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Defining Perceptual Requirements of Dynamic (Real-Time)
Acoustic Modeling and Auralization

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Acoustic modeling is evolving from static sources and receivers to dynamic sources and receivers as computational speeds allow for faster renderings. Current research has focused on creating highly accurate dynamic models and auralizations but still struggle with the trade-off between accuracy and available processing speed. The question remains as to how accurate do these models need to be if the receiver (listener) is moving dynamically through the acoustic model. The focus of this paper is to address the accuracy required of dynamic models and / or auralizations from a perceptual standpoint. From this, the necessity for creating models that are perhaps more accurate than required will be considered.