

ECOSONICO: Augmenting Sound and Defining Soundscapes in a Local Interactive Space.

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Abstract: In this paper we present a design of an augmented reality system developed for sound-art installation called ECOSONICO, the sound of biodiversity in Mexico (EcoSónico La biodiversidad sonora en México), project sponsored by The National Phonoteca of México and the Department of Environment and Natural Resources of México (SEMARNAT) .

The propose of the installation was to create a user individual sound experience in a shared space with other participants through the selection of several surroundings soundscapes contained in a mobile device (Ipod Touch) that allows the user to navigate in an augmented sound reality. This was achieved by detecting the user position and orientation using a fiducial tracking system (Reactivision)¹, that reports his position to the mobile device associated to the fiducial tracking, where an algorithm of binaural spatialization of virtual sound objects permits the user identify and navigate into the soundscape.

Finally we present future ideas to interact with the system On Line in the definition of the soundscapes, also present ideas of how to enrich the binaural algorithm through the implementation digital signal time processing.

Keywords: Augmented Reality, Soundscape, Interactive space.

¹ Bencina, R., Kaltenbrunner, M., Jorda, S./ 2005/ **Improved Topological Fiducial Tracking in the reacTIVision System**/ Music Technology Group, Audiovisual Institute Universitat Pompeu Fabra, Barcelona, Spain/ {rbencina,mkaltens,jorda}@iua.upf.es/ http://modin.yuri.at/publications/reactivision_procams2005.pdf