Abstract

VoIP (Voice Over IP) technology grows as fast as internet technology growth. Cheap and rapid development prospek become better choice than conventional telecomunication system based circuit switching.

In this final project, designed and implemented mobile device softphone on mobile device. Mobile device has limitation on resource like processor and memory, but it having excellence in better mobility. Softphone represent software that enabling hardware which support conectivity based on IP to use VoIP technology. Softphone that built use SIP and SDP protocol as signalling protocol. UDP transport protocol used on transport layer because its better of delay. Builded softphone still represent prototype of peer to peer call pursuant to SIP basic call flow. Application capable to make communication session as like as common peripheral phone using IP addressing by media of WiFi connectivity.

Pocket PC device which running Windows Mobile 5.0 and .NET Compact Framework 2.0 library and also integrated Wi-Fi adapter used on softphone implementation. Visual Basic .NET used as programming language.

Analysis emphasized at a requirement analysis in softphone impelementation and analyse to result of implementation testing. Based on testing, application functionality has fulfilled design that made. SIP protocol implementation and design has fulfilled RFC 3261. Delay and voice clarity depended by record time.

Keyword: softphone, SIP, SDP, UDP, pocket PC, VoIP.