

No. 36 – SIP-I Support

Introduction

SIP-I, or the Session Initiation Protocol with encapsulated ISUP, is a protocol used to create, modify, and terminate communication sessions based on ISUP using SIP and IP networks. Services using SIP-I include voice, video telephony, fax and data. SIP-I and SIP-T are two protocols with similar features, notably to allow ISUP messages to be transported over SIP networks. This preserves all of the detail available in the ISUP header, which is important as there are many country-specific variants of ISUP that have been implemented over the last 30 years, and it is not always possible to express all of the same detail using a native SIP message. SIP-I was defined by the ITU-T, where SIP-T was defined via the IETF RFC route.

WTL have implemented SIP-I and this is available as a no-cost option in all products.

About SIP-I

SIP-I (SIP with encapsulated ISUP) is an ITU-defined SIP extension which allows IP networks to provide services that are supported by ISUP networks, for example, malicious call identification. The feature allows a Softswitch to interwork between SIP-I and ISUP, and also to interwork between SIP-I and other protocols such as SIP, H.323, and PRI. Where PSTN services are required in IP networks, SIP trunks with SIP-I support can be the preferred method for supplying these services, because the ISUP content is encapsulated in SIP message headers.

ITU-T Q.1912.5 covers SIP interworking with ISUP (Q.761-Q.761) and BICC (Q.1902.1-Q.1902.4)

It defines 3 Profiles:

Profile A does not encapsulate ISUP messages. ISUP information is mapped towards SIP headers. Standards of interest are: 3GPP TS 24.229, 3GPP TS 29.163

Profile B is also a pure SIP based solution generalizing some 3GPP specific details of Profile A to allow interworking with a range of ISUP networks.

Profile C (SIP-I) adds ISUP encapsulation to Profile B. Profile C is found where ISUP networks are interconnected via SIP backbones. The encapsulated ISUP messages are used for various purposes (e.g. meet regulatory requirements).

WTL SIP-I Support

Profile A - Fully Supported by WTL

Profile B - Fully Supported by WTL [Profile B = Profile A + provisional response + (optionally) resource reservation. WTL supports provisional response but not resource reservation]

Profile C - Partially Supported by WTL. See the following list of ISUP services currently supported by WTL for interworking and transmitting with SIP-I:

Call Diversion (CFB, CFNR, CFU, CD)

Connected Line Presentation and Restriction (COLP/COLR)

Calling Line Presentation and Restriction (CLIP/CLIR)

Suspend/Resume

Further services will be added as required.