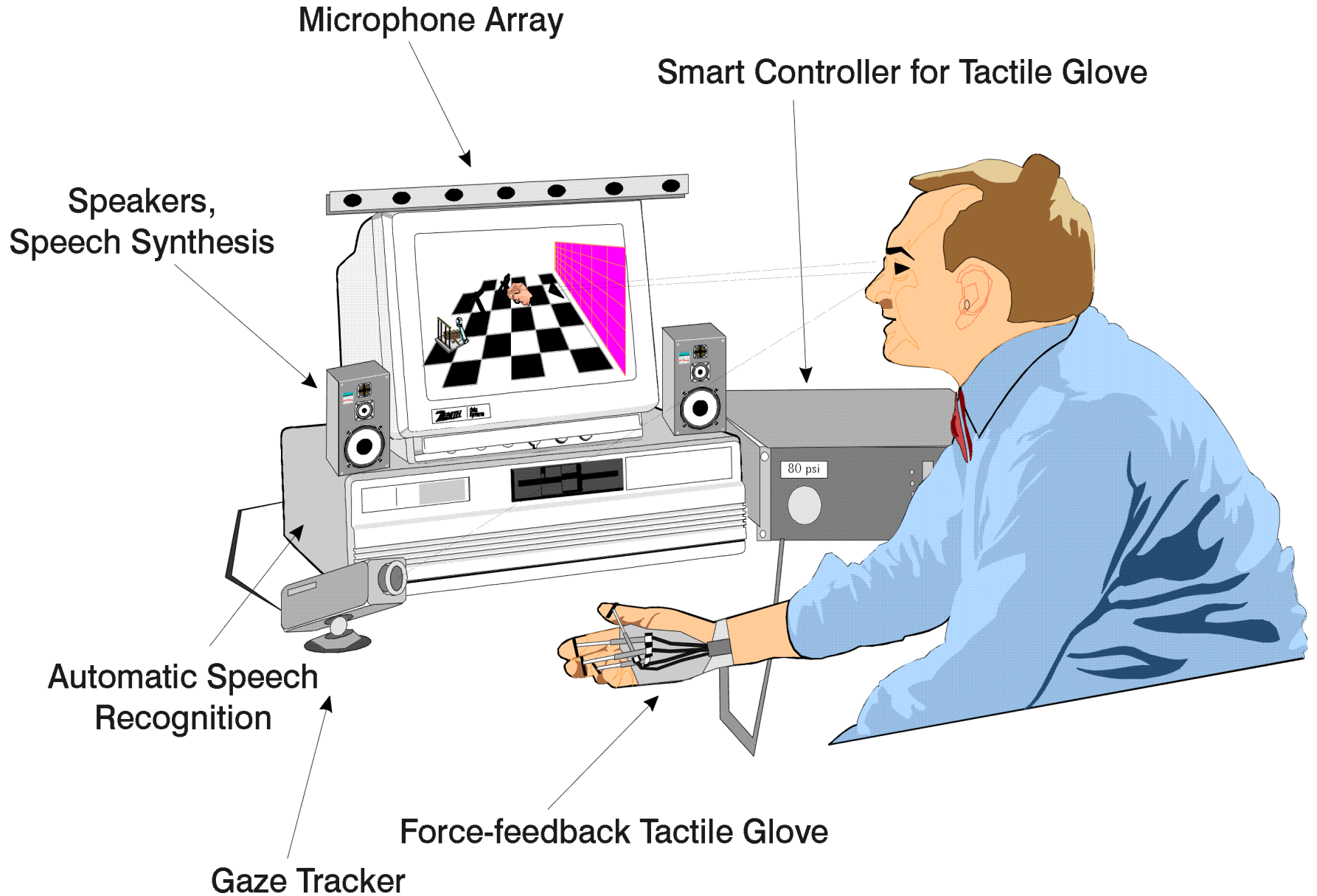# Multimodal User Interface Management

- Part of STIMULATE project at CAIP Center, Rutgers University

- PI: Dr. James L. Flanagan

- Research on natural human-computer interfaces for multimedia information systems

