

# Requirements for Developing Multimedia Teaching Materials under Linux

Hitoshi Yonaiyama  
Department of Management Engineering  
School of Engineering  
Tokai Univ.  
Japan

In recent years, financial conditions in our university may be getting worse, because of decrease of population of young generations in Japan. By these conditions, we have to develop efficient teaching materials in limited cost without information gaps among students. So we are trying the possibility of developments of the teaching materials by softwares of Linux. We would like to present collections for three teaching material developments of delivery of texts, presentation in lectures and supports of private studies.

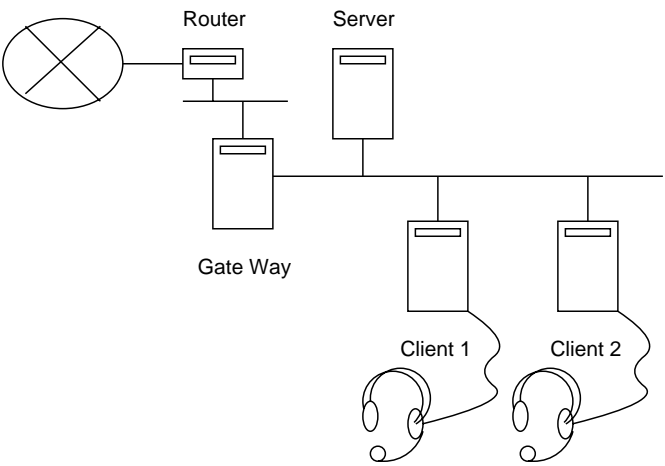
## 1. Introduction

Linux has been developed by Linus and other people all over the world, and it is distributed to all over the world in accordance with the GPL (The GNU General Public License). Therefore we can get it freely, and construct teaching material development systems by introducing it, very cheaply.

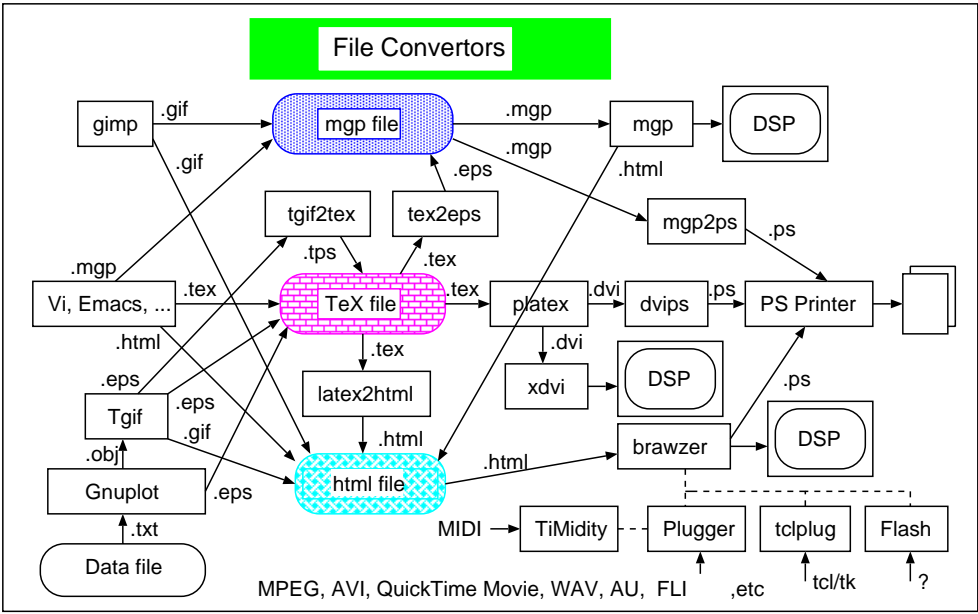
Our objects are management of learning progress of students, and to prepare the place for experiment for constructing business-models.

For the management of students, we have to construct communication tools which have multimedia functions integrated with streaming decoders, movies, sounds, graphics, photos, documents, etc. One of the most familiar tools for the multimedia is a Personal Computer (PC). For using these multimedia functions, each student has to only prepare a PC, a headphone and a microphone. And also a browser is needed. For providing the multimedia contents to students, we have to prepare servers, a camera, a video camera. For digitizing analog media, encoders are needed. We need editors for arranging materials, and also we need application softwares for producing contents. For transmitting the digitized contents, many kinds of server softwares are needed. Especially, we

have to treat many kinds of educational contents production softwares and converters. Searching and collecting these softwares are complicated and tedious work. So if there are maps to guide how to produce the educational contents and to edit materials, it may be very convenient for us.



2. A map for developing teaching contents and materials



Map for multimedia contents