international conference on Autonomous agents*, United States , pp. 106 – 113, 1997
  - A. B. Loyall, J. Bates, “*Real-time Control of Animated Broad Agents*”, In *Proceedings of the Fifteenth Annual Conference of the Cognitive Science Society*, 1993
  - J. Bates, A. B. Loyall, W. S. Reilly, “*Integrating Reactivity, Goals, and Emotion*”, *Proceedings of the Fourteenth Annual Conference of the Cognitive Science Society*, Bloomington, Indiana, July 1992
  - J. Bates, A. B. Loyall, W. S. Reilly, “*An Architecture for Action, Emotion, and Social Behavior*” Lecture Notes In Computer Science, Selected papers from the 4th European Workshop on on Modelling Autonomous Agents in a Multi-Agent World, Artificial Social Systems, pp. 55 – 68, 1992
  - Liwei Zhao, “*Cognitive Modelling for Computer Animation: A Comparative Review*”, Technical Report, MS-CIS-01-02, Computer and Information Department, University of Pennsylvania, 2001
  
- **18.7.2003** Interactive Story Telling
  - M. Cavazza, F. Charles, S.J. Mead “*Interacting with Virtual Characters in Interactive Storytelling*”, *First ACM Joint Conference on Autonomous Agents and MultiAgent Systems*, Bologna, Italy, pp. 318-325, 2002
  - F. Charles, M. Lozano, S.J. Mead, A.F. Bisquerra, M. Cavazza “*Planning Formalisms and Authoring in Interactive Storytelling*”, *1st International Conference on Technologies for Interactive Digital Storytelling and Entertainment*, Darmstadt, Germany, 2003
  - Mazin Assanie “*Directable Synthetic Characters*”, AAAI Spring Symposia, March 25 - 27, at Stanford, 2002

- **25.7.2003** Abschluß Besprechung, Diskussion
  - R. Sun, C. X. Ling “*Computational Cognitive Modeling, the Source of Power, and Other Related Issues*” *Artificial Intelligence Magazine*, pages 113 - 120. Summer 1998 1998
  - Liwei Zhao “*Cognitive Modelling for Computer Animation: A Comparative Review*”, in Technical Report, MS-CIS-01-02, Computer and Information Department, University of Pennsylvania 2001