

Pablo Cesar
Biographical Notes

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Experiences from a PhD Student

- Summary
- Before PhD (2001)
- Starting (2002)
- Mid Way (2003)
- Finishing (2004)
- Next Phase (2005)
- Conclusion

Summary

- May 2000 – Dec 2001: Future TV Project
 - System Software for Digital Television receivers
 - Assistant Researcher
 - Master's Thesis: HAVi Components in Digital Television under supervision of Petri Vuorimaa
 - Ms. Sc. from Universidad Politecnica de Madrid (February 2002)
- Jan 2002 – Dec 2004: Brocom Project
 - System software for Non-Desktop devices
 - Researcher (Jan 2002 – Dec 2002)
 - Project Manager and Researcher (Jan 2003 – Dec 2004)
- Jan 2005 – Date: Finalization of Doctoral Thesis

Before PhD (2001) [Master's Thesis]

- Responsibilities
 - Port a number of Digital Television services to Kaffe
 - Develop HAVi widgets
 - Write Master's Thesis
- Publications (2 conference papers)
 - C. Peng, P. Cesar, and P. Vuorimaa, "Integration of applications into digital television environment," in *Proceedings of the 7th International Conference on Distributed Media Systems, DMS, 2001*
 - G. Sivaraman, P. Cesar, and P. Vuorimaa, "System software for digital television applications," in *Proceedings of the IEEE International Conference on Multimedia and Expo, ICME, 2001*

Starting (2002) [Looking for a Problem]

- Responsibilities
 - Researcher in Brocom project
 - First Ideas: UI Frameworks / Alpha channel / Video Provider
- Publications (3 conference papers)
 - P. Cesar and P. Vuorimaa, "A graphical user interface framework for digital television," in *Proceedings of the 10th International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision, WSCG, 2002*
 - K. Pihkala, P. Cesar, and P. Vuorimaa, "Cross-platform SMIL player," in *Proceedings of the 1st IASTED International Conference on Communications, Internet and Information Systems, CIIT, 2002*
 - P. Cesar, M. Honkala, V. Kautto, K. Pihkala, J. Vierinen, and P. Vuorimaa, "Group Communication Enabled XML Browser," in *Proceedings of the 1st IASTED International Conference on Communications, Internet and Information Systems, CIIT, 2002.*

Mid Way (2003) [Researcher]

- Responsibilities
 - Otadigi (Digital TV big picture)
 - Project Manager (Research Group big picture)
 - Development of Ubik
- Publications (5 conference papers)
 - C. Herrero, P. Cesar, and P. Vuorimaa, "Delivering MHP applications into a real DVB-T network, Otadigi," in *Proceedings of the 6th International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services, TELSIKS*, 2003.
 - P. Cesar, J. Vierinen, and P. Vuorimaa, "Open graphical framework for interactive TV," in *Proceedings of the IEEE 5th International Symposium on Multimedia Software Engineering, MSE*, 2003.
 - J. L. Lamadon, P. Cesar, C. Herrero, and P. Vuorimaa, "Usages of a SMIL player in digital television," in *Proceedings of the 7th IASTED International Conference on Internet and Multimedia Systems and Applications, IMSA*, 2003.

Finishing (2004) [Maturity (Really?)]

- Responsibilities
 - Project Manager
 - Development of Ubik
 - Collaboration with OpenMHP (<http://www.openmhp.org>)
 - Collaboration with X-smiles (<http://www.xsmiles.org>)
- Publications (1 journal article + 1 conference paper)
 - P. Cesar, J. Vierinen, and P. Vuorimaa, "Open graphical framework for interactive TV," in *International Journal on Multimedia Tools and Applications* (extended version of MSE2003) (in print).
 - M. Honkala, P. Cesar, and P. Vuorimaa, "A device independent XML user agent for multimedia terminals," in *Proceedings of the IEEE 6th International Symposium on Multimedia Software Engineering, MSE, 2004*.

Next Phase (2005)

- Responsibilities
 - Finish my Doctoral Thesis
 - Integration of X-Smiles in OpenMHP (MHP compatibility, Focus Manager)
- Publications (2 journal articles + 1 conference paper)
 - P. Cesar, "Graphics Architecture for Non-Desktop Devices: a Study of Digital Television Receivers," in *Adjunct Proceedings of the Third International Conference on Pervasive Computing, Doctoral Colloquium*, 2005.
 - P. Cesar, J. Vierinen, and P. Vuorimaa, "A Graphics Architecture for High End Digital Television Terminals," *ACM Transactions on Computing Multimedia, Communications, and Applications, TOMCCAP* (submitted).
 - P. Cesar, M. Honkala, and P. Vuorimaa, "A Device Independent XML User Agent for Multimedia Terminals," *Multimedia Systems Journal, MSJ* (Extended version of MSE2004 publication) (submitted).

Conclusion (1/2)

- Projects
 - Jan 2002 – Dec 2004 (Brocom): researcher and project manager
 - May 2000 – Dec 2001 (Future TV): assistant researcher
- Grants
 - January 2004 - December 2005: HECSE
 - June 2003 - June 2004: CSE Department
 - December 2002 – December 2004: Nokia Foundation
- Theses:
 - Master of Science in Computer Science (2002) [Madrid + Helsinki]
 - Doctor of Science in Technology (October/November 2005) [Helsinki]
- Publications
 - 3 Journal papers (2 of them are submitted)
 - 12 Conference papers

Conclusion (2/2)

- Teaching
 - Multimedia Programming (Fall 2005)
 - Research Seminar on Digital Media
 - Multimedia User Interaction (Fall 2005)
 - Digital TV Services in Handheld Devices (Spring 2005)
 - Web Service Technologies (Fall 2004)
- Master's Thesis Instructor
 - "3D Support in Digital TV Receivers: Review of MHP and MPEG-4 Platforms"
 - "A Java 3D Framework for Set-top Box in Digital Television"
 - "Universal SIP Client for Consumer Devices"
- Open Source Projects
 - Ubik
 - OpenMHP
 - X-Smiles