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SUPARERK PISUCHPEN: A DEVELOPMENT OF SCALING
CONTROL MECHANISM FOR FASTER ACCESSING WORLD WIDE WEB
SYSTEMS. THESIS ADVISORS: THANATORN UAN-ON D.ENGR., WANCHAI
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The objective of this research was to develop a program, which accelerates access time for searching and viewing image information on the WORLD WIDE WEB. The program can help people to quickly search and view image information on the WORLD WIDE WEB by reducing the quality of images (JPEG) and keeping them in cache.

This program consists of 5 parts. The first part is the main control part, which performs a setup system, waiting client connection, connection to client socket, and controlling the number of connections. The second part is the http-header handle part, which performs: getting a requested message, intercepting a requested message, verifying a message, deciding to modify a message, and deciding to get an image from the cache control part or web reader part. The third part is the cache control part, which performs creating image index and keeping information of images, searching image filename from cache image index, and getting an image from the cache. The fourth part is the web reader part, which performs creating a socket connection to a destination (web server or another proxy server), sending a requested message to a destination, getting a response message from destination, verifying a response message, deciding to convert quality and cache JPEG images, sending JPEG images to client, and controlling thread queue to use quality convert program. The fifth part is the image quality convert part. The part performs reading JPEG image from the web server or proxy server, verifying JPEG image size, deciding to convert image quality, calling quality convert program, sending image to client and write it to file.

The program reduces used time for searching image information such as knowledge base of herbage, animals, astronomy, etc. User can search image information on the WORLD WIDE WEB by primary method and easy to get original image.