

CHAPTER 6

CONCLUSION AND SUGGESTION

6.1 Conclusion

The program of color perception of Thai observers, which obtained from this research, has many advantages as in color communication. It can display the colors, which related to human color emotions, by calculating through the twelve color perception equations. The developing of program are divided into two system such as the developing by Java application and the developing by Java applet.

The developing by Java application, the colors are displayed on the monitor by the process of monitor profile, which obtained from this research. This monitor profile are created from the CRT techniques have been summarized by Berns and can be described as the gain-offset-gamma (GOG) model to characterize this nonlinear relationship. And its process includes two models such as the Forward model, which includes the transformation matrix and the GOG model, and the Backward model, which includes the inverse transformation matrix and inverse GOG model. The efficacy of the monitor profile depends on the accuracy of the color reproduction. And the accuracy can analyze from the CIELAB color difference (ΔE_{ab}^*). From the previous results, the standard deviation and the average of the CIELAB color difference are 0.21 and 0.55 respectively.

The developing by Java applet, the colors are displayed on the monitor by the process of sRGB's profile, which created from the average performance of personal computer displays. The obtained efficacy of sRGB's profile lower than the monitor profile because the standard deviation and the average of ΔE_{ab}^* is 2.11 and 4.98. Thus, the monitor profile is a more suitable tool for the experimental monitor. However, this sRGB's profile has more advantage than the monitor profile. Because it is a more suitable tool for the most monitor since it makes the most monitor are similar in their key color characteristics.

Therefore, in color communication on the Internet, the program, which are developed by Java applet, is a more suitable program.

Finally, in this research, the color perception programs are developed in the highest efficacy. The characteristic of program consists of five parts; color perception values, color space values, color frames, color sample frame, and color saving. The users can select the color sample from the color frames. And the selected color sample is display in a color sample frame. And the values of color perception and color space are displayed on the monitor. The users can save these values of color sample in Panel.txt. And the saved colors are recorded on grid frame for comparison of other color samples.

The color perception values, which were displayed on monitor, can describe the probability of color emotion of Thai observers in each opponent word pairs of the selected color sample. For example, +75 of Soft-Hard word pair means the probability of color emotion is 0.75 for soft emotion and 0.25 for hard emotion. And -75 of Soft-Hard word pair means the probability

of color emotion is 0.25 for soft emotion and 0.75 for hard emotion. For 0 of color emotion value means the probability of both opponent emotion equal. Because the number of Thai observers of both opponent word pair equal. In this case, we can not decide the color emotion of that word pair of selected color sample.

6.2 Suggestion

Java applet and Java application have the difference operation. Java applet can operate on Internet web sites, but Java application can not. Thus, the users have to install JDK 1.3 by free downloading JDK 1.3 from <http://java.sun.com>.

After that the computer must be set in Autoexec.bat file of C drive by SET PATH = %PATH%;C:\jdk1.3\bin and its has to be restarted.

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