Cort Lippe
Program Notes

Music for Clarinet and ISPW (aka **Music for Clarinet and Computer**) (1992) was written for the clarinetist Esther Lamneck and premiered in New York in March of 1992. The piece was realized at IRCAM, Paris, and at the Center for Computer Music & Music Technology, Kunitachi College of Music, Tokyo, which commissioned the work. The electronic part was created originally using the IRCAM Signal Processing Workstation (ISPW), a real-time digital signal processor, and the software *Max*, which was developed by Miller Puckette, whose technical advice made this piece possible.

The computer tracks parameters of the clarinet, such as pitch, amplitude, continuous pitch change, rests, articulation, tempi, etc., and uses this information to continuously control and/or influence the digital synthesis algorithms running in real-time. Time stretching, granular sampling, and other more standard signal processing such as harmonizing, frequency shifting, phasing, spatialization, etc., are employed. The intent is to create a certain degree of interactivity between the performer and the computer in which the performer influences the computer output based on aspects of the musical expressivity of his/her interpretation of the score. Much like chamber music playing, in which individual expressivity has a fundamental influence on the entire ensemble; the feedback loop between the performer and the computer should have a positive influence on the final musical result.

All the sounds used in the electronic part come from the composed clarinet part, and are transformed by the computer in real time during the piece. Thus, the musical and sound materials for the instrumental and electronic parts are one and the same. The instrument/machine relationship moves constantly on a continuum between the poles of an extended solo and a duo. Musically, the computer part is sometimes not separate from the clarinet part, but serves rather to amplify the clarinet in multiple dimensions and directions; while at the other extreme of the continuum, the computer part has its own independent musical voice.

Music for Clarinet and ISPW is recorded on the Centaur label CDCM series by Esther Lamneck. Duration: 16 minutes.