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SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

Infrastructure of audiovisual services – Communication procedures

Gateway control protocol: Supplemental tones packages

ITU-T Recommendation H.248.27

ITU-T H-SERIES RECOMMENDATIONS

AUDIOVISUAL AND MULTIMEDIA SYSTEMS

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ITU-T Recommendation H.248.27

Gateway control protocol: Supplemental tones packages

Summary

This Recommendation defines three packages that provide conferencing, diagnostic and carrier services tones capabilities for H.248.

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

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ITU-T Recommendation H.248.27

Gateway control protocol: Supplemental tones packages

1   Scope

This Recommendation defines three packages that provide conferencing, diagnostic and carrier services tones capabilities for H.248. The support of these packages is optional.

2   References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

–   ITU-T Recommendation H.248.1 (2002), *Gateway control protocol: Version 2*.

3   Definitions

None.

4   Abbreviations

This Recommendation uses the following abbreviations:

MG   Media Gateway

MGC   Media Gateway Controller

5   Conferencing tones generation package

PackageID: conftn (0x0038)

Version: 1

Extends: tonegen version 1

This package defines conferencing signals that indicate to the participants of a conference when:

•   a caller has entered or leaves a conference;

•   a conference is locked or unlocked;

•   a time limit is about to expire.

This package uses the term "tone" which may be a tone for an audio stream or may be a still or moving image for a video stream, among other possible options.

5.1   Properties

None.

5.2   Events

None.

5.3 Signals

5.3.1 Conference entrance tone

SignalID: enter (0x0061)

Description:

> Generate conference entrance tone, which indicates that a new caller has joined the conference. The physical characteristics of the conference entrance tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

> *Tone Direction*

>> ParameterID: btd (0x0001)

>> Type: Enumeration

>> Possible values: External   ext (0x0001),

>>   Internal   int (0x0002),

>>   Both   both (0x0003)

> Description:

>> The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

The other signals in this package are specified in exactly the same way. A table with all signal names and signal IDs is included. Note that each signal is defined as both a signal and a toneid, thus extending the basic tone generation package.

Signal name	Signal ID/tone id
Conf. Entrance Tone	enter (0x0061)
Conf. Exit Tone	exit (0x0062)
Conf. Lock Tone	lock (0x0063)
Conf. Unlock Tone	unlock (0x0064)
Time Limit Warning Tone	timelim (0x0065)

5.3.2 Conference exit tone

SignalID: exit (0x0062)

Description:

> Generate conference exit tone, which indicates that a conferee has left the conference. The physical characteristics of the conference exit tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

Tone Direction

ParameterID: btd (0x0001)

Type: Enumeration

Possible values: External   ext (0x0001),

Internal   int (0x0002),

Both   both (0x0003)

Description:

The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

5.3.3   Conference lock tone

SignalID: lock (0x0063)

Description:

Generate conference lock tone, which indicates that the controller has blocked new callers from joining the conference. The physical characteristics of the conference lock tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

Tone Direction

ParameterID: btd (0x0001)

Type: Enumeration

Possible values: External   ext (0x0001),

Internal   int (0x0002),

Both   both (0x0003)

Description:

>The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

5.3.4　Conference unlock tone

SignalID:　　　unlock (0x0064)

Description:

>Generate conference unlock tone, which indicates that the controller has allowed new callers to join the conference. The physical characteristics of conference unlock tone is available in the gateway.

Signal Type:　Brief

Duration:　　　Provisioned

Additional parameters:

Tone Direction

ParameterID:	btd (0x0001)	
Type:	Enumeration	
Possible values:	External	ext (0x0001),
	Internal	int (0x0002),
	Both	both (0x0003)

Description:

>The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

5.3.5　Time limit warning tone

SignalID:　　　timelim (0x0065)

Description:

>Generates a time limit warning tone, which indicates that there are only a few minutes remaining on the provisioned conference bridge. The physical characteristics of the time limit warning tone are available in the gateway.

Signal Type:　Brief

Duration:　　　Provisioned

Additional parameters:

Tone Direction

    ParameterID: btd (0x0001)

    Type: Enumeration

    Possible values: External   ext (0x0001),

                              Internal   int (0x0002),

                              Both   both (0x0003)

    Description:

The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

5.4 Statistics

None.

5.5 Procedures

None.

6 Diagnostic tones generation package

PackageID: test (0x0039)

Version: 1

Extends: tonegen version 1

This package defines diagnostic signals for use by telephony providers. The definitions and usage of these tones are dependent upon the test application in use. These signals are provided as an aid to performing diagnostic tests and the use and characteristics of the signals may vary from region to region and implementation to implementation.

6.1 Properties

None.

6.2 Events

None.

6.3 Signals

6.3.1 Low tone

SignalID: low (0x0066)

Description:

Generates a low tone. The physical characteristics of low tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

    Tone Direction

        ParameterID: btd (0x0001)

        Type: Enumeration

        Possible values: External   ext (0x0001),

                               Internal   int (0x0002),

                               Both   both (0x0003)

    Description:

        The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

The other signals in this package are specified in exactly the same way. A table with all signal names and signal IDs is included. Note that each signal is defined as both a signal and a toneid, thus extending the basic tone generation package.

