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《广播与电视技术》是由国家新闻出版广电总局主管，国家新闻出版广电总局广播电视规划院主办，信息研究所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.tv、“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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〔38〕 量子保密通信技术广电业务应用研究

本文基于《量子保密“京沪干线”技术验证及应用示范项目》(发改高技[2013]1389号),着重介绍了量子保密通信“京沪干线”广电应用研究项目工作,包括广电应用研究项目系统的建立、量子加密对广电视频业务的适应性验证、量子加密对广电视频业务带来的安全价值等,可资参考。

〔50〕 高标清上下变换器技术要求和测量方法标准解读

我国电视节目制作及播出正处在一个高标清混合制播的阶段,既有高清节目素材下变换至标清播出,也有标清节目素材上变换至高清播出。在这样的背景下,如何选择合适的高标清上下变换器以及如何制定高标清转换策略就显得尤为重要。为此,国家广播电视总局发布了行业标准《高标清上下变换器技术要求和测量方法》。为便于大家对标准的理解和使用,本文对这项新制定的标准进行解读。

〔54〕 5G 技术现状及 4K over 5G 业务前景

伴随着广电 4K 超高清电视的快速发展,4K 节目如何在广播电视网络上传输,如何在终端上呈现成为需要重点研究和突破的关键点之一。本文基于 5G 的发展现状和未来方向,结合全国移动多媒体交互广播电视网的建设,展望了 4K over 5G 的业务前景,并提出了应对策略与推进计划,可进一步拓展业界同仁的思维,提供一定的参考借鉴。

〔59〕 “央视专区”智能推荐系统与编排算法设计

“央视专区”是中央电视台基于有线电视网络的融合媒体服务系统。该系统通过采集全国有线电视用户收视行为数据,协同大数据分析系统,结合运营策略、宣传要求等因素对“央视专区”的节目进行智能编排与推荐,可为用户提供精准个性化服务。本文介绍应用于“央视专区”的智能推荐系统和编排算法设计,供业界参考。

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〔108〕 基于 FSK 可变载频调幅广播的应急广播覆盖仿真研究

中短波调幅广播覆盖网络是应急广播传输覆盖网络的重要组成部分,为使传统中短波调幅广播适应应急广播的要求,需要增加应急广播适配模块,将应急广播信息加入中短波调幅广播系统。然而在中短波广播中传输应急广播数字信号将会影响模拟广播的模式同播业务。本文提出了一种新的方案,将数字信号进行 FSK 调制,然后用此 FSK 调制信号取代调幅载波信号,以达到在中短波广播中传输窄带数字应急消息的目的。

〔127〕 码流特征值比对技术的研究与实践

随着中央无线覆盖工程的深入推进与全面建设,广播电视无线发射台站的播出任务越发重要。如何能够更有效的实现无线发射台站的安全播出监测成为一项新的课题。本文提出一种运用码流特征值比对技术实现台站节目防插播、防错播的检测管理方案,有效地实现了无人值守广播电视发射台站的安全播出管理。



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[38] Research on the Application of Quantum Secrecy Communication Technology in Radio and TV Services

This paper mainly researches on the project of quantum secrecy communication "Jing Hu Main Line" applied in radio and TV services, according to the document "Technical Verification and Application Demonstration of Quantum Secrecy Communication 'Jing Hu Main Line' Project" (NDRC [2013] No.1389). It includes the construction of radio and TV application system, the verification of quantum cryptography for radio and TV services, and the security value which is brought by quantum cryptography. Hope to be referenced.

[50] Interpretation of "Technical Specification and Measurement Method of HD/SD Converter"

TV programs in China are at a stage of HD & SD mixed production and broadcasting. There are SDTV programs converted from HDTV materials and HDTV programs transformed from SDTV materials. In this case, how to choose the right converter and how to make the strategy of HD & SD converter are both important. Therefore, the State Administration of Radio and TV issued an industry standard of "Technical Specifications and Measurement Method of HD/SD Converter". This paper gives an interpretation of this new standard to help understanding and application.

[54] 5G Technology Status and 4K over 5G Business Prospects

With the rapid development of 4K ultra HDTV, how 4K programs are transmitted on the CATV network, and how to present 4K programs on terminals become one of the key points to research and breakthrough. Based on the development of 5G, this paper looks forward to the business prospect of 4K over 5G and proposes the countermeasures and promotion plan in combination with the construction of the national multimedia interactive mobile network. It could further expand the thinking of colleagues in the industry and provide some references.

[59] Design of Intelligent Recommendation System and Scheduling Algorithm for CCTV Special Area

"CCTV Special Area" is a convergent media service system based on CATV network in China Central Television Station. It gathers ratings data of CATV subscribers all around China. Along with big data analysis system, it recommends and schedules the program of "CCTV Special Area", considering the operation strategy and publicity requirement. It provides precise personalized services for subscribers. This paper introduces a design of intelligent recommendation system and scheduling algorithm for "CCTV Special Area", to be referenced for industry.

[87] Super-user Thinking Pattern for CATV

In the era of "Triple Play" and "Internet Plus", the radio and TV service is changing from a traditional non-differentiated service mode to a differentiated and precise service mode. Ningbo Wasu Radio and Television Network Co. Ltd. gives industry colleagues a reference of super-user thinking pattern and its application based on CATV network.

[108] Simulation of Emergency Broadcasting Based on FSK-AM

The medium-and short-wave AM broadcasting network is an important part of emergency broadcasting transmission network. In order to match with the emergency broadcasting, the traditional medium-and short-wave AM broadcasting has to add an emergency broadcasting module for emergency information. However, this module has influence on analog & digital co-broadcasting business. This paper proposes a novel scheme, that is, the digital signal is modulated by FSK, and then is used to replace the AM carrier signal. Now, narrowband digital emergency messages could be transmitted in medium-and short-wave broadcasting.

[127] Research on TS Characteristic Value Comparison Technology

With the development and comprehensive construction of the central wireless coverage project, the broadcasting task of radio and TV wireless transmitting stations is becoming more and more important. It could be a new problem how to effectively monitor the safe broadcasting in wireless transmitting stations. This paper proposes a detection management scheme based on TS characteristic value comparison technology to against insertion broadcasting and mistaking broadcasting. An unattended safe broadcasting management in radio and TV transmitting stations is effectively realized.