

"Wanted - spaceship engine noise" Intelligent sound database developed

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St. Poelten, AUSTRIA 26 May 2008 – From 30 May 2008, media producers will be able to access an efficient and easy-to-use new technology that will help them track down the sound effects they need. After two and a half years of development work, the AllThatSounds (ATS) intelligent database for sounds and noises is going online at allthatsounds.net. The database has been designed and developed by a research team at St. Pölten University of Applied Sciences with support from the FHplus programme run by the Austrian Research Promotion Agency (FFG).

The aim of the AllThatSounds research project was to make it easier for media companies to track down the sounds they need. Currently, conventional sound libraries only allow users to search for sound effects by entering a simple description of how the desired sound is produced, for example “shutting the door of an X brand car”. The research team at St. Poelten University developed an efficient method of categorisation that ensures sound effects are accurately described when entered in the database. However, users can also define sounds in a variety of different ways, for example according to their impact. This “associative semantic indexing” of audio data is an entirely new development and also allows users to search by intended use.

AN INTELLIGENT DATABASE THAT THINKS OUTSIDE THE BOX.

ATS technology offers major advantages for the process of sound design, whereby noises are often replicated using other means – as is the case with the ubiquitous thunder board. Professor Hannes Raffaseder, Head of the Institute for Media Production at St. Poelten University and Project Manager for ATS explains: “Besides its sophisticated system of categorisation, AllThatSounds also automatically searches the database for similar sound effects and samples, regardless of whether or not they have been described with the relevant key words. In an action movie, for example, the sound of liquid metal was replicated with a combination of sizzling fat and bubbling yoghurt. The ATS database would automatically suggest this type of solution. The same applies to the production of artificial sound, such as the noise made by the drive system of a spaceship. If a sound designer wants to base the sound effect on the buzzing of a lawn mower, ATS also suggests other noises that are similar to that of a mower. As a result, the sound designer will be able to achieve precisely the result he wants much faster”. The technology is based on complex signal theory algorithms known as mel-frequency cepstral coefficients (MFCC), which identify similar sounding noises by analysing and sorting all the sounds in the database in the background.

AllThatSounds is aimed at all media creatives who work on computer games, advertisements, films, radio programmes, etc. The first version of ATS already offers over 2,500 sounds for download, and users can perform searches in English or German. Professor Raffaseder on the new database: “We would like to invite all sound designers, composers and sound artists to upload their sounds onto AllThatSounds and define the noises that are already online in terms of their effect and function. The database has been designed to become more efficient and sophisticated as it is used more.”

TECHNOLOGY WITH MARKET POTENTIAL

The research team at St. Pölten University is already working on a stand-alone version of ATS that will allow large production companies to use the categorisation and similarity analysis technology for their existing sound libraries.

ABOUT ALLTHATSOUNDS

AllThatSounds was developed at St. Poelten University of Applied Sciences in close cooperation with Vienna-based company Audite, which specialises in the design and implementation of audio products and systems, and with support from the FHplus programme run by the FFG. Communications company Team Teichenberg and Vorarlberg University of Applied Sciences also contributed to the project.

Professor Hannes Raffaseder
Institute for Media Production, St. Poelten University of Applied Sciences
Matthias Corvinus-Strasse 15, A-3100 St. Poelten, Austria
Phone: +43 (0)2743 / 313 228 – 616
E-Mail: hannes.raffaseder@fhstp.ac.at

PR&D - Public Relations for Research & Education
Petra Andrea Rotheneder
Phone: +43 / 1 / 505 70 44
E-Mail: rotheneder@prd.at

St. Poelten University of Applied Sciences, Austria, was founded in 1996 and currently offers 11 different courses at its new campus at 15 Matthias Corvinus-Strasse. At present, 1,400 students are enrolled at the university, which offers degree courses in the three main areas of health and social sciences, business and technology. All the courses are based on the Bologna bachelor's/master's model. Practical research is also a key area of activity at St. Poelten University.

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