

网络与通信

改进的二进制循环码盲识别方法

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摘要: 目前已有的循环码盲识别方法在低码率编码条件下效果较好,但在高误码率及高码率条件下不能高效识别,或者只针对循环码中某一子类。为有效解决高误码率以及高码率编码下的循环码盲识别问题,提出一种基于矩阵变换和码重分布的方法,首先对接收序列按估计码长构造矩阵,并对矩阵进行初等变换;然后利用改进的码重分布距离公式对循环码进行盲识别。仿真结果表明该方法在高误码率以及高码率编码时可实现高效的循环码盲识别。

关键词: 矩阵变换 循环码 盲识别 码重分布 码长识别

Improved blind recognition method for binary cyclic code

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Abstract: The existing blind recognition methods of cyclic code have poor effects in the high or only Bit Error Ratio (BER) better in low code rate conditions, or the method is only for a subclass of the cyclic codes. In order to solve the blind identification for cyclic code with high BER or high code rate effectively, a method based on code weight distribution and matrix transformation was proposed. First of all the article structured the receiving sequence to matrix according to the estimated code length, and then realized the blind recognition using the improved weight distribution distance formula. The simulation results show that the method can realize the blind recognition for cyclic code with high BER and high code rate, and the results are better.

Keywords: matrix transform cyclic code blind recognition code weight distribution code length identification

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