PAPER	DESCRIPTION			INPUT				OUTPUT	
Authors	**Goal**	**Metaphor**	**Topic**	**Speech**	**Gesture**	**Gaze**	**Hardware**	**Visual**	**Auditory**
Bolt & Herranz 1992	Manipulation of 3-D graphics	One-way multi-modal	Graphics manipulation	Discrete word recognition	Iconic	Deictic	Gloves, headmic, head eye-tracker	3-D graphic objects	No
Koons et al. 1994	Arranging 2-D icons	Multi-modal dialogue	Firefighting/ 2-D map	Discrete word recognition	Deictic	Deictic	Gloves, headmic, head eye-tracker	2-D map with icons	Synthesized speech
Neal & Shapiro 1991	Information access	Multi-modal dialogue	Military activities	Discrete word recog. Typed NL	Decitic	No	Mouse, keyboard, microphone	2-D map w/icons, deictic refs., text	Synthesized speech
Sparrel & Koons 1993	Arranging 3-D, graphical objects	One-way multi-modal	Furniture in a virtual room	Continuous recognition	Iconic	No	Datagloves, headmic	3-D graphic objects	No
Starker & Bolt 1990	Interest-responsive storytelling	User as observer, comp. as storyteller	Little Prince's planet	No	No	Deictic, attention	Table-mounted eye-tracker	3-D graphical world	Synthesized speech
Maes et al. 1994	Playful interaction in virtual worlds	Non-verbal interaction	Dogs, creatures and critters	No	Symbolic, full body	No	Cameras	3-D graphics	No
Chin 1991	Help for line-command systems	Computer as tutor, user as student	UNIX commands	Typed NL	No	No	Keyboard	Typed NL	No
Jacobs 1990	Object selection	Augmented direct manipulation	Boats on a 2-D map	No	No	Deictic	Keyboard	2-D map with icons	No

Table 1. Comparison of recent systems that have employed gaze, gesture and speech/NL at the computer interface.