



Speech Intelligibility

This presentation introduces the basic concepts of speech intelligibility. Emphasis is on the Speech Intelligibility Index (STI) as described in IEC 60268, Part 16, however, the differences between other objective measures is discussed. The principle factors affecting speech intelligibility are described and the concept of the modulation transfer function is introduced. Methods for measurements and calculation of the STI are described. The typical required intelligibility for different listening situations and applications is shown. A comparison of objective and subjective measures is reviewed. The limitations of objective measures based upon the modulation transfer function concept is discussed, and particular the effect of discrete reflections. References for additional detailed information are also provided.

Course Outline

- **Objective Measures of Speech Intelligibility**
- **Factors Affecting Intelligibility**
- **Effect of Noise & Reverberation on Speech**
- **The Modulation Transfer Function**
 - **S/N Ratio & Reverberation Time**
 - **STI from the Impulse Response Magnitude**
- **Typical Required Intelligibility for Different Applications**
- **Comparison to Subjective Measures**
- **Limitations of Objective SI Measures**
 - **Effect of Reflections**
- **Conclusion**

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