SkAT-VG - Press release – november, 7 2014

English

Uttering the sounds of future products

A European research boost to sound design

Pleasant, yet functional. The fusion of these two adjectives describes most of the work of designers, in any domain. In the aural domain, designers aim at giving a pleasant and functional `voice´ to the objects that will populate future soundscapes. Improved safety, health, and quality of life are the possible benefits for society at large.

Early in 2014, a new European project called *Sketching Audio Technologies using Vocalizations and Gestures* (SkAT-VG, 2.4M€) started to look for ways to make this process easier and more effective. The idea is to exploit the most natural of sound design tools: human voice and gestures.

Try imitating with your own voice the sound of a motorbike, an animal, the wind in the trees! Chances are that you are pretty good at it, especially with a little practice. Everyone will recognize your imitations. It is fun, just try it! Humans have surprising capabilities in communicating sound, especially in interactive contexts, but a thorough understanding of how this happens and how these capabilities could be exploited requires an ambitious research plan. In the project, the Iuav University of Venice, coordinator of SkAT-VG under the leadership of Professor Davide Rocchesso, develops design methods and tools based on vocal and gestural sketching. The French company Genesis provides an industrial framework and application contexts. As an example, Genesis and Iuav are experimenting with the design of vehicle sounds, a hot topic in view of new European regulations on noise emissions of motor vehicles. For the first time a “minimum noise” is considered for electric and hybrid vehicles, in terms of both pedestrian safety and product experience.

In SkAT-VG, the possibilities and limitations of the human voice as a sound sketching apparatus are charted by partner KTH in Stockholm, where thousands of utterances are being collected, annotated, and classified in relation to the physical phenomena they are supposed to mimic. This work is being done together with the Ircam institute in Paris, where three research teams are involved in studying the features (Sound Analysis-Synthesis), understanding the human response (Perception and Sound Design), and exploiting the non-acoustic component (Sound Music Movement Interaction) of imitative or evocative vocalizations.

The four institutional partners of SkAT-VG are also interacting with professional and academic stakeholders to define the scope of sound design in future interactive contexts. In the near future, designers might sketch novel responsive sounds, for a car or for a coffee maker, by using the whole expressive potential of their voice and body.

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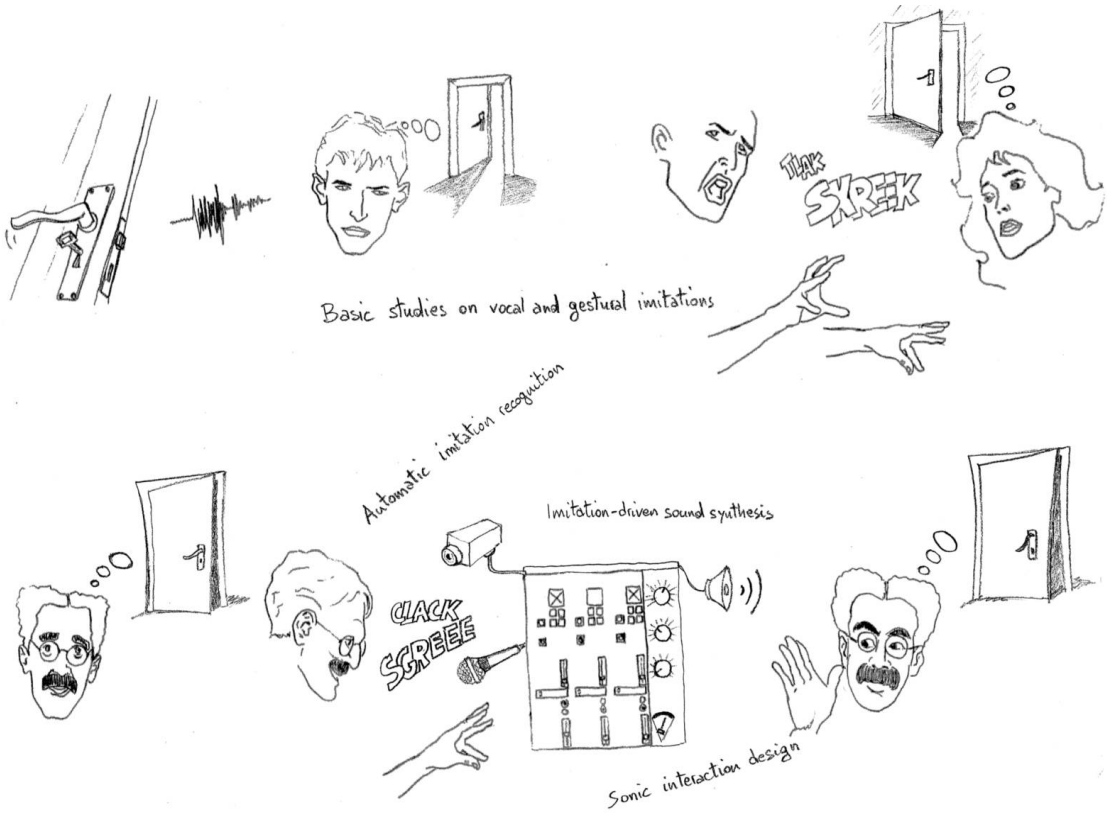

Sketch of the stages in the SkAT-VG project: one hears a sound and recognizes it; one imitates the sound and someone else understands what is imitated; one wants to create a better sound and enlists the computer, which uses the imitation as a starting point to suggest new variations.

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