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80 XG-PON技术在广电网络中的应用设计及实践

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主管: 国家广播电视总局

主办: 国家广播电视总局广播电视规划院

《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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[19] 基于卷积神经网络的数字电视劣质画面检测算法设计

人工智能技术的不断发展与落地应用, 将给广播电视安全播出工作带来智慧化变革。本文针对广播电视安播工作中的画面监测环节, 基于卷积神经网络设计了对马赛克、色斑等劣质电视画面的检测算法, 可应用在广播电视技术中心、监测中心, 降低值班员的工作负担, 提升安全播出保障水平。

[29] 广电5G网络共建共享规划建设思路

5G网络共建共享的实施对贯彻落实国务院推进电信基础设施共建共享、减少5G网络重复建设、集约高效地实现5G网络全国覆盖和业务发展具有重大意义。本文介绍了中国广电与中国移动共建共享5G网络的技术路线、组网架构、业务流程等规划建设思路, 可为多运营商网络共建共享提供借鉴。

[35] 融媒体生产背景下非编制播系统的改造方案及实现

当前, 媒体融合向纵深化发展, 对广电内容生产制作环节也提出了融合转型的需求, 如何进行非编制播系统的改造升级以适应新形势的发展需要成为业界颇为关注的课题。本文将非编制播系统的改造置于融媒体生产大背景下, 相关方案及做法值得参考借鉴。

[80] XG-PON技术在广电网络中的应用设计及实践

广电网络宽带入户是大势所趋, 也是发展宽带业务的基础。本文选用XG-PON技术, 在如何结合广电网络特点低成本实现光纤到户上开展了一系列的探索, 文中介绍的应用案例和建设策略可资业界同行参考。



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[19] **Design of Digital Television Inferior Picture Detection Algorithm Based on Convolutional Neural Network**

The continuous development and grounded application of artificial intelligence technology will bring intelligent changes to the safety broadcasting work of Radio and Television. For the screen monitoring link in radio and TV safety broadcasting work, this paper designs detection algorithms for poor quality TV images such as mosaic and color spots based on convolutional neural network, which can be applied in broadcast TV technical center and monitoring center, so as to reduce the working intensity of the clerks and improve the guarantee level of the broadcasting safety work.

[29] **Planning and Construction Ideas for Co-construction and Sharing of Radio and Television 5G Network**

The implementation of 5G network co-construction and sharing is of great significance to implement the State Council's promotion of telecom infrastructure co-construction and sharing, reduce the duplication of 5G network construction, and realize the nationwide coverage and business development of 5G network in an intensive and efficient manner. This paper introduces the technical route, network architecture, business process, and other planning and construction ideas of the 5G network co-construction and sharing of China Radio and Television and China Mobile, which can provide a reference for multiple operators to realize the co-construction and sharing.

[35] **Transformation Scheme and Realization of Non-linear Editing System under the Background of Media Convergence**

At present, the media convergence is deepening, and the production of radio and television content is also been put forward the need for integration and transformation. How to transform and upgrade the non-linear editing system to adapt to the development needs of the new situation has become a topic of considerable concern in the industry. In this paper, the transformation of the non-linear editing system is combined with the background of converged media production, and the relevant programs and practices are worthy of reference.

[80] **Application Design and Practice of XG-PON Technology in Radio and Television Network**

Radio and Television network broadband access to households is the trend of the times and the basis for developing broadband services. This paper uses XG-PON technology and carries out a series of explorations on how to realize FTTH at low cost in combination with the characteristics of Radio and Television networks, and the application cases and construction strategies introduced in this paper can be used for reference by peers in the industry.