

Some Programs for Real-time Computer Synthesis and Composition

BARRY D. TRUAX

Programs for Real-time Computer Synthesis and Composition

AND SUMMARY

I. INTRODUCTION

Programs that operate in real time have been developed for the PDP-15 computer at the University of Illinois at Urbana-Champaign, using between 10 and 150 Kbytes of core memory.

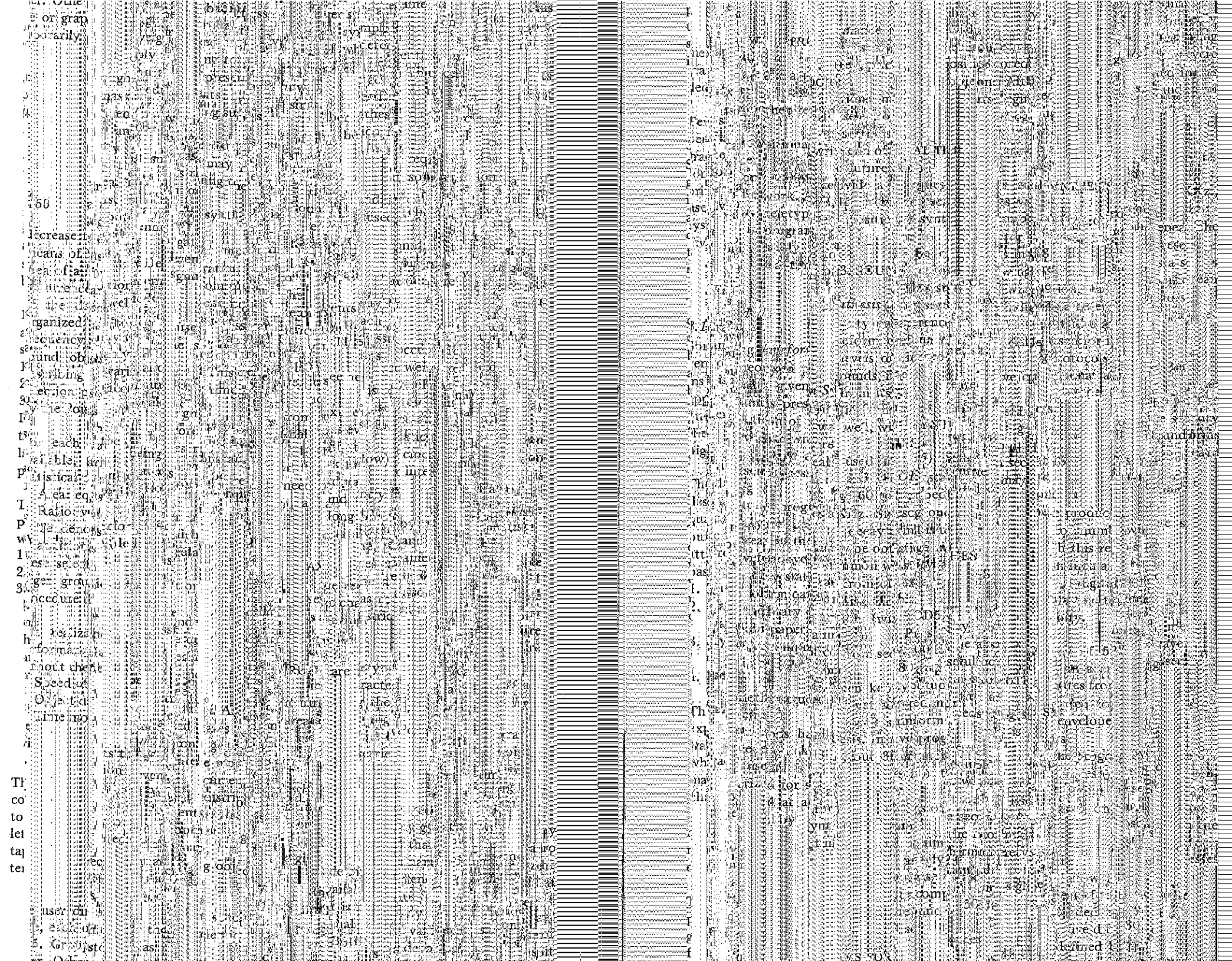
Programs for sound synthesis and composition developed by the author during the past year and used at the Institute of Sonology in Utrecht. They have been designed to use the 12K core memory capacity of the 18-bit wordlength real-time computer.

The real-time synthesis and composition programs are designed to be modified very quickly.

Some of the programs are real-time interactive sound synthesis programs. The user is able to work interactively with the sound result of his specifications and

The two major synthesis methods used are fixed waveform synthesis and frequency modulation which produces time-dependent spectra. Both methods are characterized by sampling rates that are variable within a limited range. The compositional

programs are designed to be modified very quickly. The frequency modulation is determined by a Poisson distribution. The two



s

I

P

t

r

c

3

T

P

P

a

t

s

d

I

w

2

si

th

si

in

If

si

va

sr

I

gr

at

re