Studies of Emotional Expressions in Oral Dialogues: towards an Extension of Universal Networking Language

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Abstract. Emotions entail distinctive ways of perceiving and assessing situations, processing information, and prioritizing and modulating actions [24]. The paper aims to study theoretical and pragmatic aspects of emotions and to propose a semantic representation of emotions for oral dialogues, based on an analysis of real-life conversations, telephone messages and recorded TV programmes, focusing on a relationship between prosody and lexeme for the purposes of a speech to speech machine translation. The semantic representation is made, by using the **U**niversal **N**etworking **L**anguage (UNL) formalism, in a way where lexeme, phatics, gestures, prosody and voice tone are taken into account at the same time.

1 Introduction

This work has been carried out in a continuation of "VoiceUNL" [21], which is one of subprojects of the "LingTour" [1] project. "VoiceUNL" is an extension of **U**niversal **N**etworking **L**anguage (UNL), which is a text-oriented formalism of semantic graphs,, to oral dialogues.

As for **s**peech to **s**peech **m**achine **t**ranslations (SSMT) or man-machine interactive systems, the detection and generation of emotions are an important issue from the viewpoint of the naturalness of dialogues [7], because *emotion entails distinctive ways of perceiving and assessing situations, processing information, and prioritizing and modulating actions* [24]. It's the key reason for proposing a semantic representation of emotions.

In this paper, section 2 is devoted to previous emotion studies mainly focussed on prosody: a survey of existing approaches to emotion detection and generation, theo-

[1] The Lingtour project was launched in 2002 by the partnership which consists of TsingHua University (China), Paris 8 University (France), INT (France), ENST-Paris and Bretagne (France), and CLIPS (France). One of the objectives of the projects resides in R & D to enable multilingual-multimedia MT on user-friendly tools [1].

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