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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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〔15〕基于AVS3的8K超高清压缩编码技术研究与应用

2021年，中央广播电视总台8K超高清频道试验播出，并成功直播了2021年春节联欢晚会。总台采用我国自主研发的下一代更高效的AVS3编码标准进行8K超高清节目的实时编码压缩，本文即是此次探索实践后的总结，可为业界同行提供参考借鉴。

〔30〕基于5G与多协议的全媒体“云采访”系统的设计和实现

在融合媒体时代，如何充分运用文字、图片、音频、视频等融媒体传播手段全面报道全国两会，不断强化网上网下互动、大屏小屏共振、会内会外呼应、前方后方配合，全面展现全国人大代表和全国政协委员履职建言情况是每个媒体机构都非常关切的课题。贵州广播电视台采用全网络技术方式，借助于5G新兴技术，利用多协议、多路径、多方式的传输方式完成视音频信号的高机动、直播化、定制化码率的传输和网络推流，利用远程制作的方式实现全国两会素材及时、安全的报道，取得了比较好的传播效果，该台的做法可咨参考。

〔70〕基于广电网络的智慧政务电视云平台的建设和创新

近年来，智慧广电项目实践在全国如火如荼的开展，涌现出一大批政务、教育、医疗、交通、公安等细分领域的垂直应用。本文阐述的建设案例就是智慧广电的一个典型应用场景，文中介绍的创新做法可供全国同行参考。

〔95〕广电5G承载网技术分析与建设方案探讨

根据中国广电与中国移动签署的共建共享合作协议，中国广电目前可以有偿租用中国移动的承载网开展业务，从而缩短5G网络建设时间周期。但是为了广电5G网络长期可持续性发展，中国广电必须尽早着手研究自有的5G承载网规划和建设。本文全面分析了5G承载网的总体架构、主流技术、带宽需求等，并结合广电网络现状，提出了广电5G承载网的建设方案建议。

〔133〕基于人脸识别技术的电视节目特定人物识别系统设计与实现

电视节目中如果出现负面政治人物、公众人物，会给社会舆论带来负面影响。通过人脸识别技术自动完成负面人物的发现与识别，能够大幅提高电视节目审核的效率和可靠性。国家广播电视总局监管中心利用基于卷积神经网络的人脸识别技术，设计实现了电视节目特定人物识别系统，经过半年的运行实践，效果良好，本文介绍了该系统的设计实现方法。

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〔15〕 **Research and Application of 8K UHD Encode Technique Based On AVS3**

CMG 8K UHD Channel started to broadcast in 2021. The channel successfully broadcasted 2021 Spring Festival GALA. CMG adopts next-generation and more efficient AVS3 coding standard independently developed by my country for real-time coding and compression of 8K UHD programs. This paper is a summary of this exploration and practice, which can provide reference for industry peers.

〔30〕 **Design and Implementation of Omni-media "Cloud Interview" System Based on 5G and Multi-protocol**

In the era of converged media, it is a topic of great concern to every media organization how to make full use of text, pictures, audio, video and other converged media communication methods to comprehensively report NPC and CPPCC sessions, and continuously strengthen online and offline interaction, large screen and small screen resonance, echoes inside and outside the conference, and cooperation between front-end and back-end to comprehensively show NPC deputies and CPPCC members' performance of their duties and suggestions. Guizhou Radio and Television Station adopts a full network technology method, with the help of 5G emerging technologies, uses multi-protocol, multi-path, and multi-mode transmission methods to complete high mobility, live broadcast, customized bit rate transmission and network streaming of video and audio signals, and uses remote production mode to realize timely and safe reporting of the materials of NPC and CPPCC sessions, which has achieved relatively good communication effect. The practice of this station can be consulted.

〔70〕 **Construction and Innovation of Smart Government TV Cloud Platform Based on Radio and Television Network**

In recent years, the practice of smart radio and television projects has been widely carried out across the country, and a large number of vertical applications in government affairs, education, medical care, transportation, public security and other sub-fields have emerged. Construction case described in this paper is a typical application scenario of smart radio and television, and innovative practices introduced in this paper can be used for reference by peers across the country.

〔95〕 **Technical Analysis and Construction Scheme Discussion of Radio and Television 5G Bearer Network**

According to 5G co-construction and sharing agreement, China Broadcasting Network Corporation Ltd. can rent carrier network of China Mobile for business, thus reducing construction time of 5G network. China Broadcasting Network Corporation Ltd. must start to study planning and construction of its own 5G bearer network as soon as possible for long-term sustainable development of radio and television 5G network. This paper comprehensively analyzes overall architecture, mainstream technology, bandwidth requirements, etc. of 5G bearer network, and proposes construction plan of 5G bearer network combined with status quo of broadcast and television network.

〔133〕 **Design and Realization of TV Program Specific Character Recognition System Based on Face Recognition Technology**

If negative politicians and public figures appear in TV programs, it will have a negative impact on public opinion. It can greatly improve efficiency and reliability of TV program review through face recognition technology to automatically complete discovery and recognition of negative characters. Supervision Center of NRTA uses face recognition technology based on convolutional neural networks to design and implement a specific character recognition system for TV programs. After six months of operation and practice, the effect is good. This paper introduces design and implementation method of the system.