SIP - The Driving Force in Desktop Multimedia Conferencing

We have recently begun to see the emergence of new videoconferencing solutions based on a new IP protocol – SIP.

Microsoft chose SIP as this signaling protocol for its Windows Messenger communications client, offering voice, video and data conferencing along with IM in a single interface/application. And Marconi earlier this year introduced its ViPr SIP-based desktop conferencing system for highly functional, highly scalable desktop videoconferencing.

It is important to note that, while in this piece we aim to highlight some of the technology benefits of SIP, we believe that each protocol offers its own strengths in IP-based multimedia communications - H.323 is more mature and widely used and SIP is more 'next-gen."

RADVISION's philosophy is that you should not force your customer to choose one protocol over the other . . . so our solution supports both standards, as well as ISDN and 3G wireless.

Of note, RADVISION was the first videoconferencing equipment provider to support SIP on its platform and interwork between SIP and traditional IP (H.323) and ISDN (H.320). We also fully support Microsoft's Windows Messenger SIP end point as demonstrated in a live network at the Networld+Interop tradeshow.

Why Should You Care About SIP?

There are five major reasons why you should care about SIP:

1. SIP has the potential to enable and actually spur the creation of many diverse end points and video-enabled applications
2. SIP is becoming a fundamental a driver for desktop (personal) conferencing – something that every reseller and system integrator should be tracking closely.
3. SIP is gaining market share and mind share with solution developers, such as Microsoft, because it enables ad-hoc communications. SIP is the only signaling protocol that incorporates IM (Instant Messaging) and presence, two technologies that are today driving ad hoc communications. So a communication between two people (ad hoc) can be launched by a short SIP-based IM message, then a click of a button upgrades the call to voice and/or video.
4. SIP is also gaining market share because, at least from our recent experience in the market, more and more large companies are looking to incorporate SIP into their networks – it is gaining significant traction – particularly with the emergence of IP communications network infrastructure and end points that fully support SIP.
5. Just because both SIP and H.323 are IP a communications protocol does not mean that they automatically interoperate with one another. In fact they don't.

To implement a SIP-based solution and integrate it into an existing H.323 (or H.320/ISDN) video network, you would need a gateway and MCU in supports SIP and both H.323 and H.320 in order to mediate the call. So SIP is not just a new flavor of IP – it is something you need to architect into your network.

What is SIP?

SIP is a signaling protocol for IP communications, much like H.323. In fact, the underlying packet handling if both SIP and H.323 is the same. Where the two protocols diverge is in the call signaling, which influences the call set up and breakdown, call control, and delivering advanced communications features.

Why Does SIP Have a Future?

We assume that visual communications needs three things to take off and move from the meeting room/conference room to the desktop personal multimedia communications (read: mass deployment).

1. Integration of video into voice and data/Web to deliver true multimedia (or rich media communications) – instead of videoconferencing as an overlay media applications ever separate
2. Improve ease of use in dialing and "reaching out to people"
3. Migration of voice, video and data to the personal communications level

While H.323 also addresses these three goals, SIP is a protocol that delivers unique solution to these three needs.

1. It enables easier mixing of video with voice and Web as never before and delivers it over IP to the desktop
2. The power of presence, delivered by SIP, enables easier communications
3. SIP provides the ability to initiate Instant Messaging (IM) sessions and so is a natural way to initiate and control a voice or video session.

From the technical/protocol point of view SIP also has some advantages over the H.323:

- Modularity – SIP is modular designed around WEB technologies versus H.323 that is an umbrella standard.
- Easier for debugging – no need to alter tools on each new extension
- Operators in charge of own services (Less dependency on the vendors since the code is text format and extension headers, while in H.323 code is binary and ASN.1 formatted)
- Internet friendly – Due to the modularity of the protocol and the better interaction with WEB protocols

As such, SIP is fast emerging as a signaling protocol which, while not eclipsing H.323, has a powerful place in the visual communications and rich-media collaboration network and architecture of the future.

Conclusion:

In conclusion, we are not suggesting that you “write off” H.323. The future of H.323 is very strong and any enterprise conferencing solution must fully support ALL protocols (SIP, H.323, and H.320 – ISDN).

Your customer needs a flexible solution to their conferencing needs, one the will let them roll out any end point and integrate it with their existing video network, regardless of the protocols used.

To do this, the vendor needs to choose a platform that supports all of the transport protocols for a true transparent communications experience agnostic – regardless of if the end point is running on SIP, H.323, or ISDN (H.320).