A Triage Information Agent (TIA) based on the IDA Technology

Stan Franklin and Dan Jones, M.D.

Computer Science Division &
Institute for Intelligent Systems
The University of Memphis

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Triage in Trouble

- Hospital emergency rooms are busy
- Patients are impatient
- Triage nurses, and physicians, make mistakes
- Patients are harmed
- Malpractice suits ensue

TIA to the Rescue

- Triage nurse rules out an immediately life-threatening situation
- Patient dialogues with TIA
- TIA passes information and recommendations
- Nurse observes, interviews & schedules initial testing
- Convert a 2-step patient to a 1-step patient

From TIA to the Triage Nurse

- Patient demographics, condition, chief complaint
- Differential diagnosis, recommendations for
  - Prioritization
  - Non-physician care (testing)

My Research Directions

- How do minds work?
  - Human minds
  - Animal minds
  - Artificial Minds
- How to make smart software agents?
  - Copy them after humans

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The IDA Project

- IDA finds new jobs for sailors
- Negotiates in colloquial English
- Adheres to Navy policies
- Automates task of a human detailer
- Cutting edge software agent technology
- Employs diverse "new AI" mechanisms
- Models animal and human cognition
- Hypotheses for cognitive scientists and neuroscientists

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The IDA Modules for TIA

- Perception
- Working memory
- Semantic memory
- "Consciousness"
- Action selction

- Language generation
- Deliberation
- Volition
- Diagnosis

IDA suffices for TIA

- TIA can be implemented on the IDA technology
- Much knowledge engineering needed
- Some basic research
  - Differential diagnosis
  - Interfacing with voice recognition

Goals for TIA

- Shorten patient time in the emergency room
  - TIA initiates routine non-physician care actions
  - Converts 2-step patients into 1-step patients
  - Decreases the time a physician spends with patients
- Decrease triage-related errors and malpractice risk
  - Reduce prioritization errors leading to errors of delay
  - Reduce errors of oversight or omission

Issues of Concern

- Will patients willingly interact with TIA?
- Quality of voice recognition software
- Variety of patient's
  - incapacity due to illness/stress
  - intelligence level
  - English fluency
- Knowledge engineering costs

TIA as an idea

- So far, high-level planning only
- One partner   at
  remote location   and
  otherwise occupied
- No intention to seek funding
- Willing to collaborate with
  other interested parties

Email and Web Addresses

- Stan Franklin
  - franklin@memphis.edu
  - www.cs.memphis.edu/~franklin

- "Conscious" Software Research Group
  - www. csrg.memphis.edu/