

# 广播与电视技术

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第二届中国期刊奖百种重点期刊

Radio & TV Broadcast Engineering

全国百种重点期刊 专业核心科技期刊

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**SONY**

**小巧精悍  
灵活直播**

**Live**

**MCX-500**  
多机位现场制作小型切换台

● 可透过 Sony HXR-NXSR 和 PXW-F55 摄像机实现 Tally Tally 显示在摄像机 LCD 屏上。这样有助于避免丢失拍摄内容。此外，使用同步录制功能在 MCX-500 内部录制的视频，可用作粗略编辑内容，而摄像机中的记录可用作主材料。

● 支持 PGM 直接录制到机内 SD 卡

- 最大支持9路输入 (4路3G-SDI+2路HDMI+2路Video+字幕)
- 内置5ch立体声混音设备
- 节目信号通过streaming 口输出，可实现直播在线网络直播功能\*
- 支持Logos, 字幕, 画中画和Key控制
- 支持 PGM 直接录制到机内SD卡
- 具有硬切, 混合, 划像等切换特效
- 支持机身硬件操控/LCD触屏操控, 同时支持GUI软件/有线/无线操控 (电脑, 手机, ipad)
- 连接RM-300P控制器, 即可实现光栅, 焦点等参数的调整

\*此功能需通过USB升级实现

索尼中国专业

索尼专业手持摄录一体机  
尊享会员

**原有1年+延长2年=3年保修**

\*注册条件: 用户自购买MCX-500多机位现场制作小型切换台的正式发售所记载的开票日期起一年内完成在线产品注册, 即可在原有1年保修基础上再享两年保修服务 (购买地仅限中国大陆, 不包括港澳台地区)

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● 图片与实物可能存在差异, 产品规格, 价格 (含运费) 等以实际为准。● 索尼中国专业系统集团生产的产品均符合CE, FCC, RoHS, REACH, WEEE, PSE, CCC, CB, EMC, EN55022, EN55024, EN55032, EN55035, EN55038, EN55041, EN55042, EN55045, EN55048, EN55050, EN55052, EN55054, EN55056, EN55058, EN55060, EN55062, EN55064, EN55066, EN55068, EN55070, EN55072, EN55074, EN55076, EN55078, EN55080, EN55082, EN55084, EN55086, EN55088, EN55090, EN55092, EN55094, EN55096, EN55098, EN55100, EN55102, EN55104, EN55106, EN55108, EN55110, EN55112, EN55114, EN55116, EN55118, EN55120, EN55122, EN55124, EN55126, EN55128, EN55130, EN55132, EN55134, EN55136, EN55138, EN55140, EN55142, EN55144, EN55146, EN55148, EN55150, EN55152, EN55154, EN55156, EN55158, EN55160, EN55162, EN55164, EN55166, EN55168, EN55170, EN55172, EN55174, EN55176, EN55178, EN55180, EN55182, EN55184, EN55186, EN55188, EN55190, EN55192, EN55194, EN55196, EN55198, EN55200, EN55202, EN55204, EN55206, EN55208, EN55210, EN55212, EN55214, EN55216, EN55218, EN55220, EN55222, EN55224, EN55226, EN55228, 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# 国家新闻出版广电总局 广播电视规划院广播电视计量检测中心



国家新闻出版广电总局广播电视规划院广播电视计量检测中心成立于1986年，2000年获得中国合格评定国家认可委员会和中国认证认可国家监督管理委员会颁发的实验室认可证书和资质认定证书，是广电行业历史悠久、检测能力领先的第三方权威检测机构。多年来广播电视计量检测中心承担了大量广播电视系统设备器材国家新闻出版广电总局抽样（入网）检测、标准符合性测试、系统工程验收测试、招标测试、性能测试、电磁兼容和安全测试、软件评测等工作。

广播电视计量检测中心秉承“**科学、准确、公正、规范**”的质量方针，不断提升检测能力，为广电行业、运营机构和广大用户提供准确可靠的数据。

## ◆ 通过 CNAS 认可检测能力

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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、不做任何承诺或保证、不承担任何责任。

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### 〔16〕 媒体融合背景下的网络安全研究

媒体融合是现代信息传输渠道多元化下的新型传播模式。但融合媒体的整体架构，使原有全台网有限边界演变为无边界的网络状态，给电视台的IT基础设施安全带来了巨大的挑战。本文从基于大数据分析的APT防御和虚拟机安全隔离两个方面研究分析了媒体融合背景下的网络安全，提出融合媒体平台总体安全架构。

### 〔31〕 电视台全媒体融合生产平台设计方案

南宁电视台从传统媒体的采编播模式向全媒体融合生产平台全面转型，采用全新的组织架构及新闻生产模式，实现了内部资源的优化，提高了媒体的核心竞争力，满足了大众的多元化需求。本文详细介绍该全媒体融合生产平台的设计方案、系统功能及架构特点，供业界参考。

### 〔56〕 有线网络综合工单系统的设计和应用

如何实现有线网络的高效运维服务，提升用户服务质量已成为有线网络业务运营中不容忽视的一个问题，建立面向客户的全业务、全网络的快速响应体系变得越来越重要。本文基于地方有线网络运维实例，提出了一种新型综合工单系统的设计思路和实现方案，值得大家业界同仁参考借鉴。

