Iolaus: A Robotic Partner

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Purpose

Design a robotic information partner whom the user can ask for information very much as if it were a real person. Iolaus is designed as a companion and acceptable partner that will behave in a socially unobtrusive manner.
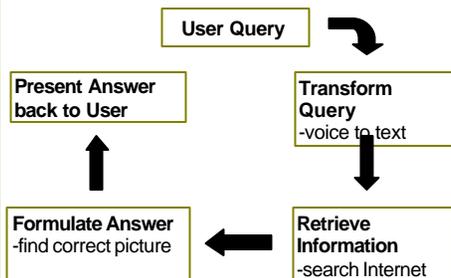
Design Goals

The intent is to make Iolaus available to the user at any time. Iolaus should stay with the user to retrieve information as required.

The design and the placement of Iolaus must fit the social norms of the user's environment.

Iolaus will be perched on the user's shoulder like a parrot. Users can interact very discretely with Iolaus as it is close to the user's ear.

Interaction Flow

User Query → Transform Query -voice to text → Retrieve Information -search Internet → Formulate Answer -find correct picture → Present Answer back to User

Iolaus Components

Query Collection: Verbal queries

Data Retrieval: Dynamically retrieve data from information sources. Gather physical information using vision.

Analysis: Determine correct answer

Response: Verbal communication with subtle physical movements (i.e. head pointing).

Experimental Implementation

Prototype: Sony Aibo ERS-7M2 robot dog.

Goal: Aibo is to correctly identify and locate a person in a room. The room physically contains the person with other false choices .

Task: Aibo receives verbal query from the user, translates it into text form, autonomously performs a search on the Internet for the information, determines the correct match and responds back to the user.

Iolaus perched on the user's shoulder.