Introduction to the Workshop on Music Technology and Audio Processing

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This is the first ever Euromicro workshop on Music technology and Audio Processing and it is particularly pleasing to have it associated with the 25th anniversary of Euromicro itself. The addition to the proceedings of an audio compact disk (CD) is of special note, since this has enabled some of the fruits of work in the area to be disseminated. This will enable delegates to appreciate some of the variety of contemporary music that is being created using modern audio processing techniques. Details about the audio tracks can be found on the CD itself by accessing it using a web browser.

Music technology and audio processing, whether electronic or acoustic, is about controlling the acoustic pressure vibrations reaching the ears of the listeners, from the user interface with the instrument, through the sound synthesis technique itself, any post-processing that is applied, the diffusion of the sound acoustically and the acoustic treatment of the space in which the listeners are present. Such research benefits most from a close working relationship between those working with the relevant technology and practicing musicians.

The demands made on available technology for real-time processing of increasing numbers of audio channels are pushing the bounds of currently available technology as attempts are made to:

- increase the naturalness of synthesized sounds
- improve electronic musical instruments’ user interfaces
- model the acoustics of spaces more exactly
- synthesize sounds not available from acoustic instruments
- create new post-processing effects units

The Keynote Speaker for this workshop is Professor Johan Sundberg from Stockholm who will reflect on the current state of the art in the area and consider the likely changes as we head towards the millennium, and in particular whether the work will slow down (rall) or speed up (accel). This has been placed at the end of the Workshop to enable delegates’ minds to reflect on the papers presented as they are focussed on the issues to foster discussion about approaches to future areas of work.

Workshop sessions incorporate a range of topic areas that explore music performance issues, music education, audio signal processing, synthesising singing ensemble and acoustic modelling. This range of topics gives a broad impression of research areas in Music technology and Audio Processing only as there are many issues under consideration as scientists and engineers endeavour to make an impact on the art of music making in all its forms.

All the aspects of music technology and audio processing outlined above are represented in this workshop from the user interface to modelling the acoustics of rooms. In addition, the use of modern multimedia techniques for education is playing an increasing role in music learning, and this aspect is represented in this workshop.

If you take nothing else away from this event, I do hope there is something you enjoy on the audio CD that you will want to listen to again. Perhaps this will stimulate in you some of the pleasure of meeting the challenges in this area that I know I share with many of my colleagues who are presenting their work.

Let’s hope that the Euromicro Fanfare (on the CD) will herald in 25 more years of activity in the Music technology and Audio Processing area.