PRINCETON ACM / IEEE-CS CHAPTERS
APRIL 2005 JOINT MEETING

Any Sound You Can Imagine

RCA's Electronic Music Synthesizer and the Beginning of Binary Sequencing

Milton Babbitt

(co-sponsored by **David Sarnoff Library**)

New Jersey has a good claim as the birthplace of electronic music synthesizers. On January 31, 1955, RCA chairman David Sarnoff introduced the world's first music synthesizer using binary sequencing to the American Institute of Electrical Engineers meeting in New York City. The Mark I, which was designed by Harry F. Olson (director of RCA's acoustics research laboratory) and Herbert Belar (an acoustics lab staff member), was intended to reduce costs for the production of recorded music.

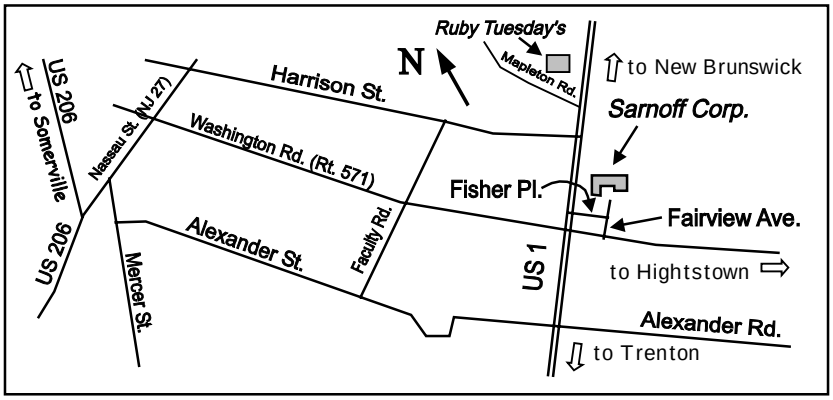
With the Mark I, a composer could program a series of notes on paper tape through a keyboard that defined the pitch, loudness, timbre, growth, duration, and decay of a tone. This enabled the electronic replication of the sound of any instrument or the fabrication of musical sounds impossible to produce otherwise. A series of notes was then generated electronically and the track was recorded on a phonograph disc for remixing.

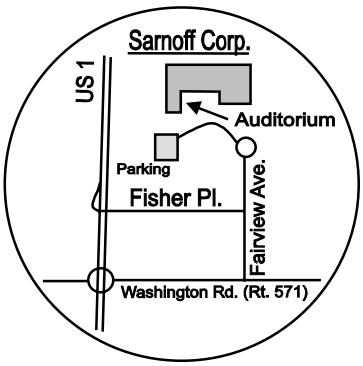
The Mark II, featuring magnetic tape recording of the sequences, was intended for the RCA Victor Records Division to produce mood, lounge, and soundtrack music. When RCA Victor balked, the company donated the three-ton instrument to the Electronic Music Center of Columbia and Princeton Universities in 1959. Princeton University professor Milton Babbitt, Charles Wuorinen, and other serial composers used the Mark II, not for the generation of mood music but to realize their theories of modern composition.

In tonight's presentation, we take a look back at Princeton's contribution to the development of electronic music. Highlighting the evening will be Professor Emeritus **Milton Babbitt**. He will discuss his experiences working with RCA's staff and the synthesizer in composing music. Babbitt is both a Pulitzer Prize winner and a MacArthur Fellow for his pioneering work in serial composition

In addition, **Dr. Alex Magoun**, executive director of the David Sarnoff Library, will explain the background behind RCA's investment in the synthesizer; and Radcliffe Fellow and computer scientist **Dr. Rebecca Mercuri** will explain its operation. Throughout the evening, recordings of music composed on and for the synthesizer by Professor Babbitt and members of the RCA Labs will be played.

Date: Thursday, April 14, 2005, 8:00 pm (Refreshments at 7:30 pm)
Place: Sarnoff Corp., Routes 1 and 571, Princeton, NJ
Information: Dennis Mancl (908) 582-7086, André Bondi (609) 734-3578
On-line info: **http://www.acm.org/chapters/princetonacm**





All ACM / IEEE-CS meetings are open to the public. Students and their parents are welcome. There is no admission charge, and refreshments are served.

A pre-meeting dinner with the speaker is held at 6:00 p.m. at Ruby Tuesday's Restaurant on US 1. Please send email to **princetonacm@acm.org** in advance if you plan to attend the dinner.