The IDA Technology

Stan Franklin
and the
‘Conscious’ Software Research Group
Introducing IDA

An intelligent software agent capable of entirely automating human information agents

• Customer Service Agents
• Travel Agents
• Insurance Agents
• Loan Officers
IDA Negotiates

IDA negotiates with clients in natural language—English
IDA Accesses Databases

IDA locates and understands information from databases
IDA Adheres to Policies

IDA understands and adheres to numerous company policies
IDA Makes Decisions

IDA makes sophisticated decisions involving deliberation and constraint satisfaction
IDA Produces a Product

IDA can produce useful products

- *Airline tickets*
- *Loan papers*
- *Insurance policies*
IDA Generates Hypotheses

IDA generates hypotheses about how minds work to guide cognitive scientists and neuroscientists.
IDA’S Modules and Mechanisms

- Perception—Copycat Architecture—Hofstadter
- Action Selection—Behavior Net—Maes
- Episodic Memory—Sparse Distributed Memory—Kanerva
- Emotions—Pandemonium Theory—Jackson
- Metacognition—Fuzzy Classifier Systems—Holland
- Learning—Copycat Architecture, Reinforcement
- Constraint Satisfaction—Linear Functional
- Language Generation—Pandemonium Theory
- Deliberation—Pandemonium Theory
- ‘Consciousness’—Pandemonium Theory
IDA’s Architecture

- Metacognition
- Behavior Net
  - Perception
  - ‘Consciousness’
    - Working Memory
    - Episodic Memory
  - Emotions
    - Expectation & Automation
  - Database Perception
  - Constraint Satisfaction
  - Deliberation
  - Negotiation
  - Problem Solving

FedEx Institute of Technology—The IDA Technology
IDA’s Cognitive Cycle

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IDA’ Technology in Action

Focus

Working memory

Episodic Memory

Job List

Outgoing Message

Behavior net

Behavior net templates

Playing field

Side lines

Broadcast

Stands
Is IDA Conscious?

IDA is functionally ‘conscious’, but what about subjective experience?

Is IDA the world’s first conscious artifact?