

ICMC07 - Proposal for concert:

Ivar Frounberg,: *Waves and Velocities...* new version 2007 dur.: 10'

for quartertonemarimba and interactive electronic's
soloist: Kjell Tore Innervik

The solo-marimba-piece *Waves and Velocirties* is already a second generation derived from the *Quartertonemarimbaetude* written for the percussionist Kjell Tore Innervik in 2004.

For the new version (third generation) the score has been cut into 10 sections allowing a certain amount of improvisation between each section, and allowing an interactive relation between the performer and a sound-processing computer.

The computerprogramme is realized in Max/MSP/Jitter. Main features of the final programme amond others: gesture capturing via Jitter (and Jamoma objects).

The programme will investigate the feasibility of a new paradigm for structured programming in Max/MSP/Jitter. The paradigm will try to adhere to the standards set by the Open Sound Control (OSC), the INTEGRA-project and the Jamoma-project. The paradigm introduces structuring the programme in four distinct – and replaceable - modules: the input module, the mapping module, the generating/modifying module and the output module.

The input-module

The task of the input-module is to unify the diverse raw data-streams from the outside world and make them avaiable for the mapping-module in a standardized way. There are three steps in this module: optimization, analysis and scaling. We will call the outcome of the analysis proces 'parameters' as opposed to 'data-stream'.

Every input data stream must be *optimized*. Optimization mean to make a proper presentation of the inputdata-stream – removing unwanted artifacts and scaling the data to a unified size.

Next step is to *analyze* the input streams in order to create new datastreams that is representing a derived understanding of the data meassured by possible diverse interfaces in the outside world. This step is dependent on a understanding of what the incoming data streams 'means' f.ex. in a musically sense (f.ex. vibrato, dynamics, finger position etc.).

The last step will scale all the parameters to proper standards, to allow the parameters to be mapped freely to all (or most of all) of the generating and modifying modules.

The mapping-module

The mapping module consists of two submodules: a performer module and the mapping itself. The role of the performer module is to control dynamic mappings. Dynamic mapping can be either in form of a predefined sequence or as a random access. The mapping will direct a selection of the parameters from the input module toward parameters for generation (or modification).

The generating/modifying module.

This is the part of the programme which will be specific to the musical work. All processing of incoming signals/data/parameters will be done in this module. Result of the processing will be directed towards the output module.

The output module

The specific outer world hardware etc. will be represented in a general form adhering to f.ex. the INTEGRA-protocol. The task of the output module is to interpret this general representation into the specific datastreams needed by all external devices involved in the specific performance.

A CASE STUDY

It is expected that this planned implementation of the software of the latest version of *Waves and Velocities* will provide a deepened knowledge about the problems involved when structuring programmes while –as a composer - being in the often unstructured and chaotic state of composing. But the benefits from a structured programming style are big: shorter time spent developing new pieces of music, greater portability, and better understanding by the users are just a few important issues.

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BIOGRAPHY

IVAR FROUNBERG -born in 1950- has composed orchestral pieces like *What did the Sirenes sing as Ulysses sailed by?* (1987-89), numerous pieces for major chamberensembles and sinfoniettas from *Drei-Klang* (1982) to *Voyelles* (1999); as well as pieces in which interactive computerperformance play an important role f.ex. *Time and the Bell* (1990; performed at the ISCM Music Days in Zurich 1991 and ICMC in Banff, Canada 1995). One of his most performed pieces is *Embryo* (1985) which has been performed at several major festivals like Peiling-festivallen 1988 in Stockholm and ISCM Music Days in Cologne 1988.

During the 1990's a consequent musical concentration is found, culminating in *...to arrive where we started* (1993, performed by ensemble die Reihe at Wien Modern 1998). In this piece the musical matherial is varied at the microlevel with repetitions calling not on meditation rather on a sharpened attention from the listeners.

IVAR FROUNBERG was assistant professor in electro-acoustic music and computermusic at [The Royal Danish Academy of Music](#) in Copenhagen. Until 1994 he has been active in music politics as a board member of [KODA](#) (the performing rights society) and the Danish Composers' Society. In 1994 Ivar Frounberg was music coordinator at the [ICMC, Aarhus](#) in Århus and in 1996 he was president for the planning committee of the World Music Days 96. In 1995 he recieved the prestigious Prize in Honour of the Composer Carl Nielsen. From 1998 to 2000 he was chairman for the Danish Institute for Electro-acoustic music (DIEM) and he was member of the Danish State Art Council for the period 1999-2001. He is currently senior professor in composition at Norges Musikkhøgskole in Oslo, Norway.