

## Virtual Reality Based 3D Video Games and Speech-Lip Synchronization Superseding Algebraic Code Excited Linear Prediction

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**Abstract :** In 3D video games, the dominance of production is unceasingly growing with a protruding level of affordability in terms of budget. Afterward, the automation of speech-lip synchronization technique is customarily onerous and has advanced a critical research subject in virtual reality based 3D video games. This paper presents one of these automatic tools, precisely riveted on the synchronization of the speech and the lip movement of the game characters. A robust and precise speech recognition segment that systematized with Algebraic Code Excited Linear Prediction method is developed which unconventionally delivers lip sync results. The Algebraic Code Excited Linear Prediction algorithm is constructed on that used in code-excited linear prediction, but Algebraic Code Excited Linear Prediction codebooks have an explicit algebraic structure levied upon them. This affords a quicker substitute to the software enactments of lip sync algorithms and thus advances the superiority of service factors abridged production cost.

**Keywords :** algebraic code excited linear prediction, speech-lip synchronization, video games, virtual reality

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