

---

## Acknowledgements

My last remaining task is to acknowledge all those people that have contributed to the work described in this thesis. This is an impossible task, given the many people that have helped to design, implement, apply, criticize, sponsor and evangelize the work. I am going to try anyway, and if your name is not listed, rest assured that my gratitude is not less than for those listed below.

Henk Obbink started our research in product families and stimulated me in writing some of it down in the form of a PhD thesis. Also, he was my cluster leader when the work started. Other managers that supported me were Hans van Antwerpen, Jean Gelissen, Jaap van der Heijden, Wouter-Jan Lippmann, Hugh Maaskant and Otto Voorman. And I should not forget our secretary, Anja van Dooren.

Remi Bourgonjon was the initial owner of our research work. Subsequent sponsors were Hans Aerts, Erik Kaashoek and Osman Khan. Joop van der Linden led the project that used Koala for the first time.

Jeff Kramer and Jeff Magee demonstrated Darwin in the ARES project, and this has strongly influenced the design of Koala. They also stimulated me to publish my work. Jeff Magee helped me to analyze the HorCom protocol with his LTSA.

The initial team that designed Koala consisted of Aad Droppert, Hans Jonkers, Gerard van Loon, Marc Loos and myself. Pivotal were comments by Robert Jagt and Maarten Pennings. Hans van Antwerpen and Maarten Pennings implemented the first Koala compiler. In subsequent years, the responsibility for the compiler was taken over by Chritiene Aarts, Bram Stappers and Rob Wieringa.

The MG-R architecture was designed by Hans van Antwerpen, Gerard van Loon and me. Initial subsystem architects were Chritiene Aarts, Klaas Brink, Maarten Pennings and Ganesh Thonse. John Coumans was our project leader.

More people became involved when the project was scaled-up. Among these were Wim Baekelandt, Elmar Beuzenberg, Kathleen De Sutter, Vinay Deshpande, René Geraets, Eric Heijkers, Padma Kulkarni, Dirk Lietaert, Geert Neuttiens, Louis Stroucken, Geert Vancompernelle, Mikaël Van Herpe, Jan Verbeke, Theo Vergoossen and Emiel Wijgerink. Important managerial roles were filled by Otto Voorman and Jan Rooijmans.

Within research, I learned a lot from cooperation in the *Composable Architectures* project, with Pierre America, Marcel Bijsterveld, Frank van der Linden, Jürgen Müller, Gerrit Muller, Henk Obbink, William van der Sterren and Jan Gerben Wijnstra.

Jan Bosch was instrumental in placing my work in the larger context needed to write this thesis. We first met in 1998, and first agreed on the topic of my thesis in

2000. That it took me so long to complete the thesis just shows how much I appreciate working with Jan.

Many other people provided valuable remarks, invited me to give presentations, or asked me to join program committees or otherwise help to organize workshops and conferences. Among these are Lenn Bass, Marcello Bonsangue, Joe Baumann, Paul Clements, Ivica Crnkovic, Eric Eide, Stefan Ferber, Dieter Hammer, André van der Hoek, James Ivers, Merijn de Jonge, Kyo Kang, Charles Krueger, Neil Maiden, Tomi Männistö, Nenad Medvidovic, Robert Nord, Linda Northrop, John Regehr, Heinz Schmidt, Judith Stafford, Kurt Wallnau, and last but not least, David Weiss.

There is life after Koala as described in this thesis. Evgeni Eskenazi, Robert Jagt, Piërre van de Laar, Milan van den Muyzenberg, Gerben Soepenber and Ivan Vojsovic provided valuable input to extend Koala with various features. A major upgrade named Koala2 was recently designed by Chritiene Aarts, Bas Engel, Pieter Kunst, Milan van den Muyzenberg, Jacques Swillens, Jos Vergeer, Bernard van Vlimmeren, Rob Wieringa and me. Additional features are now being studied by Paul Hoogendijk, Piërre van de Laar, Felix Ogg and Jur Pauw. Reinder Haakma created an interesting variation on Koala, named Kangaroo. Maurits Rijk measured reuse in MG-R.

The work described in chapter 2 was done together with Reinder Bril, Loe Feijs, René Krikhaar and André Postma.

Hennie Alblas designed the cover of this thesis. The Koala diagram on the front page was created with KoalaViewer, a tool made by Chritiene Aarts, and it shows an early version of our TV platform using the HorCom protocol. The TV on the cover is an FL-1 that we bought around 1992, while I was sleeping, recovering from a concussion.

I am glad that my children Kim, Michael and Jamie can now finally read about what I have been doing all these years. Kim also helped me with the layout of this thesis. I thank my father and my late mother for laying the fundamentals for this work. Last but not least, I want to thank my wife for all the support that she gave me during the years I have been working on this thesis, especially all the holidays that she arranged to give me time to write, to think and to talk to her about this subject. Had I written this last sentence myself, I couldn't have put it any better.

Hapert, October 20<sup>th</sup>, 2004.