Archived:Introduction of S60 VOIP Codecs

Archived: This article is archived because it is not considered relevant for third-party developers creating commercial solutions today. If you think this article is still relevant, let us know by adding the template {{ReviewForRemovalFromArchive|user=~~~~|*write your reason here*}}.

VOIP codecs in S60 3rd Edition

In S60 3rd and later release, there are 5 preinstalled VOIP codecs.

```
AMR Narrowband
PCMU (G.711 µ-law) PCMA (G.711 A-law).
iLBC (Internet Low Bitrate Vocoder)
G.729
```

AMR Narrowband

Adaptive Multi-Rate Narrowband(AMR NB) is an audio data compression scheme.This scheme is optimized for low-bit rate devices like mobile phones.

Key attributes of AMR NB codec.

PTime.

PTime represents media data length in a packet. Unit of PTime is millisecond.In s60,AMR NB's PTime default value is 20 and its range is between 20 and 200(MaxPTime).

Jitter buffer.

Jitter buffer is used to stores incoming packets in order to minimize delay variations.If packets arrive too late then they will be discarded. Unit of Jitter buffer is millisecond.In s60,AMR NB's Jitter buffer default value is 200 and its range is between 20 and 200.

Voice activation detection (VAD)

VAD is a technique through which RTP packets will not sent if speech silent is detected.To AMR NB,Default value is Off.

Octet align.

whether Bandwidth efficient framing or Octet-aligned framing is used in this codec. To AMR NB,Default value Off means Bandwidth efficient framing is used.

Mode-set.

AMR NB has 8 modes.

```
• ‘0’: AMR 4,75 kbit/s
• ‘1’: AMR 5,15 kbit/s
• ‘2’: AMR 5,90 kbit/s
• ‘3’: AMR 6,70 kbit/s
• ‘4’: AMR 7,40 kbit/s
• ‘5’: AMR 7,95 kbit/s
• ‘6’: AMR 10,2 kbit/s
• ‘7’: AMR 12,2 kbit/s
```

PCMU (G.711 µ-law) and PCMA (G.711 A-law)

The G.711 uses PCM to encode and decode analog speech into/from binary data.G.711 µ-law encode frames of 14-bit linear PCM samples into frames of 8-bit logarithmic PCM code words.G.711 A-law encode 13-bit linear PCM samples into the 8-bit logarithmic PCM code words.

PTime

To G.711 µ-law and G.711 A-law,the default value of PTime is 20 milliseconds and its range is between 20 milliseconds and 200 milliseconds.

Jitter buffer

To G.711 µ-law and G.711 A-law,the default value of Jitter buffer is 200 milliseconds and its range is between 20 milliseconds and 200 milliseconds.

Voice activation detection

To G.711 µ-law and G.711 A-law,the default value of Voice activation detection is off.

iLBC (Internet Low Bitrate Vocoder)

(C) Copyright Nokia 2013. All rights reserved.

iLBC (Internet Low Bitrate Vocoder) is a narrowband speech codec developed by Global IP Sound.Because iLBC has a good performance on packets losing condition,It is widely used by VoIP applications,eg,Gizmo,Skype.

PTime

To iLBC ,the default value of PTime is 20 milliseconds.The allowed values for this codec are 20 and 30 or their multiples.

Jitter buffer

To iLBC ,the default value of Jitter buffer is 180 milliseconds and its range is between 20 milliseconds and 200 milliseconds.

Voice activation detection

To iLBC ,the default value of Voice activation detection is off.

Mode-set

iLBC supports two frame modes: 20 milliseconds at 15.2 kbit/s and 30 milliseconds at 13.33 kbit/s.the default value is milliseconds.

G.729

G.729 is an audio data compression algorithm.G.729 provide high quality performance at the price of complexity.It operates at 8 kbit/s.

PTime

To G.729,the default value of PTime is 20 milliseconds.The allowed values for this codec are 10 or its multiples.

Jitter buffer

To G.729,the default value of Jitter buffer is 200 milliseconds and its range is between 10 milliseconds and 200 milliseconds.

Voice activation detection

To G.729,the default value of Voice activation detection is off.

AnnexB This is a silence compression scheme, which is used to to reduce bandwidth usage by preventing the transmission of any non-voice frames during silence.

AnnexB's default value is Off.

(C) Copyright Nokia 2013. All rights reserved.

(C) Copyright Nokia 2013. All rights reserved.