

本期目录 | 下期目录 | 过刊浏览 | 高级检索
页] [关闭]

[打印本

论文与技术报告

唇部子运动与权重函数表征的汉语动态视位

李皓, 陈艳艳, 唐朝京

国防科技大学电子工程学院; 中国人民解放军75753部队 广州

摘要:

针对汉语是基于音节的语言, 发音过程具有“枣核型”的特点, 提出一种描述汉语动态视位的模型, 模型分别对音节自身和音节之间的唇部运动进行建模。对音节利用基于声韵母的唇部子运动模型描述, 先提取声母和韵母发音时的唇部特征参数, 并按参数对口型归类, 得到化简的音节视位模型, 再计算唇部子运动与音节发音过程在口型上的相似性。在音节间采用元音影响分级的权重函数模拟协同发音影响, 先分析各元音与其后接辅音的口型影响, 再通过权重函数控制实际发音口型。实验结果表明, 相对于单音子或三音子模型表征汉语动态视位, 方法提高了动画效率, 使得汉语音唇动画更为合理, 自然。

关键词: 汉语; 动态视位; 唇部子运动; 权重函数

Dynamic Chinese Visemes Implemented by Lip Sub-movements and Weighting Function

LI Hao, CHEN Yan-Yan, TANG Chao-Jing

School of Electronic Science and Engineering, National University of Defense Technology; Troop 75753, People's Liberation Army, Guangzhou

Abstract:

Chinese is a syllabic language and its pronouncing process bears the characteristic of “rugby”. Aiming at these, a model is proposed to describe dynamic Chinese visemes with inner-syllabic and inter-syllabic modelings respectively. As for a syllable, lip sub-movements model based on initials and finals are used, which first extracts the lip feature parameters of initials and finals and get the simplified viseme model by categorizing the mouth shapes according to the parameters, and then computes the mouth shape likelihood between lip sub-movements and the pronouncing process of syllables. As for inter syllables, weighting function of vowel impact grading is used to simulate the effect of co-articulation. Experimental results show that comparing to the Chinese visemes described by phoneme or triphone model, the method promotes the animation efficiency and makes more reasonable and natural Chinese lip animation.

Keywords: Chinese dynamic visemes lip sub-movements weighting function

收稿日期 2011-09-02 修回日期 2011-12-07 网络版发布日期 2012-03-25

DOI:

基金项目:

国家部委基金(51329060101)

通讯作者:

作者简介:

作者Email: lihao7183200@163.com

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF(1830KB)
- ▶ [HTML全文]
- ▶ 参考文献[PDF]
- ▶ 参考文献

服务与反馈

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ 引用本文
- ▶ Email Alert
- ▶ 文章反馈
- ▶ 浏览反馈信息

本文关键词相关文章

- ▶ 汉语; 动态视位; 唇部子运动; 权重函数

本文作者相关文章

- ▶ 李皓
- ▶ 陈艳艳
- ▶ 唐朝京

PubMed

- ▶ Article by Li, H.
- ▶ Article by Chen, Y. Y.
- ▶ Article by Tang, C. J.

参考文献:

本刊中的类似文章

文章评论