

## ABSTRACT

Nowadays, a clear, transparent, credible, reachable and interactive government system, which is also able to accommodate every change effectively, is becoming Indonesian society's primary expectation. In order to solve the issue, Indonesian government, by president instruction number 3 in 2003, has a new concept about using government electronic application. This concept is now more popular as *E-Government* application.

President instruction number 3 in 2003 is a guidance for Indonesia in strategy to the planning and applying *e-Gov*. The designing step starts from developing a new network connecting internal and government units to each other. The government network must be able to run *front office* and *back office* applications which are dominated by multimedia applications (such as VoIP, Conference Video, IP-TV and Streaming) recently.

In this Final Assignment, there's a *blueprint* of computer network of Dinas Tingkat II Padangsidempuan city, which is also considering the amount of demands, network topology and network capacity and capability. Those 3 considered things will determine which hardwares are going to be chosen and selected in order to develop a network. In the network planning, there are 3 network interconnection alternatives connecting office area A and office area B. office area B is divided into 3 smaller areas according to working nearness.

Alternative 2.a is more optimal than other ones. Besides, alternative 2.a is also suitable to Padangsidempuan City that wants to centralize its government park onto area B. Alternative 2.a need connection BW to reach ISP for area A as much as 4096 Kbps and for area B as much as 8192 Kbps.

*Keywords : E-governments, computer network, Demand Planning, Capacity Planning, network topology*