WHITHER MUSIC;WHAT'S THE SCORE?

JOHN R. PIERCE, APRIL 5, 1984

This very preliminary memo is a "think piece" inspired by three
sources:

1. A proposal for $1,159,067 from MIT to SDF (copy attached),
titled "Real-time Computation in the Context of Skilled Human
Performance."

2. An undated unsigned memo from Bob Shannon titled CONTROL,
copy attached.

3. Conversations with Bernard about the NSF project, no copy
attached.

4. Something by Johan Sundberg that I read, about putting
expression in music automatically; I once had a copy but can't
locate it; it is probably lost.

All of these relate in some way to scores and music.

It is a truism that the score isn't the music. To go from score
to music requires both trained dexterity and tradition.

A central problem of computer music is, how should or can what
isn't in a conventional score be added so as to produce music?

An alternative question (3 above) is, given the music, how can
we get to the score, stripping away much that is essential to
music, partly by "evening things up" and partly by invoking
musical tradition in deducing key and in using repititions to
resolve metrical or pitch uncertainties (3.above).

The problem of adding whatever necessary to the score in order to
get music is of crucial importance in developing better ways of
inpputting to sound generators. Can we proceed satisfactorily by
starting with, say, CMUSIC and use the piping feature of UNIX to
do chores with programs written by or supplied to the user? Or,
is something more fundamental necessary?

What is needed is discussion, in which I'd like to participate.

Perhaps discussion can be inspired by commenting on the four
items listed above.

As I see it, the good thing about the MIT proposal is that it
addresses the problem and proposes specific hardware and software
solutions. As I see it, the bad things are (1) it cites only MIT
work and could almost be said to disregard other work and to go
behind people's back - a far cry from the cooperation Charlie
Smith once hoped for; (2) I don't believe they have really thought
the problem through - perhaps because there's such an emphasis on
conventional music, perhaps for other reasons.

Item 2, Bob Shannon's memo seems to me to have many good things in
it, perhaps because of Bob's talents in both music and hardware,
perhaps because of his interaction with composers at CCRMA. But,
who is following this, or following it up.

Item 3, Bernard, is full of talent, aimed at the moment at stripping
away the expression in order to get to the score. But, in this
endeavor it is reasonable to believe that in the course of the work
a lot of relevant things will be learned about musicality - alas,
for quite conventional music only.

Item 4, Sundberg, I found very interesting when I read it. It
seemed to proceed from introspection and experience to trying
out, a sort of analysis-by-synthesis approach. Again, this is
for pretty conventional music.

In conclusion, there is a very real problem - what can the computer,
with the aid of canned programs, do satisfactorily? What must the
composer input, and how can he input it, in real time modifications
or not in real time? Partly, this is necessary in the computer -
live performer interaction, but a solution to such problems is
needed for purely computer pieces also.