



# tooway™ VoIP Transport Option

## *technical annex*

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## Abstract

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Scope of this document is to present to tooway™ Distributors the technical specifications required to enable the tooway™ VoIP Transport Option (also referred in this document, as the *Service*) and its relevant procedures before, and after, its activation.

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## 1. Introduction

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### 1.1. Definition of the Service

The tooway™ VoIP Transport Option (also shortly referred in this document as VoIP TO) provides Distributors the means to operate voice calls via the Tooway™ infrastructure. This service only provides the transportation of VoIP data and does not provide the call termination. Call termination is the responsibility of the VoIP operator selected by the Distributor.

Purpose and definition of the intended nominal service shall be found in following document:

<b>Tooway® VoIP-Transport Option</b>	<i>Additional Agreement</i> to the framework Service Agreement for the provision of the Tooway® Service in the period 1st March 2008-1st June 2011 Skylogic S.p.A .
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### 1.2 Description of the Service

The service is based on the prioritization of voice packets originated from a tooway™ Terminal to the tooway™ Hub Station, and from here, to the selected VoIP Gateway/Server through public Internet. The prioritization of voice packets on the Inbound Channel is bound to the availability of bandwidth on the involved carriers. In case of multiple outgoing calls from the same Terminal, only the first one will be entitled to benefit of the traffic prioritization features.

When the end user makes a phone call, its SIP VoIP device will send out its SIP VoIP start signaling message (*invite* message) to the receiver; the tooway™ Terminal will detect it, and will issue a request to the tooway™ Hub Station to support the transport of voice packet with a specific service flow, which will grant higher priority over other type of traffic.

After the request is approved, the tooway™ terminal will start forwarding the signaling and will start classify the voice packets into the newly created flow.

On call tears down, the tooway™ Terminal will again detects the relevant SIP signaling message (*bye* message, or termination from Server), and will tear down the VoIP service flow.

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The prioritized VoIP traffic is not taken in account for the computation of the Volume Usage used by FAP algorithm. This VoIP traffic is elsewhere accounted separately as described in tooway™ VoIP Transport Option Additional Agreement.

## 2. Activation and Configuration

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### 2.1 Validation of a VoIP operator

The VoIP Transport Option is provided to tooway™ Distributors accessing VoIP solutions offered by operators already validated by Skylogic with the tooway™ system.

In order to meet the VoIP operators should support the following specifications:

- Compliance with SIP (RFC 3261);
- Support of G.729 or G.723.1 Audio Codec;
- SIP Server and Media Gateway on static public IP addresses;
- SIP Server and Media Gateway on different IP addresses.

Any different solution will require an ad-hoc evaluation.

The Validation of a VoIP operator solution requires the provision of the following information to Skylogic through a specific configuration document (*tooway™ VoIP Transport Option – Technical Form*) available in the *Document* section of the Skylogic OSS:

- Name of the VoIP operator to validate,
- list of the public IP address(es) of the VoIP server(s),
- list of the public IP address(es) of the Media Gateway(s),
- the chosen Audio Codec standard (G.729<sup>1</sup>, or G.723.1),
- a valid account to let Skylogic get access to the VoIP service under the process of validation and test;
- one or more VoIP devices (telephone, ATA, MTA,). All devices shall be delivered to Skylogic with working configuration and accompanied by appropriate documentation.

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<sup>1</sup> SIP VoIP devices shall be set with voice packet size equal to 30ms, different solutions will require ad-hoc commercial and technical evaluation.

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## **2.2 Activation of the Service Enabling the Service for the tooway™ Accounts**

The Service will be available to Distributors only upon request to Skylogic. Distributors will have the possibility to select/deselect the VoIP Transport Option per each single Account in the Skylogic OSS

## **2.3 Supported SIP VoIP devices**

The quality of the VoIP service is supported for Outgoing calls only when used with the agreed telephony solutions and the indicated minimum configuration

Skylogic may not be held responsible in case of service malfunction if the SIP VoIP devices used are not listed in the agreed telephony solution list.

A list of VoIP devices already qualified is presented in Appendix A.

Distributors wishing to qualify any SIP VoIP devices shall provide information on devices and their configuration on the within the tooway™ VoIP Option Transfer Technical Form

### **2.3.1 Minimum configuration for the SIP VoIP devices**

The SIP VoIP device to be used by tooway™ end users shall:

- support SIP (RFC 3261),
- have voice-suppression feature disabled, and
- be configured only with G.729 or G.723.1 Codec, and
- refer only to the VoIP operator selected by the Distributor already validated by Skylogic.

Only compliance to these will allow the tooway™ Terminal to classify voice packet, provide necessary priority over other type of traffic, and route packets to the allowed destination.

Whatever different configuration is chosen by the end user (different codec or protocol, or different VoIP operator), this will not result in the expected traffic prioritization.

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## 3 After the Activation of the Service

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### 3.1 Assistance to Distributors accessing the Service

After the activation, for every type of technical/operational request the contact point remains Skylogic NOC with usual trouble ticket procedures.

Skylogic cannot held be liable for service degradation occurring beyond its area of control. For this reason, any enquiry from Distributors out of the scope of the service definition of the VoIP Transport Option shall be better redirected to the VoIP Operator.

## Appendix A - List of qualified VoIP devices

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<b>Brand</b>	<b>Model</b>
Cisco	ATA 186
Cisco	ATA 188
Linksys	PAP2
Cisco	ATA 186
Grandstream	Budgtone 100
Grandstream	Budgtone 200
Grandstream	HT-286
Grandstream	HT-386
Grandstream	HT-486
Grandstream	HT-496
Siemens	Gigaset C4501P