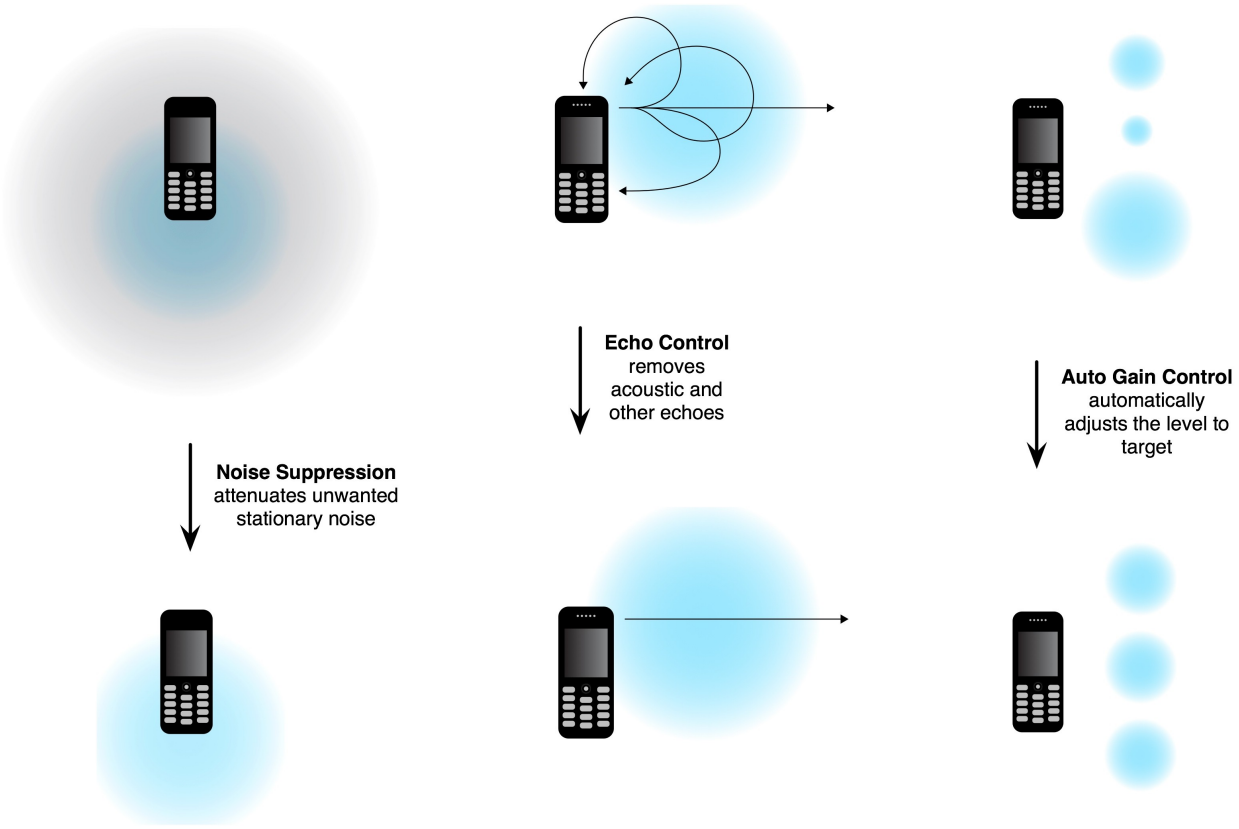
MAYAH Communications

Application Note 47

Voice options

1. General description

Voice options on MAYAH codecs perform noise suppression, acoustic echo control, and automatic gain control. These three functions do the following:



2. Technical description

All voice functions can be configured independently for any subcodec of the device via SNMP or TELNET.

The OID of the corresponding SNMP voice function, the subcodec and the local or remote index have to be used as the remote command name on TELNET sessions:
<OID>.<subcodec>.<local/remote index> <value>

Command example to activate the acoustic echo control for remote use on subcodec 1:
1.3.6.1.4.1.6210.8.31.1.7.1.2 1

Command example to deactivate the acoustic echo control for remote use on subcodec 1:
1.3.6.1.4.1.6210.8.31.1.7.1.2 0

3. Requirements

3.1 Firmware version

Firmware version 4.9.1.71 or higher must be running on the MAYAH codec.

3.2 Option

The voice functionality must be enabled with a corresponding key code for this device!

4. Voice functions

OID: 1.3.6.1.4.1.6210.8.31

4.1 Subcodec

OID: 1.3.6.1.4.1.6210.8.31.1.1

4.2 Index

OID: 1.3.6.1.4.1.6210.8.31.1.2

1: local use (mic / headphone)

2: remote use (receive / send)

4.3 Noise suppressor

OID: 1.3.6.1.4.1.6210.8.31.1.3

0: noise suppressor off

1: noise suppressor on

4.4 Noise attenuation

OID: 1.3.6.1.4.1.6210.8.31.1.4

noise attenuation limit gain [dB]

4.5 Acoustic gain control

OID: 1.3.6.1.4.1.6210.8.31.1.5

0: agc off

1: agc on

4.6 Acoustic gain control target

OID: 1.3.6.1.4.1.6210.8.31.1.6

rms agc target [dBFS]

4.7 Acoustic echo control

OID: 1.3.6.1.4.1.6210.8.31.1.7

0: aec off

1: aec on

4.8 Aggressiveness of acoustic echo control processing

OID: 1.3.6.1.4.1.6210.8.31.1.8

aggressiveness of aec processing (0..1000000)

0 is a good value when the system is reasonably linear and echo level is not much higher than near-end speech level. If you get residual echo, increase agressiveness. To get optimal double-talk performance, choose agressiveness only as large as necessary.

4.9 Audio system linearity

OID: 1.3.6.1.4.1.6210.8.31.1.9

non-linearities in audio path (0..1000000)

audio system linear(0)

audio system highly non-linear(1000000)

The usual setting is 0. If the system is only slightly non-linear a higher agressiveness is sufficient. Increase audio system non-linearity, if depite high agressiveness, you still get residual echoes.

4.10 Dereverb

OID: 1.3.6.1.4.1.6210.8.31.1.10

0: dereverb off

1: dereverb on

4.11 Dereverb attenuation

OID: 1.3.6.1.4.1.6210.8.31.1.11

dereverb attenuation [dB]

5. Test szenario