Signal name	Signal ID/tone id
Low Tone	low (0x0066)
High Tone	high (0x0067)
Loud Tone	loud (0x0068)
Faint Tone	faint (0x0069)
Slow Interrupted Tone	slow (0x006a)
Fast Interrupted Tone	fast (0x006b)

6.3.2   High one

SignalID: high (0x0067)

Description:

    Generates a high tone. The physical characteristics of high tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

    Tone Direction

        ParameterID: btd (0x0001)

        Type: Enumeration

Possible values: External   ext (0x0001),

                    Internal   int (0x0002),

                    Both   both (0x0003)

Description:

The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

6.3.3   Loud tone

SignalID: loud (0x0068)

Description:

Generates a loud tone. The physical characteristics of loud tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

Tone Direction

ParameterID: btd (0x0001)

Type: Enumeration

Possible values: External   ext (0x0001),

                    Internal   int (0x0002),

                    Both   both (0x0003)

Description:

The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

6.3.4   Faint tone

SignalID: faint (0x0069)

Description:

Generates a faint tone. The physical characteristics of faint tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

Tone Direction

ParameterID: btd (0x0001)

Type: Enumeration

Possible values: External   ext (0x0001),

Internal   int (0x0002),

Both   both (0x0003)

Description:

The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

6.3.5   Slow interrupted tone

SignalID: slow (0x006a)

Description:

Generates a slow interrupted tone. The physical characteristics of slow interrupted tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

Tone Direction

ParameterID: btd (0x0001)

Type: Enumeration

Possible values: External   ext (0x0001),

Internal   int (0x0002),

Both   both (0x0003)

Description:

The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

6.3.6 Fast interrupted tone

SignalID: fast (0x006b)

Description:

> Generates a fast interrupted tone. The physical characteristics of fast interrupted tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

> *Tone Direction*
>
> > ParameterID: btd (0x0001)
> >
> > Type: Enumeration
> >
> > Possible values: External   ext (0x0001),
> >
> >   Internal   int (0x0002),
> >
> >   Both   both (0x0003)
> >
> > Description:
> >
> > > The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

6.4 Statistics

None.

6.5 Procedures

None.

7 Carrier tones generation package

PackageID: carr (0x003a)

Version: 1

Extends: tonegen version 1

This package defines signals for use by carrier services.

7.1 Properties

None.

7.2 Events

None.

7.3 Signals

7.3.1 Carrier dial tone

SignalID: cdt (0x006c)

Description:

> Generates a carrier dial tone, indicating that a carrier other than the default is providing service for the call. The physical characteristics of carrier dial tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

> *Tone Direction*
>
> > ParameterID: btd (0x0001)
> >
> > Type: Enumeration
> >
> > Possible values: External ext (0x0001),
> >
> > Internal int (0x0002),
> >
> > Both both (0x0003)
>
> Description:
>
> > The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

The other signals in this package are specified in exactly the same way. A table with all signal names and signal IDs is included. Note that each signal is defined as both a signal and a toneid, thus extending the basic tone generation package.

Signal name	Signal ID/tone id
Carrier Dial Tone	cdt (0x006c)
Carrier Answer Tone	ans (0x006d)
Carrier Charging Tone	chg (0x006e)
Long Distance Indicator Tone	ldi (0x006f)

7.3.2 Carrier answer tone

SignalID: ans (0x006d)

Description:

> Generates a carrier answer tone, also known as tone burst on answer, indicating that a carrier other than the default is providing service for the call. The physical characteristics of carrier answer tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

Tone Direction

ParameterID: btd (0x0001)

Type: Enumeration

Possible values: External   ext (0x0001),

Internal   int (0x0002),

Both   both (0x0003)

Description:

The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

7.3.3   Carrier charging tone

SignalID: chg (0x006e)

Description:

Generates a carrier charging tone, also known as subscriber trunk dialling tone, indicating that a subscriber has dialled a trunk call, and charging is about to commence. The physical characteristics of carrier charging tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

Tone Direction

ParameterID: btd (0x0001)

Type: Enumeration

Possible values: External   ext (0x0001),

Internal   int (0x0002),

Both   both (0x0003)

Description:

The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

7.3.4 Long distance indicator tone

SignalID: ldi (0x006f)

Description:

Generates a long distance indicator tone, indicating that the call is a long-distance connection. The physical characteristics of long distance indicator tone are available in the gateway.

Signal Type: Brief

Duration: Provisioned

Additional parameters:

Tone Direction

ParameterID: btd (0x0001)

Type: Enumeration

Possible values: External   ext (0x0001),

                    Internal   int (0x0002),

                    Both   both (0x0003)

Description:

The tone direction indicates in which direction the signal shall proceed with respect to the centre of the context. "Internal" denotes that the signal shall proceed toward the centre of the context from the termination, while "external" denotes that the signal shall proceed toward the edge of the context. "Both" indicates that the signal shall proceed in both directions. Unspecified tone direction shall default to "external". Note that using the playtone signal in package tonegen to generate this signal will prevent the capability to use the directionality parameter.

7.4   Statistics

None.

7.5   Procedures

None.

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