

HD Voice

Creating value with High-Definition communications

High-Definition (HD) voice offers subscribers a significant improvement in voice quality and intelligibility; delivering an unprecedented voice communications experience.

HD Voice Benefits

- Improved voice clarity
- Better comprehension
- More accurate communications
- Less fatigue
- Improves automated voice recognition
- Improves speech-to-text
- Customer acquisition (more subs)
- Customer loyalty (reduced churn)
- Revenue generation (premium service)
- More frequent and longer calls (increased MoU)
- Improved use of network resources
- Supports migration to All-IP services

HD Voice enables clear voice communications and reduces listening fatigue in mobile environments where it is sometimes difficult to hear or listen to another person.

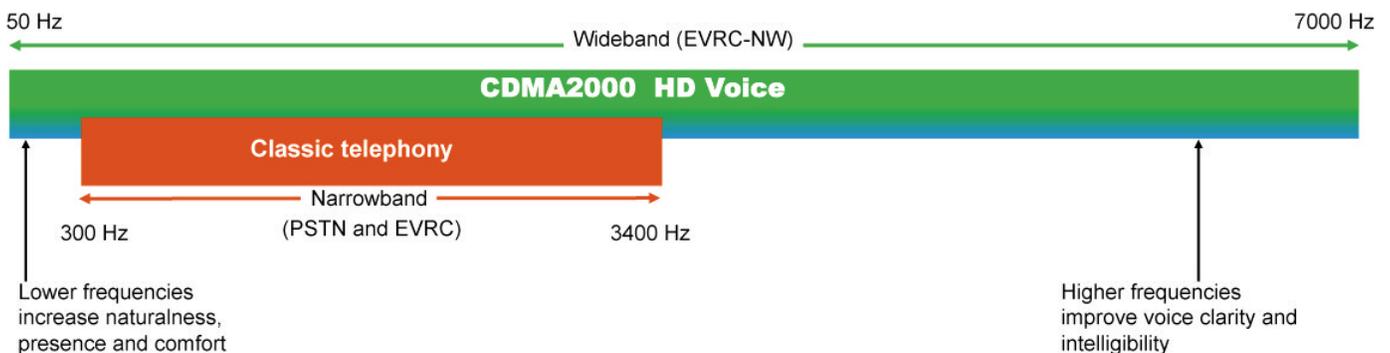
Because of its natural and easily perceivable crystal-clear voice clarity, HD Voice improves comprehension, leads to more minutes of use and enhances subscriber satisfaction.

Operators can use HD Voice to differentiate themselves and generate more loyalty and revenue from their highly-valued customers.

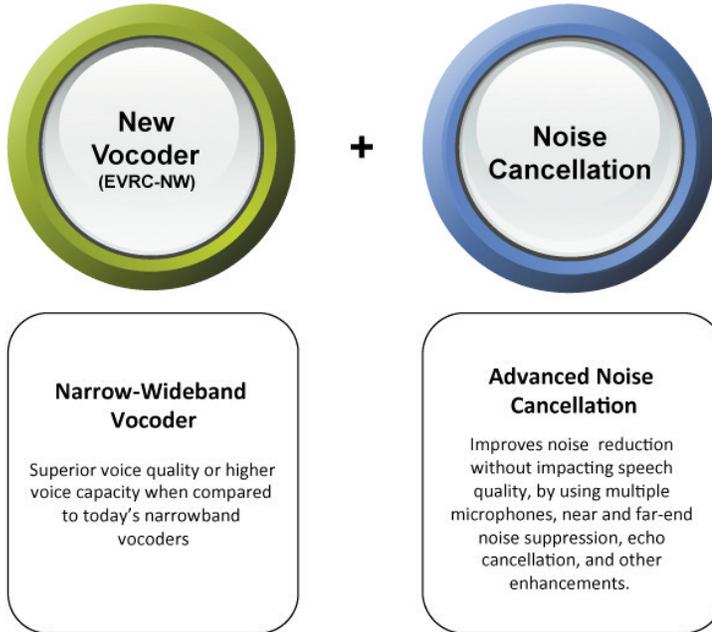
HD Voice subscribers are willing to pay more for this voice service and generally make more frequent and longer duration phone calls due to the comfortable experience. They are also less likely to revert to an alternative means of communication (e.g., IM, email, text, over-the-top VoIP, etc.)

Consumer and enterprise subscribers alike appreciate the clarity of HD Voice communications, especially in noisy environments. They also appreciate the enhanced privacy, since they do not need to raise their voices to be understood. The enhanced clarity is especially important during conference calls. Subscribers enjoy less listening fatigue.

It is a new generation voice service that can attract and retain high-value customers. It is especially attractive to the enterprise customers who rely on high-quality communications and VoIP-based teleconferencing to do business.



HD Voice leverages a new wideband vocoder and enhanced noise cancellation feature to enable users to have clearer, greater quality and more effective communications.



The Enhanced Variable Rate Codec Narrow-Wideband (EVRC-NW) combines a narrow and wideband vocoder into a single device to deliver HD Voice quality without compromising system capacity.

The wideband vocoder enables higher quality communications by expanding the frequency range of voice transmissions. The lower frequency extension makes the voice sound more natural and comfortable, as if the person were physically present in the same room. The higher frequency extension improves voice clarity and intelligibility.

The narrowband portion of the vocoder provides the flexibility to deliver high-quality voice communications without diminishing system capacity.

The advanced noise cancellation technology operates by employing a secondary microphone to accurately identify noise. By suppressing unnecessary background noise at each end of the communication line (near and far-end) and implementing echo

cancellation, this innovative technology improves the communication experience without impacting speech quality.

HD Voice services can support all types of voice-based communications, including teleconferencing, voice mail, ringtones, audio broadcasts, announcement services, circuit-switched and VoIP calls. It can also improve automatic voice recognition (AVR), voice commands and speech-to-text solutions.



Although HD Voice is primarily a mobile-to-mobile feature, mobile devices can communicate with all types of devices, so phone calls can be made between HD Voice-enabled phones, landline phones, VoIP-enabled devices and circuit switched mobile devices. Also, an HD Voice connection to a circuit-switched mobile phone bypasses the traditional PCM and PSTN network by using Transcoder Free operation (TrFO). Since HD Voice phone calls support VoIP, its implementation is a natural choice when migrating to an All-IP network.

HD Voice offers an easily perceivable and comfortable high-quality voice communications experience, which is highly valued by subscribers. It also improves an operator's key performance metrics and competitiveness.