

Customer

European developer of multimedia systems for hotel business.

Objective

The objective was to develop software platform for multimedia center based on Linux Operating System. The platform must playback various multimedia content (pictures, video, TV programs and presentations), according to the specified schedule, on displays installed in public places, hotel rooms, etc. These stations must be managed centrally by means of client program based on Windows Operating system.



Software for multimedia center must be installed on computer from boot disk or loaded from Live CD.

Solution

The developed system is based on a specialized Linux OS distribution containing Open Source applications required for playback of a great number of graphical, video and office file types:

- Mplayer – MPEG, WMV, AVI, MOV, VOB, QT, ASF video formats;
- Xine – TV programs (if there's a TV-tuner on computer);
- VLC – video streaming;
- kview – static images in JPG, GIF, PNG, TTF, BMP formats;
- konqueror – web-pages (HTML) and flash-animation (SWF);
- kpdf – PDF documents (with the function of automatic page scrolling);
- OpenOffice Impress – ODP (OpenDocument Presentation) and PPT (Microsoft Power Point) presentations.

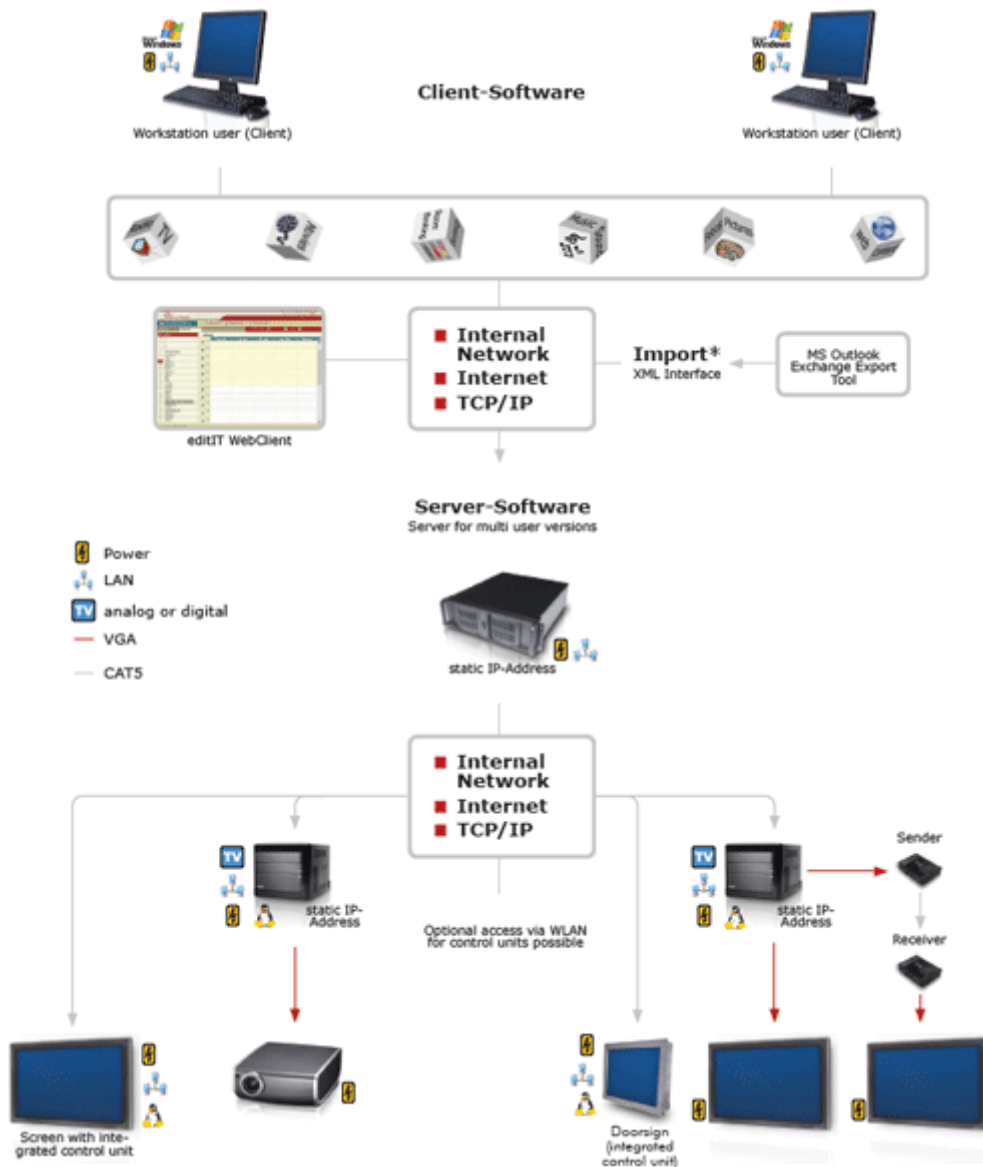
The system supports Split Screen mode to display several applications at the same time. Also, creeping line is supported.

We added functionality for event logging, which allows generating various reports on the content played back.



Centralized system for media content playback

We also implemented a possibility to work in "kiosk" mode – on user's activity (touching the sensor display) the system displays a web page, which address can be matched to the content being played back (on advertisement A playback – page A is shown, on advertisement B – page B).



Data is transmitted to multimedia center from controlling Windows application via TCP/IP protocol. It is possible to control remotely the information played back: to set the schedule for information playback as a play-list and to configure kiosk-mode.



Benefits

- Support of a great number of different file types: MPEG, WMV, AVI, MOV, VOB, QT, ASF, JPG, GIF, PNG, TTF, BMP, SWF, HTML, PDF, ODP, PPT
- Support of TV broadcasting and video streaming
- Support of Kiosk-mode, which provides the user with an additional possibility to use the terminal for viewing Web-resources
- Support of creeping line and Split Screen mode
- Playback on LCD monitor, TV set, projection screen
- Easy-to-use user interface of Windows-based control program



Design tools	TCP/IP, Xlib, Qt, KDE, OpenOffice, XML, aptitude
Programming languages	C/C++, shell, Perl
Project management tools	dotProject, MS Project, SVN
Efforts	960 man-days
Duration	6 months