Pleopatra: A Semi-Automatic Status-Posting Prototype For Future In-Car Use

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ABSTRACT

Texting while driving is dangerous and illegal in most countries. Since bans are likely to be ineffective due to various reasons, we argue that in-car texting should be made less distracting and dangerous. We propose a semi-automatic status-posting system and present a prototype based on a Pleo. The aim of this paper is to foster discussion on texting while driving and to offer a solution for one specific communication goal, namely staying connected to a social network.

1. INTRODUCTION

Ubiquity and convenience being major driving factors, the spread of mobile internet-connected devices has grown significantly over the last few years [4]. In a study by [3], almost all participants confessed that they had used their devices while driving. [3] conclude that bans enacted against texting while driving are not effective.

2. THE PLEOPATRA APPROACH

Reasons for ignoring bans on texting while driving vary, and include both business and social forces. Our focus in this paper is on the need for a "connected presence" [2] on an online social network. As an example, we pick *Twitter*, a social platform for short text messages, where users post their current status in a message (so called *tweet*) up to 140 characters long. The driving context and the nature of the communicative goal lead to a limited amount of likely messages, which are usually diary-like. A typical status might be "We are already so close to Paris, but now we hit a traffic jam!" (see Figure 1). We believe that such a message could as well be generated using a set of message templates and current status information of the car, e.g. GPS position, current speed, and available traffic jam warnings. Due to its nature and complexity, a car on the street is not a very suitable environment for fast prototyping.

In order to evaluate the concept on a smaller scale, we developed a prototype on a Pleo toy dinosaur. A Pleo is a rather sophisticated device–sometimes also referred to as artifical
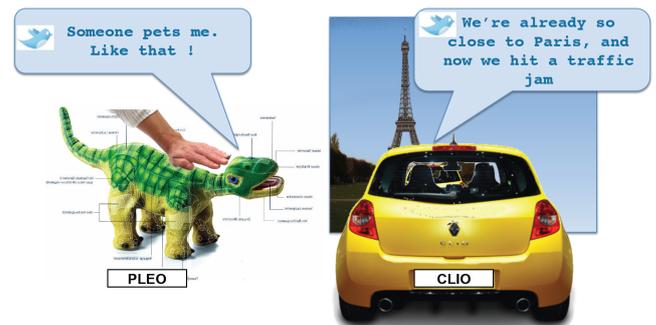

Figure 1: Twittering dinosaur and twittering car

lifeform–equipped with a multitude of sensors.

We argue that a toy robot sensing his environment is comparable to a sensor-equipped car when it comes to automatic status message generation.

The Pleo has a serial interface which we connect to a computer in order to communicate with him. The sensor data are constantly monitored and anything extraordinary (such as sudden darkness, very loud noise, very high or low temperature, detection of something green which is considered food for Pleo) triggers an event. Depending on the type of event, a pre-formulated message is picked and refined with actual sensor values, e.g. "35 centigrades? It is very hot in here!". These messages are then twittered via an automated Twitter interface (jTwitter). [1]

This is of course just a part of the solution - only one of the many communication goals leading to in-car texting can be solved that way. The solution presented here aims at proving a "connected presence" or "background presence" for power users of social networks, since the selection of pre-formulated messages is surely less distracting than formultaing a message.

Other communication goals need to be looked at and analyzed separately.

3. REFERENCES

[1] JTwitter - the Java library for the Twitter API. http://www.winterwell.com/software/jtwitter.php, 2008.

[2] A. N. Joinson. Looking at, looking up or keeping up with people?: motives and use of facebook. In *CHI '08: Proceeding of the twenty-sixth annual SIGCHI conference on Human factors in computing systems*, pages 1027–1036, New York, NY, USA, 2008. ACM.

[3] C. A. Middleton and W. L. Cukier. Is mobile email functional or dysfunctional? Two perspectives on mobile email usage. *EJIS*, 15(3):252–260, 2006.

[4] O. Turel and A. Serenko. Is mobile email addiction overlooked? *Commun. ACM*, 53(5):41–43, 2010. chi2011.