# Asterisk RadIo Archetecture
## VoIP Based Campus Announcment System

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# Problem

**A geographically large campus with many groups of students have to implement an announcment system.**

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# VoIP

**VoIP** *is a family of technologies, methodologies, communication protocols, and transmission techniques for the delivery of voice communications and multimedia sessions over Internet Protocol (IP) networks, such as the Internet.*

**- Wikipedia.org, Accesed February 2, 2012**

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# Products Currently Available

1. xyz

**No Free Software** products exist, Though almost all core components are available in a compatible licence.

# Block Diagram
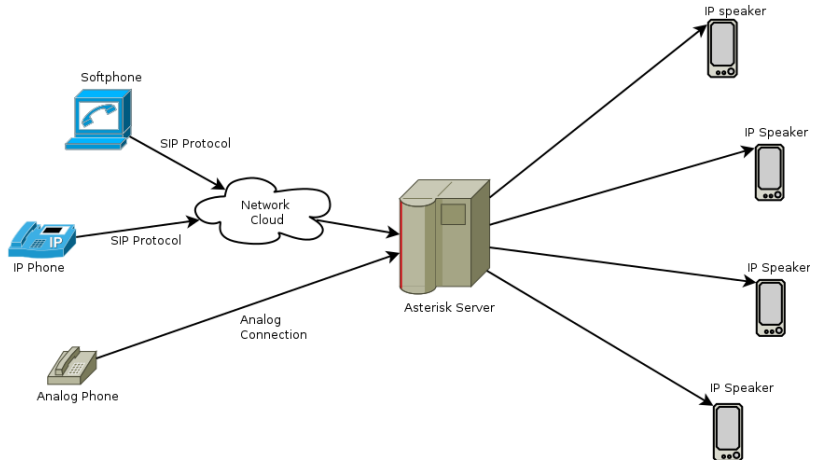
# Protocols

1. The **Session Initiation Protocol (SIP)** is an IETF-defined signaling protocol widely used for controlling communication sessions such as voice and video calls over Internet Protocol (IP). The protocol can be used for creating, modifying and terminating two-party (unicast) or multiparty (multicast) sessions.

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2. **RTP** provides end-to-end network transport functions suitable for applications transmitting real-time data, such as audio, video or simulation data, over multicast or unicast network services. *(RFC 3550)*

# Asterisk



**Asterisk** *is a software implementation of a telephone private branch exchange (PBX); it was created in 1999 by Mark Spencer of Digium. Like any PBX, it allows attached telephones to make calls to one another, and to connect to other telephone services including the public switched telephone network (PSTN) and Voice over Internet Protocol (VoIP) services. Its name comes from the asterisk symbol, \*.*

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**Asterisk** thus essentialy can act as a SIP proxy for routing the IP multicast trasport we needed to implement.

# Working