DEVELOPMENT OF A THAI TYPEFACE
FOR PHOTO LETTERING APPLICATIONS

By

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INTRODUCTION AND OBJECTIVES

The purpose of this thesis was to design a Thai alphabet of display letterforms to be used with the Staromat Automatic Photo Typesetter.

This thesis attempts to accomplish the following objectives:

1. To design a unique Thai sanserif typeface to meet the special requirements of display typography.
2. To design a simple style typeface that is easily recognized and legible.
3. To design an alphabet to be used as a vehicle for creative expression through manipulation.
THAI ALPHABET AND ITS USE

The Thai alphabet was developed in 1292 A.D by the Thai king, Ramkamhang. Originally the Thai alphabet was written with brushes and pencils. No geometric forms were involved. These forms were, however, necessary with the coming of movable type 400 years ago.

Thai-composed scripts, like English, are not symbols like Chinese. They are read and written from left to right. There are no capital letters in the Thai alphabet. Another difference is that Thai letterforms have three separate vertical parts in the same line. The middle letters represent consonants and the upper and inferior letters represent vowels. Spacing occurs between sentences but not between words.
"Thai Old Style" hand lettering
DESIGN PARAMETERS FOR DISPLAY AND SIGN LETTERS

1. The face should be simple in style and form.
2. The proportion and shapes should be legible.
3. The shapes should be easily recognized.
4. The weight should be bold enough to be effective and legible when seen from a distance.
PHOTO COMPOSITION

Photo composition machines "facilitate the arrangement of words with visual logic rather than as continuous prose." Photo lettering machines are mostly small, portable, light in weight and are operated manually.

Photo lettering is generally used for setting display lines and headings made up of individual letters. It is usually produced on strips of photographic film or paper. One letter at a time is exposed in a machine either by contact or projection. Some machines not only produce a contact print but reproporion and italicize as well.

All work for this thesis was done with the Staromat Automatic Photo Typesetter. The letterforms were transferred to meet Staromat specifications by photographing them on 4"x 5" Kodalith film. The strip of film was then inserted between two strips of plastic.

1. The Visible Word, by Spencer
STAROMAT

Basics

The Staromat is an automated photo typesetter distributed by the Photo Lettering Division of the Simmon Omega Co., Inc., and is available for use in the Communication Design Department at Rochester Institute of Technology.
EXPOSITION

The following list contains the sequence of development for this thesis:

1. Letterform development
2. Determination of weight and proportion of letterforms
3. Design of the finished letterforms
4. Development of mechanicals to conform to the Staromat specifications
5. Photographing on Kodalith film
6. Stripping
7. Contact printing on Kodalith duplicating film
8. Testing the negative with Staromat
9. Analysis of the characteristics of letterforms
10. Comparison of the new letterforms to the old styles
11. Evaluation
DETERMINE WEIGHT AND PROPORTION OF LETTERFORM

The decision was made to design a medium weight alphabet because a medium weight may be used in many applications. (below)

The proportion of the standard letterform is 3 : 4. This proportion applies itself well to the total alphabet and appears natural. (below)
The main problem with Thai letterforms is the spacing between letters. In the design of the new letterforms, when one element was changed, the others that looked similar had to be changed to fit the patterns.

The letters " aç " and " sā " of the old typestyle, when situated close together needed twice as much space as required by the same letterforms in the new alphabet. (above)

Finally, the letter " aç " and " sā " had to be changed to improve the spacing. (above)
Letters "ר" and "ך" possess very strong male characteristics. They work well by themselves, but do not integrate well with others. (below)

Curves at the front and the back of these letterforms made "ר" and "ך" look better as distinct forms. They create a more pleasing association with other letters.
Tests were made to demonstrate the various letter sizes that can be generated on the Staromat photo-typesetter, using the same negative font.
ANALYSIS OF THE LETTERFORMS

The finished typeface design has the characteristics as follows:

1. The forms must be based on geometric shape.
2. The upper, middle, and inferior letters in the lines must look as uniform as possible.
3. The size of the letters must adhere to fixed patterns.
4. The thickness of the line (strokes) must not be exaggerated.
Total view of the Thai alphabet including the Thai and Arabic numberals

กับขั้นจรรยาสมัย
บนบพพพพพพ
ปัญญามนต์ตาก
ลวงบลหพิย

๐ ๑ ๒ ๓ ๔ ๕ ๖ ๗ ๘ ๙ ๐

ไม่ เฉล
ตระหนัณฉะ
๑๒๓๔๕๖๗๘๙๐
ความพุ่มเพียยในสังคมไทย

ความพุ่มเพียยในสังคมไทย

Luxury in the Thai Society

(Comparison of the new type style with an existing version of Thai monotype)
ธนาคารกรุงเทพ จำกัด

ธนาคารกรุงเทพ จำกัด

Bangkok Bank Limited

(Comparison of the new type style with an existing version of Thai hand lettered type)
Comparison of the new type style with an existing version of Thai hand lettered type.
พิษภัยจากสิ่งแวดล้อม

Evil from the environment

(Comparison of the new type style with an existing version of Thai monotype)
I did my best
EVALUATION AND CONCLUSIONS

The thesis was developed in two phases. Phase one involved the design and gradual development of the letterforms. The time involved in this particular phase constituted a major portion of the total. Phase two was devoted to transferring the letterforms to photo negatives to be used on photo typesetting equipment. At this stage, through the use of the negatives, photoprints of the letterforms were generated.

Phase One, the Design/Development Phase, progressed as I had expected. I had thought about the development of this type face for a long time and my expectations were quite high. Upon completion, I felt my wishes and expectations were fulfilled. It is my opinion that the letterforms relate well with each other and letterform combinations are easily read and create pleasing figure/ground relationships.

Unfortunately, Phase Two and its development was not what I had expected. I feel that due to a lack of the proper photomechanical equipment and also to an inadequacy of knowledge on my part in the area of photomechanical reproduction, the quality of the photo negatives are not as good as anticipated. Also, I had hoped to have the negative type font laminated but found that no firm in the Rochester area was able to laminate it for me.
In spite of the inadequacy in certain areas as related to the development of the thesis, I am tremendously pleased with the outcomes of the problem.
BIBLIOGRAPHY


3. *Japan Lettering & Typography Annual*  
   (The remainder of the information about this book was written in Japanese and was impossible to translate)