Platform for X-Smiles

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http://www.x-smiles.org/
Outline

• Introduction
• Overview of the platform
  – Operating system
  – Java Runtime Environment
• Conclusions
Introduction

• What is platform?
  – In the literary sense “A raised surface”
  – In the technical sense “Underlying hardware and/or software for a system”

• We emphasize on the software

• X-Smiles uses “Java”, hence for executing byte code JRE is required within the platform
Overview of the platform

- **Hardware:** Currently, using PC environment, though primitive tests have been carried in embedded system.

- **Software:** Comprises of Operating System - Linux w/o X-server and system drivers.

Diagram:

- X-Smiles browser
- Java based Parsers
- Core Java Classes
- JRE
- Hardware and software
Overview of the platform (contd..)

• Java Runtime Environment:
  – Kaffe’s ‘clean-room’ implementation is used
  – For graphical applications, rendering is done using framebuffer
  – Framebuffer provides the high level abstraction of the graphics h/w
  – Vesafb is the framebuffer driver for the Intel architecture, which supports VESA2.0 compliant graphics hardware.
  – 8bpp to 24bpp and 640x480 1600x1200
Conclusions

- With a working prototype system, the next step is to ‘tweak’ it to achieve better performance
  - Have native decoders for video rendering
  - Currently used JRE does not provide the much needed functionality to support all of the features of the browser
  - Memory footprint and processor load is still under scrutiny