Acknowledgement

While a dissertation is the culmination of an individual student career, it typically benefits from the cherished contributions of many colleagues, professors, friends, and family members. This section is a brief attempt to express my feelings of gratitude to all those who have enabled me to complete my Ph.D.

I thank my Lord and Savior Jesus Christ for giving me knowledge, health and time to do my Ph.D which in my earlier years I did not dream of.

Needless to say, the greatest contribution has been from my Research Advisor, Dr S.V Kasmir Raja. I have had the pleasure of working with him, and learning from him, for many years now. Dr.S.V.Kasmir Raja exhibited a large reservoir of patience and flexibility to allow me to achieve the Ph.D at my widely varying pace. I am honored by my collaborations with him and look forward to get more guidance from him for the rest of my career.

My thanks are due to Dr.S.Albert Rabara at St.Joseph’s College, Tiruchirappalli my Doctoral Committee Member who gave valuable suggestions to me. His innovative way of telling me to add certain portions in my Ph.D thesis has made my work more standard.

I would like to thank the Principal of St. Joseph’s College, Tiruchirappalli Rev.Dr. Rajarathinam R SJ for allowing me to use the resources of the college whenever needed. I would also like to thank the former Principal of St. Josephs College, Tiruchirappalli Rev. Dr. Leonard SJ for allowing me to do my Research at this Prestigious College. It was indeed a great privilege for me to do my Research at one of the “College with Potential of Excellence” in this part of India.

The Management of Bishop Heber College, Tiruchirappalli has always been a source of encouragement to promote research work. I would like to thank them for providing me with the right ambience to do research and for supporting me in my
endeavors for International Conferences. I would like to express my thanks to Prof. D. Swamiraj, Director, Bishop Heber College, Tiruchirappalli for motivating me to do more and more research every time I met him.

My Special thanks are due to Dr. Marcus Deipan Boominathan, Principal, Bishop Heber College, Tiruchirappalli under whose leadership, the College is moving from strength to strength in research. I thank my Principal for always encouraging me and wishing me for a speedy completion of my Ph.D whenever I happened to meet him at his office.

Prof. V. Natrajan, The Head, P.G Department of Computer Science and Applications of Bishop Heber College, Tiruchirappalli has been a Teacher, Guide and Friend to me for many years. I would like to thank him for teaching me not only Computer Science, but also to do things in a systematic manner which helped me during my Ph.D work.

I would also like to express my thanks to Prof. D. S. Ravi, Head, Department of Computer Science, St Joseph’s College, Tiruchirappalli for helping me to use the resources at St. Joseph’s College, Tiruchirappalli.

Besides, I would like to thank all my colleagues at Bishop Heber College, Tiruchirappalli for supporting me and encouraging me all through my days of research work. Special thanks goes to Dr. Henry Amirtharaj for his constant encouragement to complete my research work quickly and to Mr. Srinivasa Reddy for helping me to get the resource materials from IISc, Bangalore. I would like to thank my department colleagues who stood by me and motivated me during hard times which actually made me to complete my research work soon. Special thanks to Mr. Pradeep, System Administrator, Bishop Heber College, Tiruchirappalli for providing me with a reliable, fast internet connection close to my table in the college. I would like to extend my thanks to all my friends at various colleges in and around Tiruchirappalli for encouraging me to complete my research work soon.
Special thanks are due to Prof L.Arockiam, Dept of Computer Science, St.Josephs College and Prof D.I.George Amalanathan, Dept of Computer Science, Jamal Mohammed College, Tiruchirappalli for their valuable help and suggestions during my thesis documentation.

I would like to thank Prof. M.Rajkumar, Stanford College, Kuala Lumpur, Malaysia for helping me by all means when I was there to present a paper. I would also like to thank Prof. Andrews and Prof. Clements at Multimedia University, Melaka, Malaysia for sparing their time to be with me when I was there to present a paper. Special thanks are due to Dr. Daniel Chandran., Professor of Information Technology, University of Sydney, Australia for providing me with lot of technical details. I would also like to thank Prof. Manimaran, Associate Professor, Dependable Computing and Networking Laboratory (DCNL), Dept. of Electrical and Computer Engineering , Iowa State University, USA for giving me valuable guidance during my earlier part of my research work.

I am thankful to my cousin Mr. Richard Keisar Samuel, Senior Web Designer, Infosys Technologies, Bangalore, for helping me in my thesis work. My thanks are due to Mr. Sajay Selvaraj, HCL Technologies, Chennai, Mr.Subramanian, Wipro Infosystems, Bangalore and Mr. Siva Subramanian of Cognizant Technology Solutions, Chennai for providing me with the necessary books on my research area which actually gave me a strong foundation for my research. My thanks are due to my MCA and M.Phil students for helping me in implementations. I would like to express my thanks to Prof. Arul Daniel at NIT, Tiruchirappalli for helping me to get the necessary simulators for my research work.

I was honored to have discussed, argued, and collaborated with my fellow Researchers at St.Joseph's college, Tiruchirpalli and I would like to thank them for giving me some useful ideas for my research work.
All that only covers the official side of things. More than half the battle is fought away from the academic corridors. I have been fortunate in having been married to my dear wife Sinthu Janita. I have shared my life, with all its joys and sorrows, successes and failures, with her. I am grateful to her for making my research studies her most pressing concern, and ensuring that it received the highest priority. Most of my Ph.D work, carried out between 2004 and 2006, was done at home and my wife was my equal collaborator. My thanks are due to my son Joshua Pravin and daughter Joanne Pranita for allowing me to concentrate on my research work.

My biggest debt is owed to my parents. It is they who cultivated my academic interest and pushed me to excel in my studies. My parents never lost faith in my goals, and always provided the right amount of support, encouragement, prayers and advice. I would like to thank my Elder brother Joe’s family and my sister Grace’s family for supporting me through their prayers. I thank Uncle Ponraj Issac for his timely help in translating the abstract in Tamil.

I am thankful to my mother-in-law for her prayers and help. I would also like to thank my co-brother Kennedy’s family for their continuous support and supplication which was crucial for the success of my studies. My special thanks are due to my sister-in-law Minthu Vinita for help timely help during my thesis documentation.

Finally I would like to thank all who have supported me, encouraged me, motivated me and advised me indirectly to complete my research work.

E. George Dharma Prakash Raj