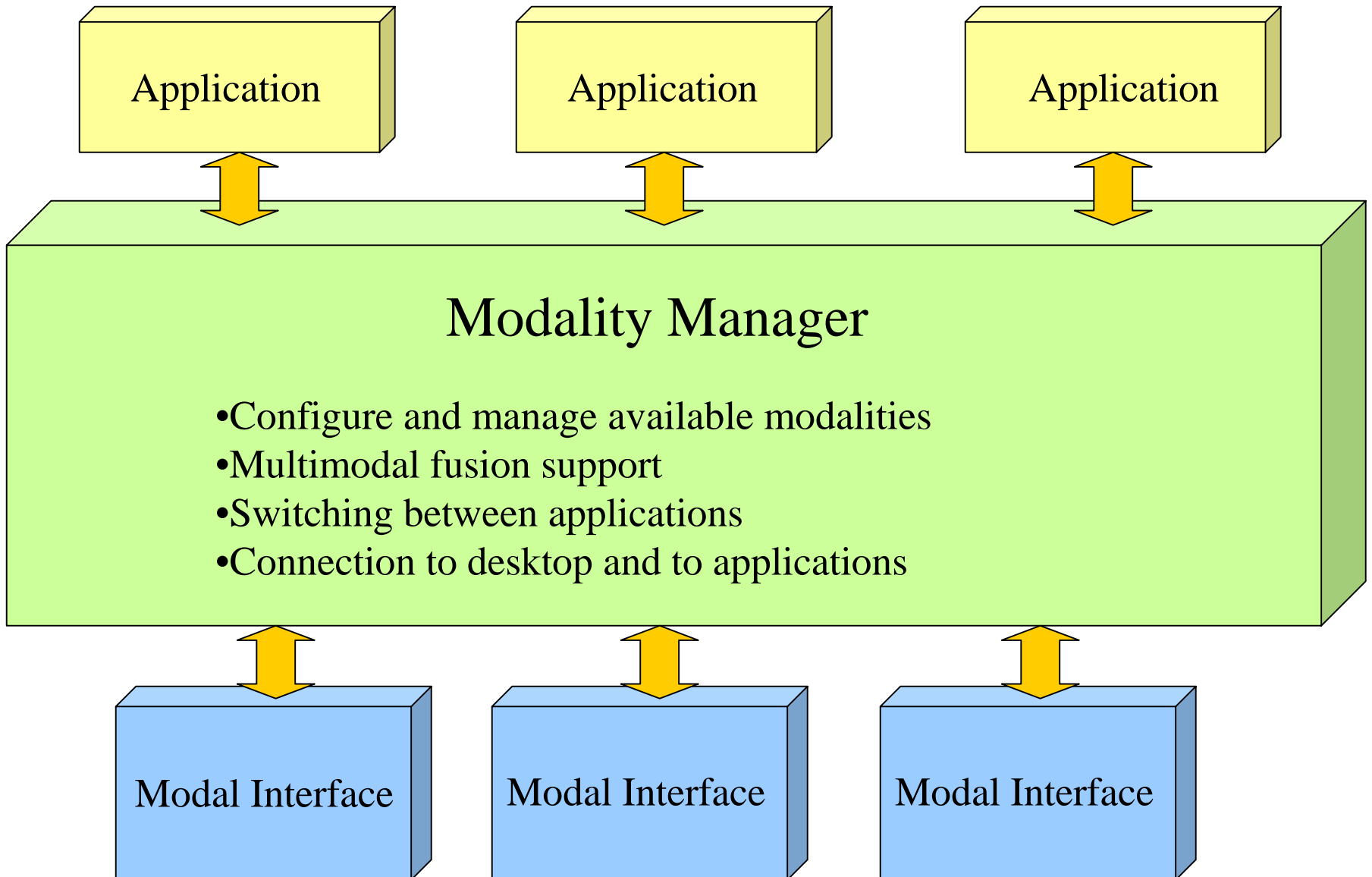- Goal: establish, quantify and evaluate techniques for natural communication

Multimodal Workstation Concept

Problems with the Multimodal Workstation

- *Communication with several different devices*
- Interpretation of input
- Presentation of output
- *Message routing and delivery*
- *Fusion of inputs from different devices*
- *Handling ambiguous and conflicting input*
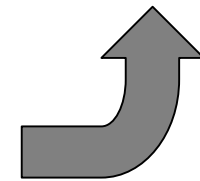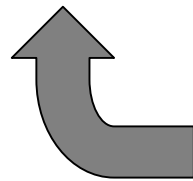- Understanding

Modality Management

Application   Application   Application

Modality Manager

- Configure and manage available modalities
- Multimodal fusion support
- Switching between applications
- Connection to desktop and to applications

Modal Interface   Modal Interface   Modal Interface

Platform Independence

Wired Multimodal Workstation

Wireless Wearable Computer

DISCIPLE Network Vehicle

Applications

- Leukemia Diagnosis Support System
- Whiteboard
- 2D and 3D Mission Planning