Adapting the Quality of Experience Framework for Audio Archive Evaluation

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\section*{Introduction}

- What happens to the musical works of the past?

- Audio quality of digitised and/or restored material is poorly investigated implying low user satisfaction and loss of fidelity.

\section*{Objective}

In this paper we discuss reasons how the Quality of Experience (QoE) framework can be adapted for assessing perceived audio quality in archive material.

\section*{Motivations}

\subsection*{How quality is assessed?}

Most organizations rely on personal and individual judgements when evaluating digitized/restored archive documents.

\subsection*{Can we do better?}

Computational models such as audio quality metrics could be used to speed up the process and to guarantee accuracy. However, computational models derived from different applications cannot be adapted in this context for a variety of reasons:

- Different quality expectations of stakeholders
- A reference signal cannot be defined
- Heterogeneity of audio archives
- They were developed for different impairments

\section*{QoE Evaluation}

\begin{tabular}{|c|c|c|}
\hline
DIGITISATION & RESTORATION & CONSUMPTION \\
\hline
Parametric Models & No Reference & No Reference \\
\hline
Full Reference & & \\
\hline
\end{tabular}

\section*{Conclusions}

- This paper describes the importance of evaluating quality in digital audio archives and proposes a QoE framework to quality assessment.

- No prior research has applied a QoE framework approach to audio archive quality. We have illustrated that it can be applied to audio archives to identify the stages, stakeholders and models for a QoE centric approach.

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