Günter Geiger

Günter Geiger è ricercatore presso l'MTG (Music Technology Group) dell'Università P. Fabra (UPF) di Barcellona, Spagna.

Si è laureato nel 1997 al Politecnico di Graz, Austria.

I suoi principali interessi di ricerca vertono su sistemi interattivi e software per la computer music su portable devices. Attualmente sta scrivendo una tesi di dottorato sui sistemi della computer music presso l'UPF. Fin dall'inizio è stato coinvolto nello sviluppo di Pure Data (PD), un linguaggio visuale per l'elaborazione e la sintesi del suono in tempo reale.

Ha lavorato come project leader nel progetto europeo AGNULA dedicato al free software per la musica ed è stato il principale sviluppatore in numerose installazioni sonore per musei e spazi pubblici.
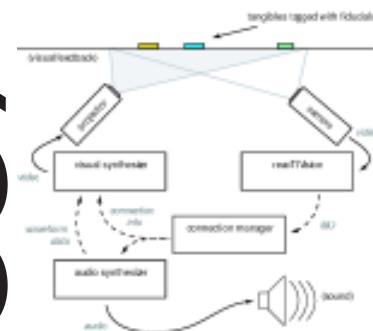
È membro del team della reacTable.

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Elettrosensi 2007

Conservatorio di Musica di Como

Istituto di Alta Formazione Musicale

la reacTable

«uno strumento elettronico multiesecutore con interfaccia tattile di tipo tabletop»

seminario, dimostrazione e laboratorio con

Günter Geiger

*del'MTG (Music Technology Group)
dell'Università P. Fabra (UPF) di Barcellona*

Giovedì 25 maggio 2007
9.30-12.30 *Introduzione*
13.45-15.45 *sessione pratica*

*coordinatori:
Prof. Giovanni Cospito e Prof. Pietro Polotti
«Musica Elettronica e Tecnologie del Suono»
del Conservatorio di Musica di Como*

Ingresso Libero
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reacTable¹

"Music controllers or new interfaces for musical expression (NIME) are experimenting an increasing attention from researchers and electronic luthiers. In parallel to this research bloom, the laptop is progressively reaching the point of feeling as much at home on stage as a saxophone or an electric guitar. However, the contemporary musical scene does not clearly reflect this potential convergence, and most laptop performers seem hesitant to switch towards the use of new hardware controllers, as if laptop performance and the exploration of post-digital sound spaces was a dialog conducted with mice, sliders, buttons and the metaphors of business computing.
…
Even if Graphical User Interfaces (GUI) conception and design may be central in most HCI related areas, not many new music instruments profit from the display capabilities of digital computers…Visual feedback potentially constitutes a significant asset for allowing this type of instruments to dynamically 'communicate' the states and the behaviors of their musical processes; it is the screen and not the mouse what laptop performers do not want to miss, and it is in this context where tabletop tangible interfaces may have a lot to bring.
…
In traditional instrumental playing, every nuance, every small control variation or modulation (e.g. a vibrato or a tremolo) has to be addressed physically by the performer. In digital instruments,… the musician performs control strategies instead of performing data, … allowing musicians to work at different musical levels and forcing them to take higher level and more compositional decisions on-the-fly.
…
Tangible User Interfaces (TUIs) combine control and representation within a physical artifact. In table based tangible interfaces, digital information becomes graspable with the direct manipulation of simple objects which are available on a table surface. Combining augmented reality techniques that allow the tracking of control objects on the table surface, with visualization techniques that convert the table into a flat screening surface, a system of these characteristics favors multi-parametric and shared control, interaction and exploration and even multi-user collaboration. Moreover, the seamless integration of visual feedback and physical control, which eliminates the indirection component present in a conventional screen + pointer system, allows a more natural, intuitive and rich interaction.
…
The reacTable consists of a translucent luminous round table –a surface with no head position or leading voice and with no privileged points-of-view or points-of-control - in which physical artifacts or pucks can be moved and rotated. Each puck represents a synthesizer module with a dedicated function for the generation, modification or control of sound. Six functional groups exist each one associated with a different puck shape (audio generators, audio filters, controllers, control filters, mixers and global functions).

Connections and disconnections between modules are not explicitly indicated by the performer, but automatically managed by means of a simple set of rules according to the objects' types, and their affinities and proximities with their neighbors. By moving pucks and bringing them into proximity with each other, performers on the reacTable construct and play the instrument at the same time"

In order to control a system of such complexity, with potentially dozens of continuous and discrete parameters, visual feedback becomes an essential component of the reacTable's interface…All shapes, forms, lines or animations drawn by the visual synthesizer bring relevant information, and all the relevant information of the system is permanently displayed.

The reacTable, was designed with both casual users as well as professionals performers in mind, and it seeks to combine an immediate and intuitive access in a relaxed and immersive way, with the flexibility and the power of digital sound design algorithms and endless improvement possibilities and mastership."

¹ *Tratto da: S. Jordà, G. Geiger, M. Kaltenbrunner and M. Alonso, "The reacTable", in Sound to Sense, Sense to Sound. A State of the Art in Sound and Music Computing, Ed. D. Rocchesso e P. Polotti, Logos Verlag, Berlin (in stampa)*

Programma

25 maggio 2007

9.30 - 12.30   Introduzione

Overview sulle interfacce tangibili
Paradigmi dell'interazione, applicazioni al caso delle tavole
Struttura del software della reacTable
Introduzione al software reacTIVision e suo utilizzo
Usare PureData con reacTIVision

13.45 - 15.45   Sessione pratica

La reacTable: lo strumento, concetti e funzionalità
Problemi pratici: Calibrazione e gestione delle distorsioni
Implementazione di una applicazione Demo sulla reacTable