

NocTel Glossary

Terms used throughout the NocTel Communications websites and documentation.

Codec

"Codec" is a technical name for "compression/decompression". It also stands for "compressor/decompressor" and "code/decode". All of these variations mean the same thing: a codec is a computer program that both shrinks large data, and makes it smaller to transport across the Internet. To help speed up transport of audio, mathematical "codecs" were built to encode ("shrink") a signal for transmission and then decode it for listening. Without codecs, downloads would take longer or consume more bandwidth than the original version. With today's high bandwidth connections, codecs are not as important as they once were not so many years ago.

Codec Quality

A non-compressed codec, G711, will give the best voice quality, as no compression and decompression is required. This in turn makes this G711 less susceptible to packet loss, which even in small amounts will quickly degrade voice quality. Other codecs which use compression techniques consume less bandwidth, a good thing, but this compression process in itself lowers the voice clarity and introduces a delay. Additionally, compressed codecs are even more susceptible to packet loss. In addition G711 will maintain better quality with more latent connections, whereas compressed codecs' voice quality can quickly degrade as latency increase, as the chart below reflects.

Lately many telephone companies, such as NocTel, have started using G722, which is at least double the bandwidth and quality of G711. Using this new codec is known by many as "HD Voice" and provides superior quality conversations across the Internet.

CNAM DIP

Requesting a Caller ID Name (CNAM) when you have the phone number.

Grade of Service (GOS)

A Grade of Service (GOS) is a statistical probability of receiving a busy signal for a given volume of traffic, presented to a given number of trunks. We represent GOS as a capital P (for probability) followed by a number between 0 and 1. The number is the probability of receiving a busy signal for a call attempt on the trunk group. For example, a P.02 grade of service would indicate a sufficient number of trunks such that no more than 2 busies out of a theoretical 100 call attempts would be incurred during a given hour.

MOS Score

Mean opinion score (MOS) is a test that has been used for decades in telephony networks to obtain the human user's view of the quality of the network. MOS is expressed in one number, from 1 to 5, 1 being the worst and 5 the best. MOS is quite subjective, as it is based figures that result from what is perceived by people during tests. The possible outcomes of a MOS test are as follows:

- **5** - Perfect. Like face-to-face conversation or radio reception.
- **4** - Fair. Imperfections can be perceived, but sound still clear. This is (supposedly) the range for cell phones.
- **3** - Annoying.
- **2** - Very annoying. Nearly impossible to communicate.
- **1** - Impossible to communicate

Since the manual/human MOS tests are quite subjective and less than productive in many ways, there are nowadays a number of software tools that carry out automated MOS testing in a VoIP deployment. Although they lack the human touch, the good thing with these tests is that they take into account all the network dependency conditions that could influence voice quality.

NocTel

A hosted VoIP provider based in Portland, Oregon.

SIP - Session Initiation Protocol

The **Session Initiation Protocol (SIP)** is a communications protocol for signaling and controlling multimedia communication sessions. The most common applications of SIP are in Internet telephony for voice and video calls, as well as instant messaging all over Internet Protocol (IP) networks.

VoIP - *Voice over Internet Protocol*

Voice over IP (**VoIP**) is a methodology and group of technologies for the delivery of voice communications and multimedia sessions over Internet Protocol (IP) networks, such as the Internet. Other terms commonly associated with **VoIP** are IP telephony, Internet telephony, broadband telephony, and broadband phone service.