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《广播与电视技术》是由国家广播电视总局主管,国家广播电视总局广播电视规划院主办,《广播与电视技术》编辑部编辑出版的国家级技术期刊,是发布广播电视科技政策,反映事业建设成就,介绍高新技术,交流工作经验,传播各种信息的重要媒体。本刊主要面向各级广播电视行业主管部门、各级广播电台、电视台、网络公司、发射台、微波站、卫星站、节目制作单位及电教系统,同时对企业、工矿、学校、部队等具有公共广播电视设施的管理人员、技术人员也有参考价值。

为繁荣学术交流,本刊已加入《中国学术期刊网络出版总库》、“万方数据”和“维普中文科技期刊数据库”,有权选取部分论文在本刊关联平台(如广电猎酷网 www.lieku.cn、“广电猎酷”微信公众号等)发布,作者著作权使用费已随论文稿酬一次性给付。本刊充分尊重作者的原创成果并合理保护作者享有的权利,如作者不同意本刊之外其他形式的发布,请在来稿中声明,本刊将作适当处理。本刊及主办单位对本刊已发布作品的内容和观点不持有任何立场、不做出任何承诺或保证、不承担任何责任。

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〔14〕 4K超高清HDR向高清SDR转换的播出技术研究

随着4K超高清HDR制播业务的开展，采用4K超高清HDR向高清SDR转换的超高清和高清同播方式成为一种趋势。本文开展4K超高清HDR下变换播出技术的探索和验证，可资参考。

〔37〕 基于AVS2的编码单元快速划分算法研究与实现

随着高视频技术的发展，需要处理的视频数据量显著增加，为了提升编码效率，缓解传输带宽压力，AVS工作组制定了AVS2视频编码标准，并被广电总局颁布为广播电视行业标准。AVS2与上一代视频编码标准最大的差异在于采用了基于二叉树的块划分结构，能更好地适配视频内容，有效提升视频编码效率，同时也导致决策过程的计算复杂度增加，给编码器的实现带来了很大挑战。如何在保证编码质量尽量不降低的情况下，提升编码划分决策的速度，是当前AVS2视频编码的一个难点，本文提出一种基于AVS2的编码单元快速划分算法，有望在一定程度上解决该难点问题。

〔66〕 基于广电机顶盒的分离式网络模块的设计与实现

如何实现广电网络同一机顶盒内适配EoC、CM、WiFi等各种接入技术是有线网络升级发展中不容回避的难题。本文提出了一个多种型号分离式网络模块设计的方案并付诸实践，可以较为有效的解决数字电视机顶盒普适性问题，可供行业同仁参考借鉴。

〔89〕 应急广播快速传送通道应用分析

按照国家对应急广播系统的要求和部署，需要相关部门研究建立秒级应急广播快速传送通道，满足应急信息快速发布的需求。本文分析了应急广播快速传送通道的需求、技术，并对现有应急广播系统应对快速传送通道的要求提出了改进建议，有助于促进应急广播系统的完善，可供业界参考。

〔132〕 基于人工智能的广播广告自台监播系统

江苏广播利用人工智能技术与现有广告业务系统相结合，建立了一套智能化广告自台监播系统，能够实现所有频率广告的播后监测和统计反馈，为广播频率的口播广告提供智能化技术监管，也为广告客户的合同履行服务提供自台监播报表。本文介绍了该系统的设计思路和实现方法，值得同行借鉴。



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[14] Research on Broadcasting Technology of Conversion from 4K UHD HDR to HD SDR

With the development of 4K UHD HDR production and broadcasting business, UHD and HD simulcast mode of converting 4K UHD HDR to HD SDR has become a trend. This paper carries out exploration and verification of 4K UHD HDR down conversion broadcasting technology, which can be used as a reference.

[37] Research and Implementation of Fast Coding Unit Partitioning Algorithm Based on AVS2

With the development of high-tech video technology, the amount of video data to be processed has increased significantly. In order to improve coding efficiency and alleviate the pressure on transmission bandwidth, AVS working group has formulated AVS2 video coding standard, which has been promulgated as radio and television industry standard by NRTA. The biggest difference between AVS2 and previous generation video coding standard is that it adopts a quad-tree-based block division structure, which can better adapt video content and effectively improve video coding efficiency. At the same time, it also increases computational complexity of decision-making process and brings great challenges to encoder implementation. How to improve the speed of coding division decision without reducing coding quality as much as possible is a difficult problem in AVS2 video coding. This paper proposes a fast coding unit division algorithm based on AVS2, which is expected to solve this difficult problem to a certain extent.

[66] Design and Implementation of Separate Network Module Based on TV STB

How to adapt various access technologies such as EoC, CM and WiFi in the same set-top box of radio and television network is an unavoidable problem in upgrading and development of CATV network. This paper puts forward a design scheme of multiple models of separated network module and puts it into practice, which can effectively solve universality problem of digital TV set-top box, and can be used as a reference for colleagues in the industry.

[89] Application Analysis of Emergency Broadcasting Fast Transmission Channel

In accordance with national requirements and deployment of emergency broadcast system, relevant departments need to study and establish a second-level emergency broadcast fast transmission channel to meet the needs of rapid release of emergency information. This paper analyzes requirements and technology of emergency broadcast fast transmission channel, and proposes improvement suggestions for existing emergency broadcast system to meet the requirements of rapid transmission channel, which is helpful to promote the improvement of emergency broadcast system and can be used as a reference for the industry.

[132] A Monitoring System for Radio Advertisement Based on Artificial Intelligence

Jiangsu Broadcasting Corporation has established a set of intelligent advertisement monitor system by combining artificial intelligence technology with existing advertising business system, which can realize post-broadcasting monitoring and statistical feedback of all-frequency advertisements, provide intelligent technical supervision for oral advertisements, and also provide broadcasting monitoring reports for advertisers' contract performance services. This paper introduces design idea and implementation method of the system, which is worthy of reference.