

Resolving Object References in Multimodal Dialogues for Immersive Virtual Environments

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Figure 1. Analyzing references during a connection task. Following the pictures clockwise beginning left the simple utterance “Take [pointing] this red part here and connect it to the [pointing] left front chassis.” contains already two gesture accompanied definite noun phrases with different referential ambiguity and propositional value.

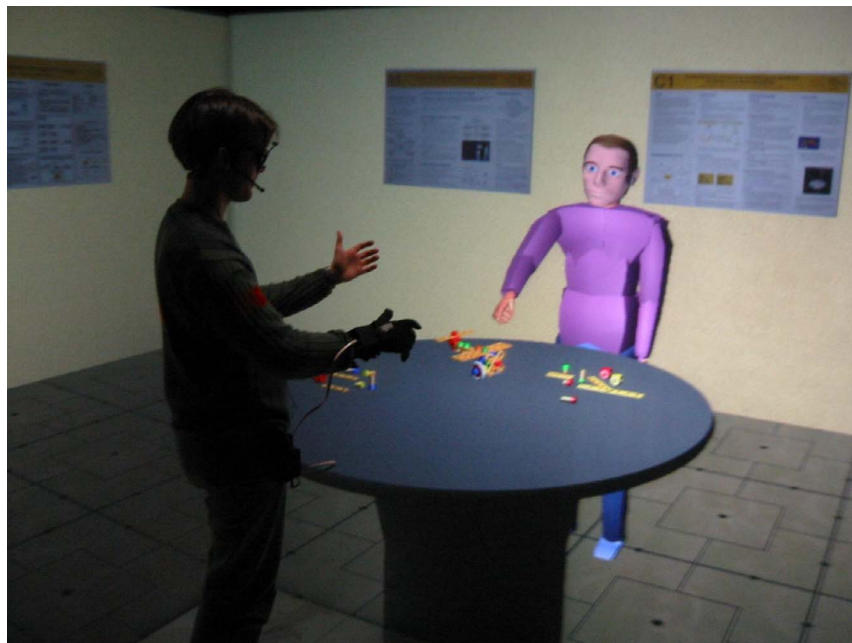


Figure 2. The user is instructing the embodied conversational agent (ECA) Max to build a plane out of generic building blocks laying on the table. The scene illustrates how references are resolved with respect to three different frames of reference: egocentric (user), extrinsic (Max) and intrinsic (plane).