Music, Computing, and Design I
mus256a / cs476a
Ge Wang and Nick Bryan (TA)

CCRMA | Fall 2010
Stanford University
week 1 lecture A

what is this all about?

what it’s not

building software for music
for audio.

programming is a creative effort.

two good answers to everything:
“I don’t know.”

“it depends.”

“the purpose of a computer is do something else.”

- Mark Weiser

how software works

The Operating System

2nd system effect

• 1st system
  – terrified of failure
  – simplified to its bare bones
  – successful beyond its intended life-span

• 2nd system
  – hugely ambitious
  – usually conceived by academics
  – many good ideas
  – a little ahead its time
  – doomed to failure

(adopted from Randy Wang’s lecture on Multics)
2nd system effect (beyond)

- 3rd system
  - pick and choose essentials
  - usually made by good hackers
  - emphasize elegance over performance
  - become widely adopted
- 4th system
  - maturation

abstraction

polymorphism

the goto statement

convolution, optimization, and asymptotic superiority
real-time audio; buffers, buffers

C++, compilers, linkers, object files, makefiles

Hello Sine