

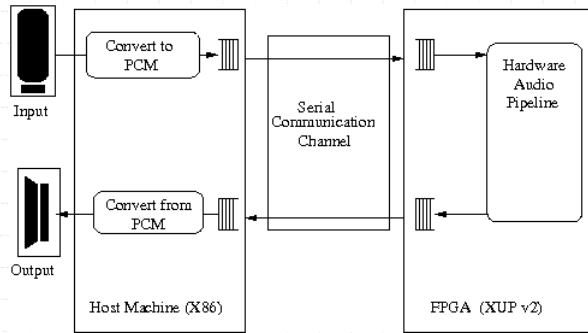
Lab1 Tutorial

Myron King, Elliott Fleming, Nirav Dave
Computer Science & Artificial Intelligence Lab
Massachusetts Institute of Technology

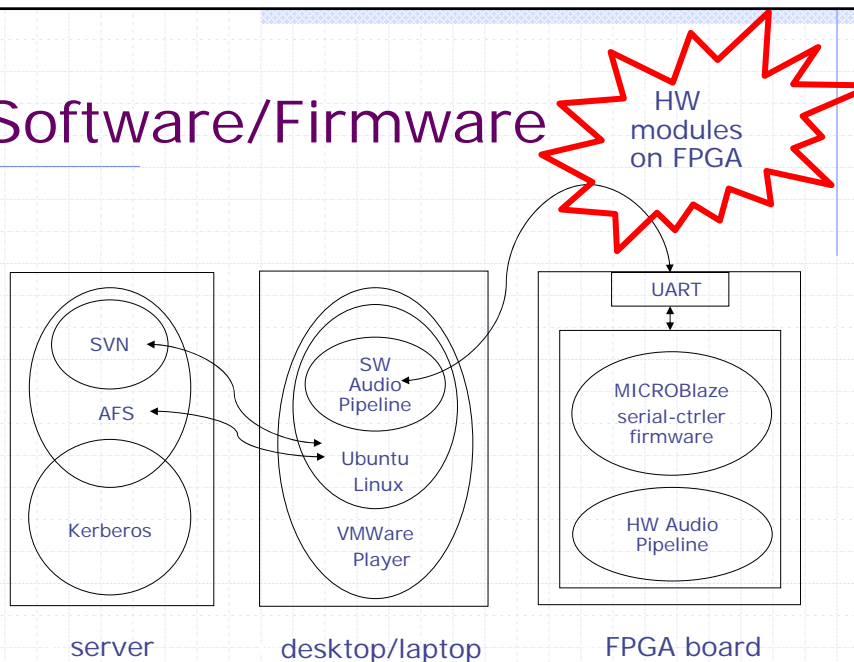
Tutorial Outline

- ◆ Platform Overview
- ◆ Tool Summary
- ◆ Live Demonstration

Audio Pipeline

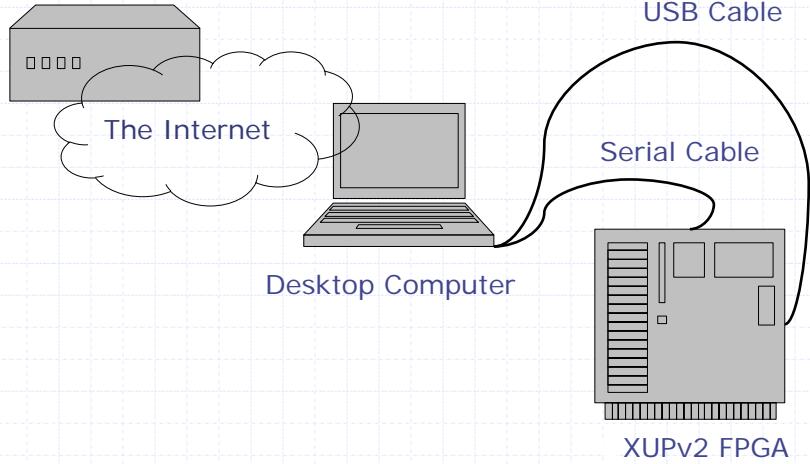


Software/Firmware



Physical Setup

hyewon.snu.ac.kr



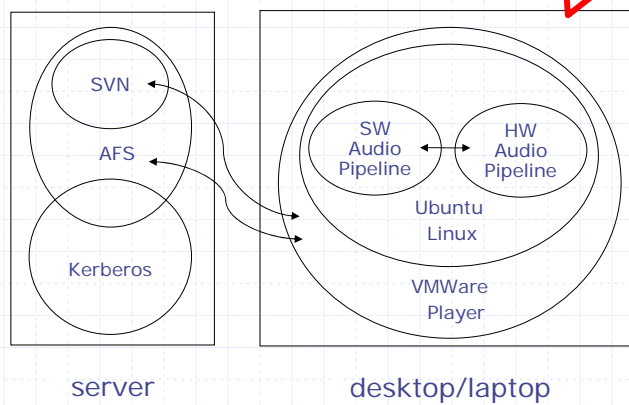
September 10, 2009

<http://csg.csail.mit.edu/korea>

L04-5

Software/Firmware

HW
modules in
Simulation



September 10, 2009

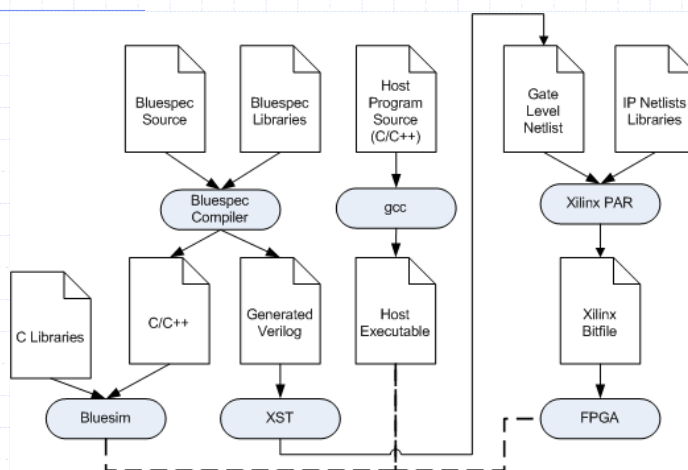
<http://csg.csail.mit.edu/korea>

L04-6

Why Run in Simulation

- ◆ Faster
 - XST tools take lots of time
- ◆ You don't need a FPGA board
 - You can do it at home
