

*3<sup>rd</sup> Annual Update*

# *Acceleration...*

Jim Rosbe



# Soar Technology

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 **Soar Technology**  
Thinking *inside* the box

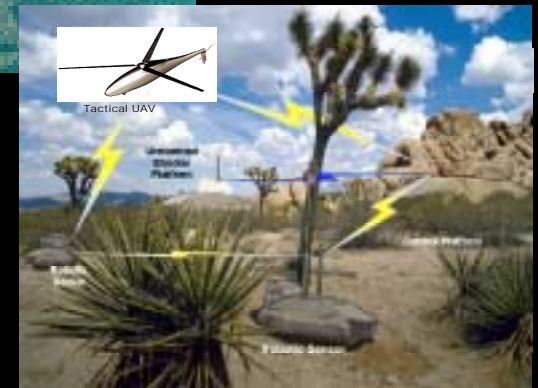
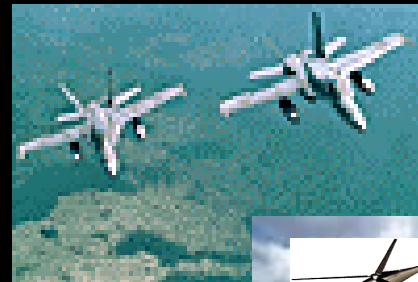
# Continuity...

- Continued TacAir-Soar Support & Development
- Continuing Research Efforts for Army, Navy, Air Force



# ...& new directions...

- Special operations forces modeling
- New training system applications
- Army Future Combat System (FCS) modeling



And....

# ...the Intel Community...

- Adapting commercial game engines
  - + real-world sensor data
  - + libraries of process models
  - + cognitive agents...to build dynamic simulation tools for intelligence analysts
- Research on graphic visualization techniques to convey complex information

