

## 一种基于 MDCT 量化系数小值区的 AAC 隐写方法

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**摘要:** 提出一种在 AAC 编码过程中嵌入秘密信息的方法. 该方法利用 MDCT 量化系数的小值区一般处于中高频段, 具有良好的不可感知性这一特点, 对小值区的 MDCT 量化系数按照一定的规则进行修改来实现秘密信息的嵌入. 嵌入算法先对载体 AAC 文件进行比特流解包, 通过码本信息搜索出小值区的码字, 并对码字进行解码得到一组量化系数. 在保持编码长度不变的条件下, 通过量化系数对的映射, 每组至多修改一个量化系数来实现秘密信息的嵌入. 实验表明, 该隐写方法对 AAC 编码的长度没有任何改变, 具有较高的嵌入容量、良好的不可感知性, 以及较好的抗隐写分析性.

**关键词:** AAC; 音频隐写; MDCT 量化系数; 不可感知性

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## A Steganography Method for AAC Based on Little Data Regions of Quantized MDCT Coefficients

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**Abstract:** An information hiding method in the process of AAC coding is proposed based on research of AAC coding standard. The proposed method modifies coefficients of the little regions by rules to embed secret information, using the features of the little data regions which generally exist in the high frequency band and have good imperceptibility. The algorithm first unpacks the cover AAC file to search for the little data region according to code books, and then gets a group of quantized coefficients by decoding a code word. Under the condition of maintaining the length of the code words, no more than one coefficient of each group is modified to embed the secret information by mapping of a pair of coefficients. Experimental results reveal that the proposed method can obtain higher hidden data capacity, without any changes of the length of AAC coding, furthermore, it has good imperceptibility and good resistance to steganalysis.

**Key words:** AAC; audio steganography; quantized MDCT coefficients; imperceptibility

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