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### Framework for path finding in multi-layer transport networks

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# Acknowledgment

Dear reader, this book is –by definition– written for you, regardless of whether you have read everything so far or immediately skipped to this acknowledgment (yes, I’m talking to you). There is nothing as depressing as working on a book for years if no-one is even going to open it.

“Years,” you ask? Yes, years. And I wasn’t even the only one doing the work. Jeroen van der Ham, Bert Andree and Karst Koymans did a lot of the thinking. Bert and I were working with group theory and XML to describe networks when Jeroen listened to an idea from Franco Travostino and pulled *NDL*, the *Network Description Language*, out of his sleeve. If it wasn’t for this, we would still be struggling.

Karst Koymans was the first to suggest to look at the ITU-T G.805. Karst, I dedicate the path finding ‘puzzle’ in [section 3.3.1](#) to you.

“ITU-T G.805?”. Sorry about the technobabble. It’s a standard, and if you think the name is unreadable, wait till you see the gobbledygook inside. It took us over a year before we turned abracadabra like “*A transport processing function that consists of a co-located adaptation source and sink pair*”<sup>1</sup> into [section 4.3](#) of this thesis.

Cees, you owe me a crate of beer now. You are the living proof that free-form thinking in a scientist is a solid recipe for great new ideas. Of course you also prove that it is pointless to try to steer a bright mind. “Cees, I need to talk to you about chapter 3.” “Oh, that’s great. Let me show you how to play a 4k movie on my iPod first.” It’s amazing to see how far you are in front of the troops. Your idea that led to my first paper (on the multi-layer nature of optical exchanges) was published in late 2003, but only recently attracted attention from others.

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<sup>1</sup>So, that’s what the page number graphics represent. Now you see?

## ACKNOWLEDGMENT

Paola, where Cees lacks in orderliness, you make up for it. Lighthouse or not, *you* have been the guiding beacon at the UvA during the last few years.

And there are so many more people to mention and thank. The members of my graduation committee, Pieter Adriaans, Rob Meijer, and in particular Tom DeFanti and Pascale Vicat-Blanc for traveling from abroad. My promotor, prof. Sloot, who I thank for taking the time to read my thesis. Colleagues and students, in particular Hans, Jaap, Erik, Ralph, Matthijs, Damien, Bas, Ronald, Niels, Arie, Andree, JP, Fred, Paul, and Li, I owe you all a drink. My current colleagues at SARA deserve recognition for their patience while I was making last-minute corrections to this thesis.

When I started this work, I did not want to look into path finding. Someone with my last name could not live up to the expectations<sup>2</sup>. Nevertheless, the topic appeared too tempting for me to ignore. Fernando Kuipers and his colleagues at TU Delft have been extremely helpful in developing path finding algorithms (I can only hope that the quality of this thesis approaches that of Fernando's).

SURFnet has not only financially supported this work. Without the Gigaport project, I may not have met all the partners, TU Delft, Universiteit Twente, TNO, SARA, and others. Gigaport, above all, has been a club of friendly peers. If only the EU projects would take the same approach to a no-nonsense project overhead, there would be so much more great research.

Maxine Brown and Robert Patterson allowed me to include their GLIF map (figure 1.3). SARA and UvA financially supported the printing costs of this thesis, which allowed me to have an even fancier reception after my defence.

There are so many people I met in the GLIF community, OGF organisation and at conferences, that it is undoable to list everyone of them. So I will not even try. Talking to you certainly shaped my ideas, and perhaps it sometimes also shaped your ideas. I hope to talk to all of you in the foreseeable future.

Hennie, Wil, thank you for your during support. I wouldn't even have started, let alone ended this journey with your inspiration and kind steering all these years. My sister Marrit and my friends, thank you for your continued patience when I was busy once again. Floris and Jeroen deserve special recognition. Even after putting up with me, they still support me as paranympths during my defence. My accomplice all the way was Caroline. Impatient sometimes ("It's over four years now, are you done yet?"), but always loving, caring and supportive. Supportive even when I was coding deep into the night with little attention for her. Thanks to invention of the laptop and wireless Inter-

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<sup>2</sup>Of course I'm talking about Edsger W. Dijkstra.

## ACKNOWLEDGMENT

net I could fulfil two tasks at once, keeping her feet warm in bed and keep on working next to her side. Even the ridicule by St. Nicholas<sup>3</sup> that inevitably followed did not stop me.

And with that we come to the end of this dissertation. There is always more to discover, but I leave that up to you, dear reader. If computer science is not your cup of tea, may I suggest a statistical distribution on my grammatical flaws per chapter? I'm sure there are countless plural errors left. Or perhaps you like to know what has occupied me for so long. [Section 1.1](#) to [1.3](#) or even [section 3.3.1](#) are good starting points. I'm done writing, I hope you enjoy the reading.

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<sup>3</sup>It is Dutch custom to make small poems for relatives on the eve of St. Nicholas' birthday.

