# Electroacoustic Music and Other WTFs

Jeff Hendy UBC UDLS 9 May 2008

#### What is EA?

...the most successful works in the field are usually concerned with those aspects of sonic design which remain inaccessible to either traditional or electronic musical instruments played live...

## Computers to Normal People



Computers to Normal People



## Computers to Computer Scientists

```
#ifndef AKS POLY H -
#define AKS_POLY_H_
#include <amp.h>
typedef struct {-
   mpz_t *coefs;
   mpz_t degree;
   char variable;
} __aks_poly_struct;
typedef __aks_poly_struct ap_t[1];
mpz_t* ap_init(ap_t p, const mpz_t degree);-
mpz_t* ap_init_ui(ap_t p, const unsigned long degree);-
mpz_t* ap_init_from_binomial(ap_t p, const mpz_t degree, const ap_t a);-
void ap_get_degree(mpz_t degree, const ap_t p);-
unsigned long ap_get_degree_ui(const ap_t p);-
mpz_t* ap_reinit(ap_t p, const mpz_t ndegree);
void ap_clear(ap_t);
void ap_change_variable(ap_t p, char var);
void ap_swap(ap_t p1, ap_t p2);
void ap_mul(ap_t ro, const ap_t op1, const ap_t op2);-
void ap_mod(ap_t ro, const ap_t op1, const ap_t op2);-
#endif /* _AKS_POLY_H_ */-
```

## Computers to Computer Scientists



## Electronic Music to Normal People







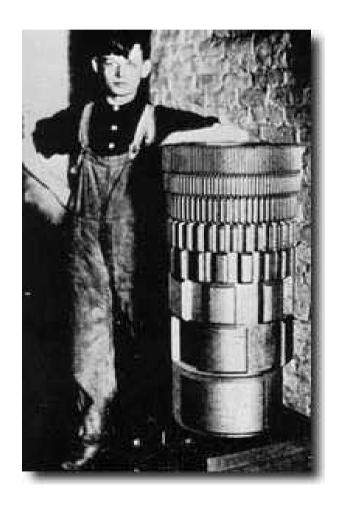
# Electroacoustic Music to Electroacoustic Musicians





## Telharmonium, 1897





## Theramin, 1919



IQU, Lothar and the Hand People, Gabby La La, Les Claypool's Fancy Band, Calle 13, Chimaira, Muse, Street Drum Corps, Olivia Tremor Control, Phish, The Cramps, Pixies, The Flaming Lips, Tripod, Clinic, Chris Funk (The Decemberists), The Mars Volta, The Polyphonic Spree, The Family Jewels, Fishbone, Jean Michel Jarre, Portishead, Jon Spencer Blues Explosion, Charlie Clouser (Nine Inch Nails), Madonna Wayne Gacy (Marilyn Manson), Natalie Naveira (Lendi Vexer), Bill Bailey, Nikki Sixx, Rocket Science, Pere Ubu, Keller Williams, Michael Hearst, One Ring Zero, The Damned (by Dave Vanian), Green Carnation, Gandalf Murphy and the Slambovian Circus of Dreams, Russian duet Messer Chups, Patrick Wolf, DeVotchKa, Roy Harter, Pram, Soular, The Phenomenauts, Black Moth Super Rainbow (in certain tracks), Chris Kilmore (Incubus), The Octopus Project (by Yvonne Lambert), Wolf Parade (by Hadji Bakara), Coheed and Cambria, Älymystö and Serj Tankian.

## **Bonus WTF**



MANSON, Charles Milles CII 966 856

## Tape Recorder, 1929

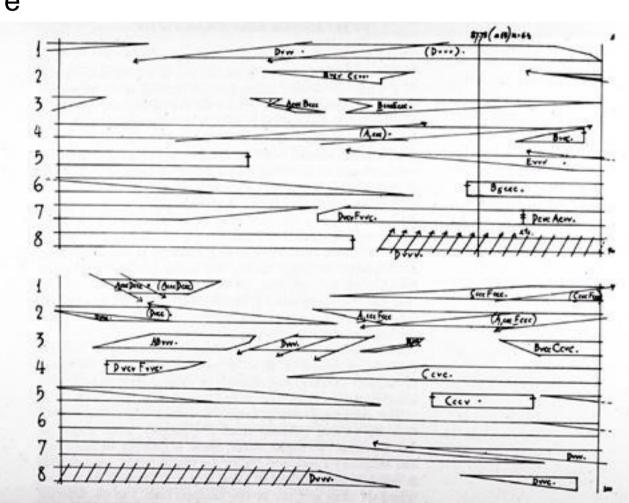


### Williams Mix

#### John Cage, 1952

The composing means were

chance operations derived from the I-Ching



## Bonus WTF: Organ<sup>2</sup>/ASLSP



## Thema (Omaggio a Joyce)

#### Luciano Berio, 1958

The work is so meticulously produced that it seems to bridge the gap between electro-acoustic music and traditional compositions by creating seemingly infinite relationships between words.







### Artikulation

György Ligeti, 1958

## Bonus WTF: Poème Symphonique

György Ligeti, 1962

## I Am Sitting in a Room

Alvin Lucier's I am sitting in a room (1969) is an electroacoustic classic. The work, which questions the distinctions between speech and music, is conceptually rich, sonically beautiful, and is achieved with an extraordinary economy of means.

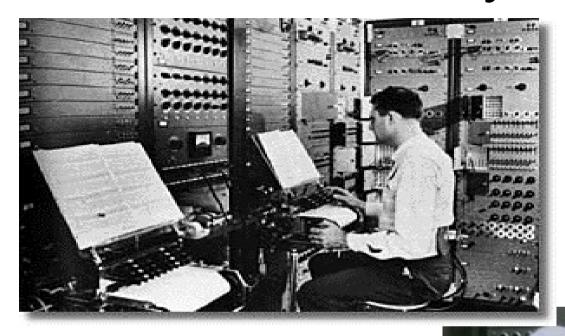








## RCA Mark II Synthesizer - 1957





## Music on a Long Thin Wire

Lucier, 1977

A 50-foot length of taut wire passes through the poles of a large magnet and is driven by an oscillator; the vibrations of the wire are miked at either end, amplified and broadcast in stereo.

Lucier admits a long thin wire is only used to impress, a short thin wire would have worked as well if not better



#### Final Bonus

#### MUSIC FOR A REVOLUTION

Scoop out one of your eyes 5 years from now and do the same with the other eye 5 years later.

T. Kosugi

(1964)