

Cort Lippe
Program Notes

Music for Flute and Computer (aka **Music for Flute and ISPW**) (1994) was commissioned by the French flutist François Bru and the French Section of the International Society of Music Educators, realized at IRCAM in Paris, and premiered in Tampa, Florida at the 1994 International Symposium of Music Educators. The piece was composed at IRCAM, 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 flute, such as pitch, amplitude, continuous pitch change, rests, articulation, timbre, tempi, etc., and uses this information to continuously control and influence all the electronic sounds via compositional and digital synthesis algorithms. Time-stretching, granular sampling, FFT-based cross-synthesis, 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.

Some of the sounds in the electronic part come directly from the composed flute part, and are transformed by the computer in real time during the piece. Sound material other than the flute part is also manipulated. Thus, in certain cases, the musical and sound materials for the instrumental and electronic parts are one and the same, while at other times the parts differ. This 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 flute part, but serves rather to amplify the flute in multiple dimensions and directions; while at the other extreme of the continuum, the computer part has its own independent musical voice. This piece is influenced by and dedicated to the people and the extraordinary musical cultures of Burundi and Rwanda, which I hope will survive present conflicts.

Music for Flute and Computer is recorded on the EMF label by Elizabeth McNutt, and the Classico label (Denmark) by Lars Graugaard. Duration: 13 minutes.