Schematic Capture for X Windows

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Motivation
Motivation

• Microsoft Windows is the name of several families of proprietary operating systems by Microsoft.
Motivation

• Microsoft Windows eventually came to dominate the world's Personal computer market.
Motivation

- As the dominance of Microsoft Windows, a majority of software packages are distributed for installation and use only on Windows.
Motivation

- Dr. Maurer developed a virtual automation “Schematic Editor” for Windows, which is able to explain the basics of Computer Logic and Logic Design.
Background
• X Window System (commonly X11 or X) is a networking and display protocol which provides windowing on bitmap displays.

• It also provides the standard toolkit and protocol to build GUIs on Unix and other operating systems likewise.
Background
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• Xlib is an X Window System protocol client library in C programming language.
• It contains functions for interacting with an X server.
Schematic Capture is used to simulate the way a variety of logic gates work by building a GUI environment in X Window system.

It consists of two parts: Digital logic and widgets.
Design & Implementation

- Primary Input

- Primary Output
Design & Implementation

- Gates
  - AND
  - OR
  - NOT
Design & Implementation

- Wires
  - Input
  - Output
• Xlib does not provide supports for components like buttons, menus, scrollbar, etc.
Design & Implementation

• Buttons
  ▪ Depressed
  ▪ Pressed
Design & Implementation

• Drop-down lists
  ▪ Inactive
  ▪ Active
Design & Implementation

• Dialogue Box
Design & Implementation
Future Work
Future Work

- More widgets
- More gates
- Tutorial of project
Questions