ABSTRACT

PSTN (*Public Switch Telephone Network*) is telecommunication network conventional available overall in Indonesia. So that, many customer use it for transfer data or voice. It is like service of customer centric, example public services using communication contact with PSTN's phone. Services like that need person capable, but also need support of information system which supporting performance. The Growth of information system is demand easly and representative model for real condition. Then for fill that needed from that geographic. However needed advance and needed a system can be reach information with real time would condition system existing and then user can know what happen in the system. PSTN (Public Switch Telephone Network) are conventional telecommunication network is provide according to expanding in Indonesia. Because the providing, many user of service telecommunication using PSTN network as modus for mutually of change information data or voice. PSTN costumer certainly have permanent location. With that characteristic, if occur a calling, and called know the telephone number are information of caller location can knowed too. In this matter the real application time call tracer telephone PSTN posted for to know the identity of caller from PSTN costumer with visualitaton shorter route with using algoritma djiktra from caller location to called location telephone.

Call tracer real time PSTN phone based on GIS (Geographic Information System) is designed with use Visual Basic, Access Database and map tool like Map info and MapX Geoset as map processor. Tool that used to process caller ID is HP connected to computer by cabel appropriate with type of HP. On the other hand, modem can be used.

In performing the process, the system will appear caller ID of the received call by HP that connected to computer, than system will compare the caller ID with data of phonenumber saved in database. If caller ID is correct than system will perform computation to search the shortest path with use djikstra algorithm from the caller location to receiver call that the location and the phonenumber have been set. From the computation, system will visualize it in map, with the result that user can see the shortest path from caller to receiver call location.

Implementation the system of call tracer phone based on GIS can be use to control the existing system easily, because user can find information in a real time manner like the location that visualized and the effort to achieve it.