



- 首页
- 期刊介绍
- 基本信息
- 编委会
- 编辑团队
- 期刊荣誉
- 收录一览
- 征稿简则
- 作者中心
- 编辑中心
- 订阅指南
- 联系我们
- English

吉首大学学报自然科学版 » 2010, Vol. 31 » Issue (5): 50-54 DOI:
 信息与工程 [最新目录](#) | [下期目录](#) | [过刊浏览](#) | [高级检索](#) [« Previous Articles](#) | [Next Articles »»](#)

认知无线电协作频谱感知混合加权算法

(南京工程学院通信工程学院, 江苏 南京211167)

A Hybrid Weighted Algorithm of Cooperative Spectrum Sensing in Cognitive Radio Networks

(School of Communication Engineering,Nanjing Institute of Technology,Nanjing 211167,China)

- 摘要
- 参考文献
- 相关文章

全文: [PDF \(1398 KB\)](#) [HTML \(1 KB\)](#) 输出: [BibTeX](#) | [EndNote \(RIS\)](#) [背景资料](#)

摘要 协作频谱感知的关键技术是降低控制信道开销, 笔者提出了一种基于信噪比的加权协作检测算法, 采用双门限混合加权判决, 融合中心根据当前检测信道贡献大小, 从而计算和分配相应的加权值, 降低无效的传输. 模拟结果表明: 该算法不仅检测概率有明显的提高外, 而且平均感知比特数下降, 从而降低了公共信道的开销.

关键词: 认知无线电 协作频谱感知 迭代算法 加权算法

Abstract: The key technology of cooperative spectrum sensing is to reduce control channel costs. A weighted algorithm of cooperative spectrum sensing based on signal to noise ratio is proposed. The contribution is determined by the SNR of detection channel for soft decision result of double threshold, and a relevant weighted value is allocated. Thereby, the invalid transmission is reduced. The simulation results show that this algorithm can improve cooperation detection probability; meanwhile, it can reduce average sensing bit and reduce overhead of common control channel.

Key words: cognitive radio cooperative spectrum sensing iterative algorithm weighted algorithm

基金资助:

南京工程学院科研基金资助项目(KXJ08026)

作者简介: 刘传清 (1964-), 男, 湖北鄂州人, 南京工程学院通信工程学院教授, 博士, 主要从事无线通信技术、无线ad hoc网络、无线传感器网络、认知无线网络研究.

引用本文:

刘传清. 认知无线电协作频谱感知混合加权算法[J]. 吉首大学学报自然科学版, 2010, 31(5): 50-54.

LIU Chuan-Qing. A Hybrid Weighted Algorithm of Cooperative Spectrum Sensing in Cognitive Radio Networks[J]. Journal of Jishou University (Natural Sciences Edit), 2010, 31(5): 50-54.

[1] CABRIC D, MISHRA S M, BRODERSEN R W. Implementation Issues in Spectrum Sensing for Cognitive Radios [C]//Proc. 38th Asilomar Conf. Signals Systems, Computers. New York: Wiley & IEEE Publishing, 2004: 772-776.

[2] GHASEMI E, SOUSA. Spectrum Sensing in Cognitive Radio Networks: Requirements, Challenges and Design Trade-offs [J]. IEEE Communication Mag., 2008, 46(4): 32-39.

[3] GHASEMI, SOUSA E S. Collaborative Spectrum Sensing for Opportunistic Access in Fading Environment [C]//Proc. of IEEE DYSpan. New York: Wiley & IEEE Publishing, 2005: 131-136.

[4] ZHU J, XU Z, WANG F, et al. Double Threshold Energy Detection of Cooperative Spectrum Sensing in Cognitive Radio [C]//Proc. of International Conference on Cognitive Radio Oriented Wireless Networks and Communications (CROWNCOM). New York: Wiley & IEEE Publishing, 2008: 1-5.

服务

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [E-mail Alert](#)
- ▶ [RSS](#)

作者相关文章

- ▶ [刘传清](#)

- [5] HUANG X,HAN N,ZHENG G,et al.Weighted-Collaborative Spectrum Sensing in Cognitive Radio [C]//Proc. of Conference on Communications and Networking in China (ChinaCom' 07).New York:Wiley & IEEE Publishing,2007: 110-114.
- [6] YANG W,CAI Y,YU Y.A Fuzzy Collaborative Spectrum Sensing Scheme in Cognitive Radio [C]//Proc. of International Symp. on Intelligent Signal Processing and Communication Systems (ISCAPS' 07).New York:Wiley & IEEE Publishing,2007:566-569.
- [7] MA J,ZHAO G,LI Y.Soft Combination and Detection for Cooperative Spectrum Sensing in Cognitive Radio Networks [J].IEEE Trans.on Wireless Communications,2008,7(11):4 502-4 507.
- [8] BIN M I,SHAHID,KAMRUZZAMAN J.Weighted Soft Decision for Cooperative Sensing in Cognitive Radio Networks [C]//Proc. of Conference on Networks (ICON' 08).New York:Wiley & IEEE Publishing,2008: 1-6.
- [9] SHEN L,HUANG,ZAHO C,et al.Weighted Cooperative Spectrum Sensing in Cognitive Radio Networks [C]//Proc.of International Conference on Convergence and Hybrid Information Technology (ICCIT' 08).New York:Wiley & IEEE Publishing,2008: 1 074-1 079.

没有找到本文相关文献

版权所有 © 2012《吉首大学学报（自然科学版）》编辑部

通讯地址：湖南省吉首市人民南路120号《吉首大学学报》编辑部 邮编：416000

电话传真：0743-8563684 E-mail：xb8563684@163.com 办公QQ：1944107525

本系统由北京玛格泰克科技发展有限公司设计开发 技术支持：support@magtech.com.cn