. : Virtual prototypes : .

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-:=Issues:=-

- Media Convergence
- Devices with different constraints and context of use
- Accessibility of information
- Sanity of information
- User Interface Adaptation
-[ Devices ]-

- PDA, Wearable, Desktop, Phone, TV ... Toaster?
- New innovative Input / Output methods
- Context Awareness, Augmented Reality.
1. DRIVE ELECTRONICS
The drive electronics acquire and process signals from an image source, then synchronize the color mix, gray-level and placement of individual picture elements (pixels) that comprise the image. The image source may be from a computer, video camera or almost any video input.

2. LIGHT SOURCES
In a full-color display, pixels are generated by modulated light sources that vary the intensity of red, green and blue light - producing a wider range of the color palette than any other display technology. The light sources used in the VRD operate at safe, extremely low intensity levels.

3. SCANNERS
A horizontal scanner sweeps the light beam into a row of pixels, and a vertical scanner moves the light beam to the next line, where another row of pixels is painted. In a VGA display, more than 18 million pixels per second are formed, projected and arranged on the retina - with exacting precision.

4. OPTICS
Refractive and reflective optics direct the light beam into the viewer's eye, projecting an image through the viewer's pupil onto the retina.
smart phone

The next generation mobile phone will have packet based broadband internet connectivity. It will have a larger screen and more PDA type applications.

The capability of the future smart phone will include more processing power, better video and sound performance included with a higher memory capacity. Phones will also likely be able to run Java applications and offer GPS based location.

The applications include web browsing, video conferencing, messaging, calendar, games and navigation help.
A wearable computer is an integrated device with all future multimedia and communication capabilities. Its purpose is to enhance perception by offering, for example, a possibility to communicate with others, search for information and enhance vision. The device also offers enormous possibilities in entertainment. The possible capabilities include projection of 3D graphics in the viewfield, real time viewfield manipulation and fast wireless connectivity. The device can be controlled by eye movement, thought and voice. Applications include video conferencing, messaging, web browsing, vision enhancement, movies etc.
A second generation multimedia pad offers numerous possibilities in portable applications.

The size of the pad can be of the size of a credit card, to the size of a wallet. The device can be controlled with a stylus, touch sensitive screen and external buttons. The device will have sophisticated multimedia capabilities, audio, video and voice recognition. The communications can be handled either with short range network (bluetooth), or with a more wider range network.

Applications could include document browsing, eBook, messaging, portable audio playing and recording. Everything palm can do now, but with enhanced multimedia capabilities. One other interesting scenario, would be the use of a Gnutella and Freenet type of distributed information systems in portable multimedia pads, via broad range waveLAN networks.
In XSmiles

- Clean interfaces, which separate UI from browser logic
- Possibility to add new devices
- Support for XML adaptation (CC/PP & XSL)
oO Virtual Devices Oo

- Different configuration for each.
- Ability to switch between windows
- Stylesheet selection logic
- Physical buttons on screen
ÖÖ Accessibility ÖÖ

• W3C Device Independence specifications
• Separate presentation from content. (XML + XSL stylesheet for each device)
• CC/PP to relay capability information to the server.
• Prototype server which understands CC/PP
0.0 Examples 0.0

• Three different virtual devices: PDA, DigiTV, and Phone.

• Work still (always) in progress. E.g. XForms UI widgets for different devices.
Kysymyksiä?