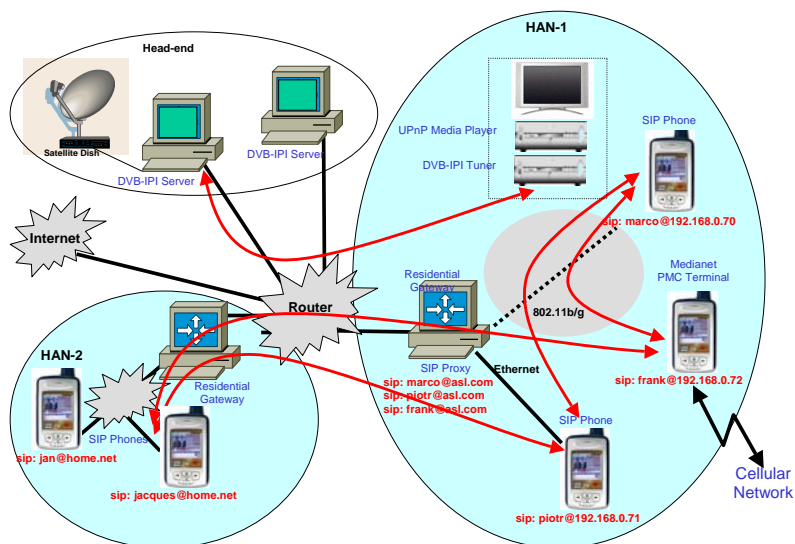
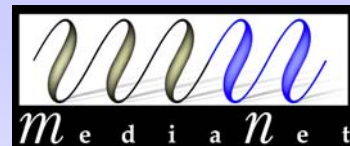


Portable Multimedia Communication Terminal

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Application Areas:

The Portable Multimedia Communication terminal finds its place both in home networks and outside the home. With a wide range of communication pipes it can communicate via the home WiFi network, or using an attached cellular modem via the cellular network. Careful attention is paid to co-existence of the several different wireless standards used simultaneously, especially WiFi and Bluetooth. Because of the Linux operating system, most applications can operate simultaneously.

Standards:

The software architecture of the PMC terminal is founded on the Linux operating system, giving transparency and ease of support for developers. Among the other standards implemented are the following:

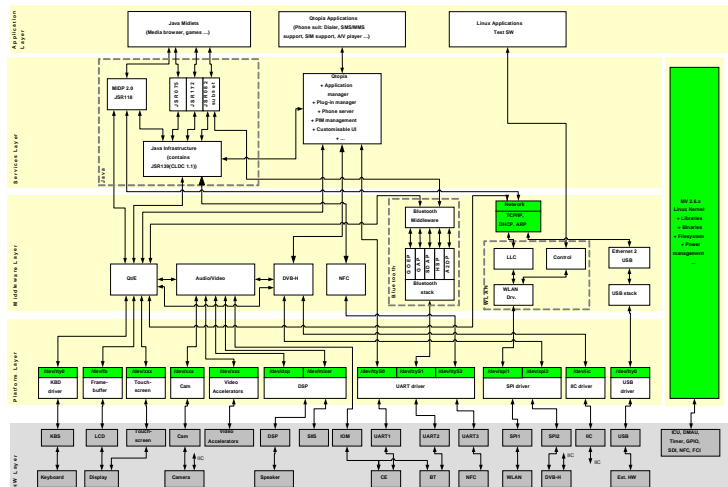
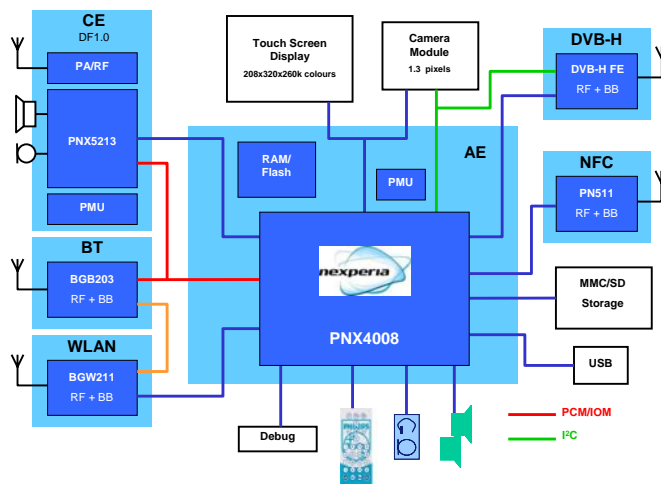
- ❑ Java: JSR139 (CLDC1.1), JSR118 (MIDP2.0), JSR075, JSR172, JSR082 (subset)
- ❑ Bluetooth: GOEP, GAP, SDAP, HSP, A2DP profiles
- ❑ WiFi: IEEE802.11b/g plus the WMM subset of 802.11e
- ❑ Infrared: IrDA, RC-5, RC-6
- ❑ NFC: Initiator and target
- ❑ Audio codecs: MP3, AAC etc.
- ❑ Video codecs: MPEG4, H.263, H.264
- ❑ Teleconferencing: SIP

Flexible hardware architecture

The Portable Multimedia Communication terminal uses a platform approach to both hardware and software. Many sub-systems are included in the generic platform, so that prototyping of new applications can be rapid, and not constrained by lack of resources. At a later stage, an application-specific IC can be fabricated with just the desired sub-set of features, to minimize cost.

Flexible software architecture

The Linux platform architecture is shown below. The platform software is flexible and modular. Because the operating system is Linux, full multi-tasking of applications is possible. Software can be developed rapidly in C or Java. The Java Virtual Machine has access to all the hardware resources of the platform, including NFC. The Qt/E graphics environment and Qtopia user interface are integrated.



Demonstration Use Cases

The demonstration shown here illustrates a small subset of the features of the PMC Terminal. This terminal makes use of the infrastructure (WiFi, SIP server) of the Testbed.

- ❑ NFC used for easy setup of parameters to allow the terminal to join a secure WiFi network
- ❑ Telephony using VoIP, using the infrastructure provided by the MediaNet Workbench - both within a home network and, via the RGW, between different home networks.