

The purpose of this thesis is a study and comparison of voicing of the initial bilabial stops appearing in the Southern and Central Thai. The study is based on the sound spectrographic analysis of the wide band filter of the initial bilabial stops. The four initial stops analyzed are /b p ph<sup>̣</sup>/ (u u n n) appearing in 12 words which are /ba; ḅa: ḅa:/, /pa; p̣a: p̣a:/, /pha: pḥa: pḥa:/ and / pḥa: pḥa: pḥa:/.

The results of the analysis are as follow :

1. Voice timing of the initial stops /b p ph<sup>̣</sup>/ in the Southern and Central Thai are not affected by the nonexistence of existence of the first tonal mark or the second tonal mark.

2. There is a difference in voicing between the initial stops /b p ph<sup>̣</sup>/ in the Southern Thai and those in the Central Thai.

3. In the Southern Thai, it is found that there is a difference in voice timing of the initial stops, in each pair... (b p) (b ph) (b<sup>̣</sup> ph<sup>̣</sup>) (p ph) (p<sup>̣</sup> ph<sup>̣</sup>) (ph<sup>̣</sup> ph<sup>̣</sup>) that is the first initial stop has a stronger voicing than the latter.

4. In the Central Thai, the difference is found in voice timing of the initial stops in these pairs... (b p) (b ph) (b<sup>̣</sup> ph<sup>̣</sup>) (p ph) (p<sup>̣</sup> ph<sup>̣</sup>) and the first initial stop has a stronger voicing than the latter, except in the pair of (ph<sup>̣</sup> ph<sup>̣</sup>).

5. The initial bilabial stops /b p ph<sup>̣</sup>/ in the Southern Thai has a stronger voicing than those in the Central Thai.

All the differences found are statistically significant at the level 0.05.