Effects of Enviromental Air Quality on Simulators

Rod Sterling

ABSTRACT

Air quality in and around simulators have an impact on cost of ownership, reliability and maintenance. This paper will address some of the metrics of air quality measurements and data showing results of various levels of dust. Air quality is a worldwide issue and the World Health Organization, WHO, monitors many area and cities and offers daily if not real time updates. Random events like dust storms, aircraft exhaust and industrial contaminates will also affect operations. As we move away from CRT projection, dust becomes a bigger issue with the projector. All surfaces will show degrading brightness and ANSI contrast ratios. Mechanical moving parts, like fans, will show short lifetimes and dust will increase heat, shortening electronic lifetime. Prior studies had looked ambient temperature and humidity with regard to MTBF, but we should also be aware of the dust and air pollution contributions.

BIO

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