

Spoken Dialogue Systems for Space and Lunar Exploration

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Abstract—Building spoken dialogue systems for space applications requires systems which are flexible, portable to new applications, robust to noise and able to discriminate between speech intended for the system and conversations with other astronauts and systems. Our systems are built to be flexible by using general typed unification grammars for

the language models which can be specialized using example data. These are designed so that most sensible ways of expressing a request are correctly recognized semantically. The language models are tuned with extensive user feedback and data if available. Open microphone speech recognition is important to hands free, always available operation.