

Acknowledgements

I am in hearty appreciation of patient discussion and proper guidance received from my advisor, Dr. Hsi-Jian Lee, not only in the course of this thesis study, but also in every aspect of my personal growth.

I think to Shan-Lung Zhao for his suggestions and encouragement and the dentist, Weng-Kong Tam, for his professional advice and dental images. Appreciation is given to the colleagues of the Document Processing and Character Recognition Laboratory at National Chiao Tung University for their assistance on this thesis.

Finally, I would like to express my deep gratitude to my family and my friends for their help and encouragement in those working days. I would like to dedicate my dissertation to them.

