

**The Study on a Chinese Calligraphy Font  
Generation**

by

**Lei Sio Cheong**

**E-Commerce Technology Master Degree**

**2007**



**Faculty of Science and Technology  
University of Macau**

## TABLE OF CONTENTS

List of figures.....	vi
List of TABLES.....	viii
Chapter 1: Introduction.....	1
1.1 Introduction.....	1
1.2 Motivation.....	1
1.2.1 Simplify the process of making font.....	1
1.2.2 Help people to learn.....	3
1.2.3 Attract people to use calligraphy in the digital world.....	3
1.3 Objectives .....	5
1.3.1 Generate Chinese characters .....	5
1.3.2 Simplify .....	5
1.3.3 Personalized font.....	5
1.3.4 Over 75% similarity.....	7
1.4 Scope of the project .....	7
1.4.1 Standard (regular) style.....	7
1.4.2 Traditional and simplified Chinese are available.....	8
Chapter 2: Character Generation .....	9
2.1 Method .....	9
2.1.1 Build a unicode list .....	10
2.1.1.1 Reasonable and Beautiful .....	13
2.1.2 DEFINE CHARACTER.....	13
2.1.3 Collect radical .....	14
2.1.4 Adjust Radical.....	15
2.1.4.1 Adjust Radical Position .....	16
2.1.4.2 The Similar Mark.....	18
2.1.4.3 The Comparative Font .....	19
Chapter 3: Detailed Technology .....	21
3.1 Introduction.....	21

3.1.1 Adjust Width of Stroke .....	21
3.1.2 Manual Adjust.....	22
3.1.3 The XML-defined character structure .....	24
3.1.4 Remove noises .....	32
3.1.5 Cropped size .....	34
3.1.6 Glyph to be generated .....	35
Chapter 4: Developing Tools.....	38
4.1 Developing tools .....	38
4.1.1 Borland Delphi.....	38
4.1.2 ImageEn for Delphi .....	38
4.1.3 Microsoft Access .....	38
4.1.4 Unicode-at-on 2.50 ( <a href="http://uao.cpatch.org/">http://uao.cpatch.org/</a> ) .....	38
4.2 Database Design .....	39
Chapter 5: Conclusion .....	40
5.1 Conculsion .....	40
5.1.1 The influence .....	40
5.1.1.1 Quantity of source character .....	40
5.1.1.2 Quality of source character .....	40
5.1.1.3 Formal versus Informal Calligraphy.....	40
5.1.1.4 The structure of character .....	41
42	
5.1.2 The percent of finished .....	44
5.1.3 Benefits .....	44
5.1.4 Develop.....	44
5.1.5 Open source .....	44
5.2.1 Seal style, clerical style, walking style and grass style.....	45
5.2.2 Formula.....	45
bibliography .....	46