

## ACOUSTICS2008/18 Adaptive sound masking

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Because activity sound levels vary widely during the day in open offices, fixed level sound masking spectra do not keep employees free of distractions. Programmed level control, time scheduling that permits hourly changes in level, is considerably better, but requires pre-knowledge of the activity. An adaptive masking system detects and responds to activity sound, both human and nonhuman, to provide constancy of privacy as opposed to constancy of masking level. These systems use several sound detectors in an area, average the sound level from them, and develop a running table of percentile levels with a given sensitivity. Two percentile levels (L10 and L99) are used to separate the masking from the activity sound. The system acts to continually keep the difference between them constant. The advantage of adaptive masking will be shown by comparison with other methods. The distraction potential will be discussed in terms of dB-minutes. The overall design of these systems will be discussed and examples of experience with existing systems will be given.