Notice of the Final Oral Examination for the Degree of Master of Science of

CARLOS GOMEZ

MSc (Universidad del Valle, Colombia, 2013)
BSc (Universidad Icesi, Colombia, 2005)

“Towards Understanding Communication Channels Within a Community Through Knowledge: An Exploratory Case Study”

Department of Computer Science

Friday, December 18, 2015
10:00 A.M.
Engineering and Computer Science Building Room 542

Supervisory Committee:
Dr. Margaret-Anne Storey, Department of Computer Science, University of Victoria (Supervisor)
Dr. Daniel German, Department of Computer Science, UVic (Member)

External Examiner:
Dr. Olga Baysal, Department of Computer Science, Carleton University

Chair of Oral Examination:
Dr. Jutta Gutberlet, Department of Geography, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies
Abstract

Media channels play an important role in knowledge flow, collaboration, coordination and communication activities that occur between programmers. Understanding how programmers use media channels is key to improving developer practices and support channel evolution. In this thesis, we investigate the way programmers use media channels to share knowledge within a particular software development community. By applying a case study methodology, we analysed the R community on Stack Overflow and the R-help mailing list-both Q&A channels-using a qualitative approach. A survey was also conducted to expand and reinforce our findings. Our study resulted in the creation of a model for a systematic comparison between two or more media channels within a community of practice. This model could be used in future studies to explore the knowledge within multiple media channels simultaneously. Moreover, based on our observations and the opinions of our survey participants, we collected a set of recommendations to assist in the usage of multiple Q&A channels. Additionally, we created a categorization of the knowledge that flows through the channel ordered by type of messages (e.g., questions, answers, and comments) that can be used to compare the knowledge sharing practices on both channels.