

SIP Protocol Operation: What is the relationship between MGCP and SIP?

The details of combining the two in a system are still being fleshed out. MGCP is a device control protocol, where a slave (gateway (MG)) is controlled by a master (media gateway controller (MGC), call agent). SIP may be used between controllers, in a peer-to-peer relationship. Note that to the SIP side, the MGC looks like a node with a large number of connections, but otherwise the same as a "native" SIP device. Similarly, the MG is completely unaware that the call between MGCs is established via SIP. Only the MGC needs to understand both protocols.

Additional details provided by Tom Taylor:

baglink:sip_h323_mgcp.gif

The basic architecture assumed by the Megaco Working Group postulates two functional entities: a Media Gateway Controller (MGC), which owns the call model and is responsible for call signalling, and a Media Gateway (MG), responsible for manipulating (directing, transforming) media flows under the control of the MG.

MGCP and Megaco/H.GCP are both protocols used between the MGC and MG when they are realized in separate physical elements. MGCP (Media Gateway Control Protocol) was a major source of the ideas in the current Megaco/H.GCP protocol draft, and is being deployed in a number of products being announced over the next few months. It is best suited for IP telephony gateway applications. The Megaco protocol is also called H.GCP because it is being developed cooperatively between the Megaco WG and ITU-T Study Group 16.

H.323 is a complete system specification, including call signalling protocols which would run between an MGC and another MGC or other H.323 entities (Gatekeepers, endpoints). SIP can also be used as a call signalling protocol, and can therefore be viewed as a competitor to H.323. Both protocols are capable of supporting multipoint multimedia conferences. H.323 was first standardized in 1996 and has been improved since then; current standardization is focusing on networking aspects such as translations data exchange and interworking with legacy telephony signalling. SIP just reached Proposed Standard status, but has attracted wide interest which may speed its maturing stages. The Megaco/H.GCP protocol will complement both protocols by also providing support for multipoint, multimedia calls at the media level.