Current computing systems do not support human work effectively. They restrict human computer interaction to one mode at a time and are designed with an assumption that use will be by individuals (rather than groups), directing (rather than interacting with) the system. To support the ways in which humans work and interact, a new paradigm for computing is required that is multimodal, rather than unimodal, collaborative, rather than personal, and dialogue-enabled, rather than unidirectional. DAVE_G project addresses these issues in the context of Geographic Information Systems (GIS) use. The project is concerned with the use of computer vision and speech processing as a means of interpreting and integrating information from three modalities, spoken words, free hand gestures and gaze. It is also concerned with how to enable a human-computer dialogue with an interactive, multi-layered map in the context of a GIS and with map-mediated dialogue between human collaborators. A long-term goal is to support time-critical applications (such as emergency response) where geospatial information is essential.

**DAVE_G Features**

- Supporting natural multimodal conversations with maps.
- Understanding vague spatial concepts (e.g., near)
- Mixed-initiative interaction and proactive visual workspace.
- Disambiguation of multimodal input.
- Human-centered and usability engineering based iterative design
- Distributed architecture.

**Feature publications**