ACKNOWLEDGEMENTS

I express my sincere thanks to my guides *Dr. Nihal A Siddiqui* and *Dr. Chinmaya Kar* without whose continuous support and mentoring, the work could not have completed.

I continue to express my full gratitude to *Honeywell* for providing higher education assistance and sponsoring the tuition for this research journey.

At this juncture it is important to thank my managers *Kondaiah Dasari* (Director, Engineering, Honeywell Technology Solutions) and *Edukondalu Yarlagadda* (Global Director, Engineering, Honeywell Analytics) for continuously supporting me through this journey.

I sincerely thank mentoring I obtained from *Srinivasan Rajagopal*, Director of Systems Engineering, Honeywell, *Ramakrishnan Raman*, Practice Head, Knowledge based Engineering, Honeywell and *Boby K Joseph*, Sr. Director Engineering, Automation and Control Solutions, Honeywell.

I also hereby thank *Toby Jaffey*, whose open-source microcoap implementation helped me to develop and verify the OR3C communications model on CoAP.

I thank the enormous support from Common tools framework team, *Rajagopal, Karthikeyan and Pavan and its architect (Srini)* which was used to develop the visual information model.

I wish to thank innumerable reviewers who had reviewed my research publications and suggested better ways to represent and communicate the material.

I wish to thank *Sujeyendra Tummala, Hemanth Reddyvari* from Honeywell for their support to critically examine the model.

I am grateful to **Dr. Srihari, Dr. Kamal Bansal, Dr. Sushabhan Choudhury** and other senior faculty members at UPES for their critical reviews on my research work at various stages.

I also thank *Dr. Anjali Midha, Ms. Rakhi, Mr. Abilash Dubey and Dr. Aparna Singh* in supporting university related and administrative matters without much worry.

Lastly I owe this entire research to my family without whose support no part of this journey could have been accomplished.

I sincerely thank my parents *Usha and Bala* for always helping me to see through things and examine subjects.

I would have to thank my wife *Aparna* and our daughter *Deekshaa* for their understanding and support without which this entire course could have been unimaginable.