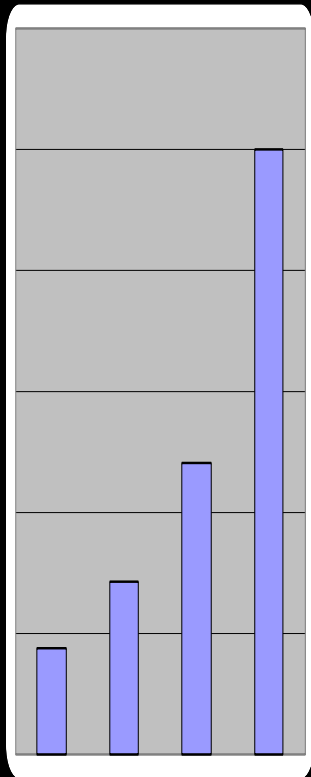


# ...& new prospects

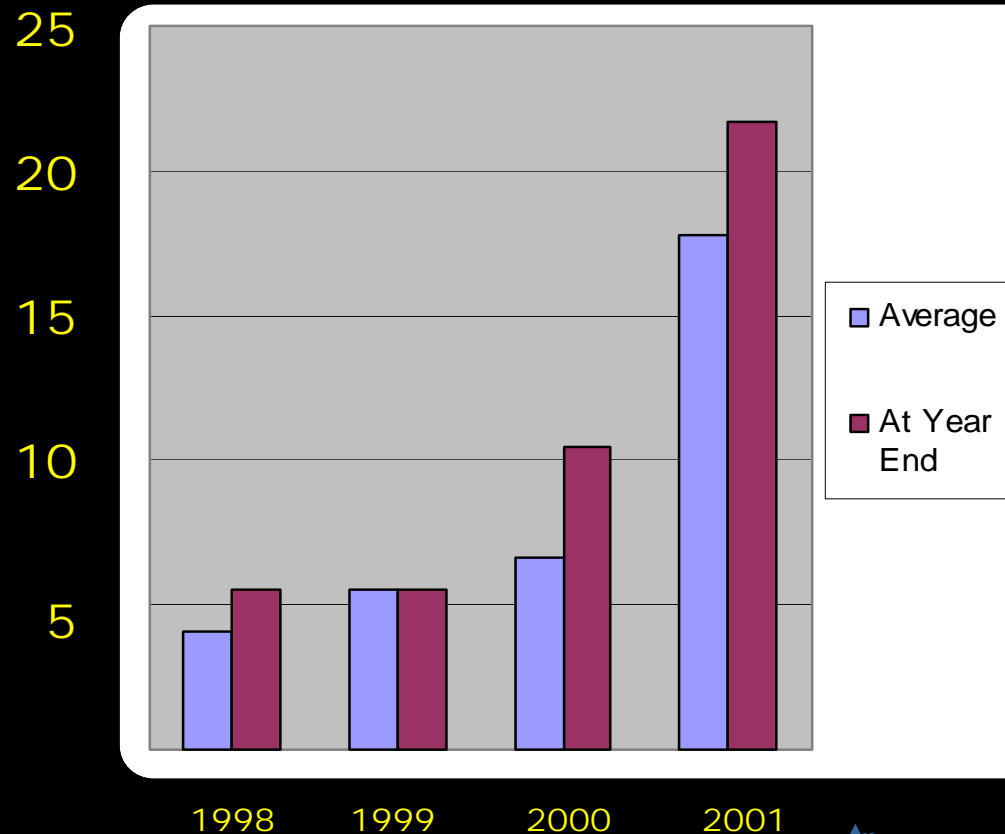
- Robotic forces command and control
- Automated “analyst agent” tools
- Enhanced error-extended GOMS tools
- Multi-agent training & tutorial systems
- Cognitive task analysis & knowledge extraction tools
- New domains
- Games AI

# The impact of this on Soar Technology, Inc.

## Revenue



## Scientific & Engineering Staff



# Since Soar 20, the following new staff:

## Ann Arbor:

Rich Frederiksen, PhD  
Jens Wessling  
Jacob Crossman  
Scott Colcord  
Scott Wood, PhD  
Al Wallace  
Jon Beard

## Orlando:

Amy Henninger, PhD  
Lyle Bloom

## Maryland:

Bob Wray, PhD

# Plus new research subcontracts and internships...

Researchers on subcontract:

Frank Ritter, PhD Penn State U

Eric Chown, PhD Bowdoin College

Ron Chong, PhD George Mason U

2001 Interns:

Laura Carter U Michigan

Brian Cook U Michigan

Jennifer Kiessel U Michigan

Amity Heckemeyer U Michigan

Richard Falk Michigan State U

Co-Sponsorship:

U Michigan 2001 Computer Games

Distinguished Lecture Series



# The Challenge: How to keep up with the opportunities we're presented with?

- *Recruiting*
- *Training*
- *Development tools*
- *Expanding the range of our expertise*
- *Internships*
- *Partnerships & collaborations*

# Mining Report

## Nuggets

- No limit to opportunities and large new markets opening up
- Able to attract highly qualified staff
- Called the "standard by which to judge all other computer generated forces"

## Coal

- Limited size of Soar community
- Lack of documentation
- Limited development tools
- Still too busy to branch out into commercial applications



*To do Soar research!*

**Intelligent autonomous agent design and development**  
**Cognitive task analysis and modeling**  
**Human performance emulation**

**SPONSORING ORGANIZATIONS**

*Air Force Research Laboratory Human Effectiveness Directorate (AFRL/HEA)*  
*Army Research Institute (ARI)*  
*Defense Advanced Projects Research Agency (DARPA)*  
*Naval Air Warfare Center Training Systems Division (NAWCTSD)*  
*Office of Naval Research (ONR)*  
*Joint Forces Command (JFCOM)*  
*USAF ASC/YW Training Systems Product Group*  
*USAF XOC*  
*Naval Warfare Development Center (NWDC)*  
*Modeling and Simulation Information Analysis Center (MSIAC)*  
*National Reconnaissance Office (NRO)*  
*Advanced Research & Development Activity (ARDA)*

**COMMERCIAL PARTNERS**

*Link Simulation and Training • BMH Associates • Veridian Systems • Lockheed Martin*  
*IITRI • BBN Technologies*

**ACADEMIC PARTNERS**

*University of Michigan • Information Sciences Institute USC • Pennsylvania State University*

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