- ◆ Switching to FPGA is seamless
 - Barring physical design issues

Toolflow



Tools

- ◆ BluespecVerilog Compiler (BSC)
- ◆ Bluespec Simulator (Bluesim)
- ◆ GNU C Compiler (GCC)
- ◆ Xilinx Synthesis Tool (XST)
- ◆ Xilinx Place and Route (Xilinx PAR)

Using BSC directly

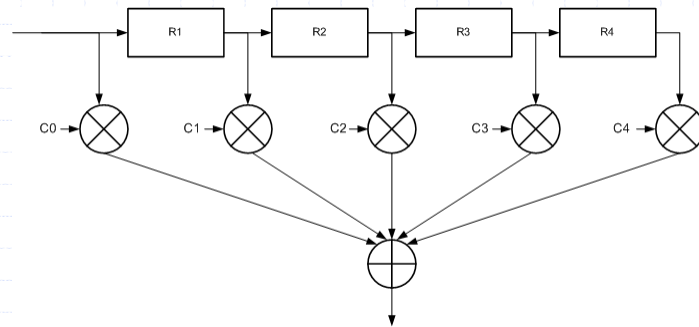
- ◆ Only for Supplemental Tutorials
 - AWB handles tools for all other uses
- ◆ Run `setup.sh`
- ◆ Invoke using command `"bsc"`

Lab Handouts

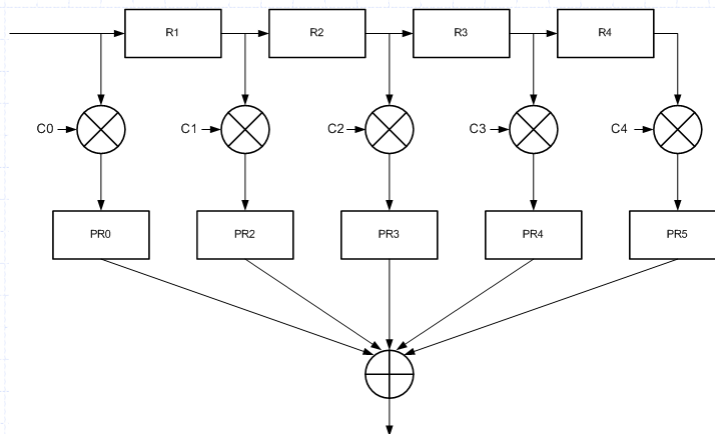
- ◆ The labs are all new
 - Written especially for you.
 - They will contain errors.
 - If something seems wrong, it may actually be wrong!
- ◆ Bring errors to our attention
 - You can help us build this course.

Live Demonstration...

Original Microarchitecture



First Modification



Second Modification

