

# Multimedia Embedded

Giuseppe Patanè  
[patane@dmi.unict.it](mailto:patane@dmi.unict.it)

D.M.I. - University of Catania

# Multimedia Embedded - summary

- Embedded Systems
- Microsoft embedded & multimedia technologies
  - [MS Windows XP MediaCenter \(OEM ed.\)](#)
- Open Source alternative
  - [MythTV based on Linux](#)

# Embedded Systems

- Device hardware highly integrated:
  - Reduced weight
  - Reduced I block
  - Low power consumption
- Operating System:
  - Compact
  - Light
  - Efficient
  - Portable
  - Interactive

# Embedded Systems

- Integration/Interaction with external world:
  - BlueTooth
  - WI-FI
  - GSM/GPRS/UMTS Support
  - IPv6

# XP = eXPerience

- The Ideal platform for application development:
  - Rapid development
  - Multiplatform
  - Flexible
  - Scalable
- The starting point for developing .NET:
  - A framework for Windows systems and others (\*nix:Mono, Dotgnu)
  - A compact framework for embedded devices

# Why .NET?

- Scalable: key requirement for developing SW
- .NET makes this transparent to the developer
- Idea introduced by SUN with Java2 EE
- Big advantage: Tested implies “Stable”

# Why .NET?

An Example

Parking Management

# MS Windows XP MediaCenter

- SetTopBox
- Windows XP without a standard graphic interface
- Integration with multiple media
- Manageable by remote control
- Features:
  - TV receiving (WebTV)
  - Multimedial contents (interactive TV)
  - TV events recording on DVD
  - Internet Surfing and mail checking
  - Centralized control of HI-FI, VCR, DVD Player, etc. systems



# MythTV

- OpenSource alternative
- GNU/Linux based
- No dedicated hardware is necessary
- An XP-MC clone with more features

# Linux Kernel 2.6

- Ready for **embedded**
- **Preemptive** (by Robert Love)
- **Scheduler O(1)** (by Ingo Molnar)
- **Real Time Customizable**

# Conclusions

- World is moving towards tembedded
- MS and GNU are ready for this revolution
- Multimedia and Usability will be key points
- Market evolution obviously hard to foresee

# References

- <http://research.microsoft.com>
- <http://www.microsoft.com/windowsxp/mediacenter>
- <http://www.mythtv.org>
- <http://www.kernel.org>

# Multimedia Embedded

Question & Answer

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