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Survey of sound quality research and applications in the
information technology industry

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Traditionally, emission sound power level has been the key attribute measured and reported for describing IT equipment acoustic performance. More recently, designers and manufacturers of IT equipment have come to realize that customer satisfaction or annoyance is not dictated by sound power alone, but is dependent on many sound quality attributes as well. Additionally, sound power level tends to be a poor indicator of equipment condition or component degradation where other tools are required for diagnosis and characterization. This paper reviews key research and trends over the last several years using psychoacoustic principles and analyses, as well as case studies of specific applications in the IT sector.