### 〔77〕 大功率中波天线与大功率调频天线共塔系统的设计与实践

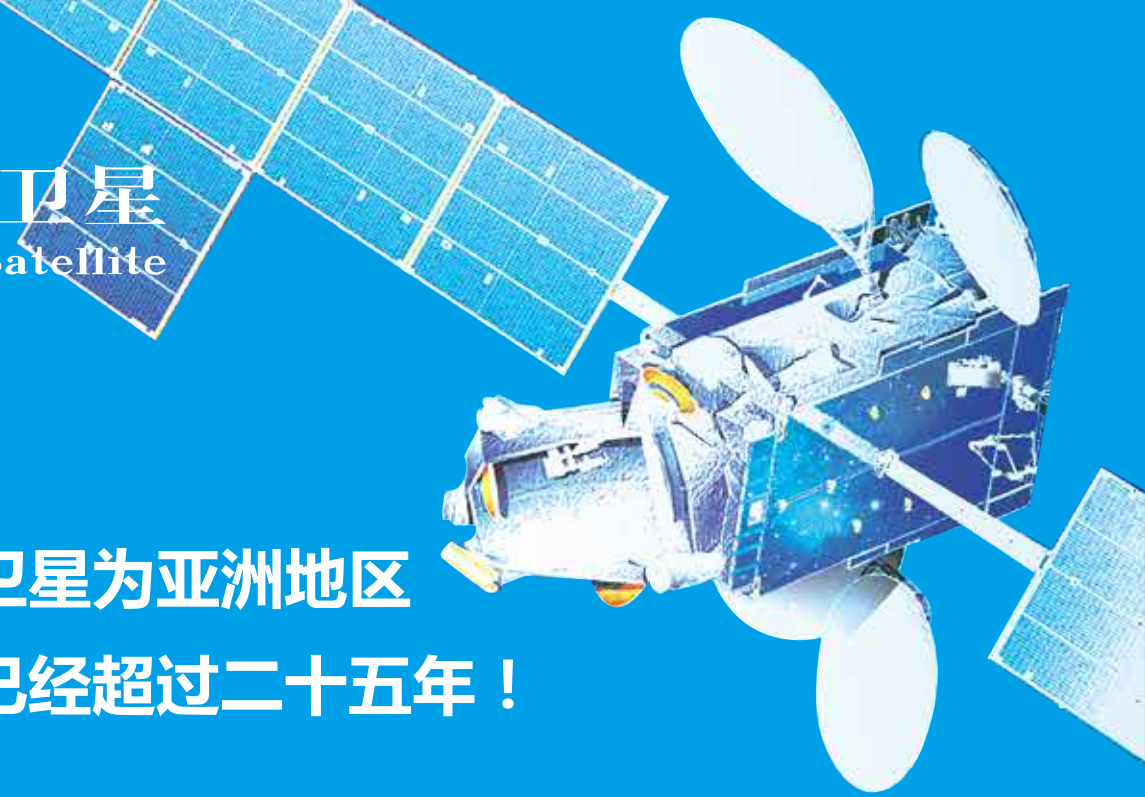
随着城市的发展建设，调频覆盖越来越复杂和困难。河南人民广播电台利用城市郊区中波发射天线，开展中波大功率双频共塔试验，取得了良好的效果。本文介绍该项目的设计思路和实现方法，对各地借助中波发射天线增强调频广播覆盖具有借鉴意义。

### 〔101〕 基于数字识别技术的无线数字化覆盖监测监管技术分析

本文通过对基于数字标识、基于视音频特征值提取和基于数字水印的三种无线数字化覆盖监测监管技术方案进行分析试验比较，为无线数字化覆盖监测监管提供了技术选择参考依据。试验证明，采用基于数字识别技术的无线数字化覆盖监测监管技术方案，具有系统建设、升级、开发、成本等方面的综合优势，可以实现数字电视节目硬件编码时数字标识的加入和检测功能。



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# Index

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## [ 16 ] **Research on Network Security under Media Convergence**

Media convergence is the latest communication mode under the diversification of modern information transmission channels. The whole structure of media convergence makes the traditional whole-station network from finite boundary to borderless boundary. This brings a huge challenge of IT infrastructure security to the TV station. This paper analyzes the network security under media convergence, including APT defense based on big data analysis and secure isolation of virtual machines. Also this paper presents the security structure of convergent media platform.

## [ 31 ] **Design of Omni-media Convergent Production Platform for TV Station**

The content production of Nanning TV Station has been transformed from the traditional editing and broadcasting mode to the omni-media convergent production platform. It adopts a new organizational structure and a news production model in order to optimize internal resources. Therefore, media's core competence is improved, and mass's diversified demand is met. This paper describes in detail the design of omni-media convergent production platform, as well as the system functions and structure characteristics, which could be references for others.

## [ 56 ] **Design and Application of Comprehensive Work Order System for Cable Network**

How to realize an efficient operation and maintenance service of cable network, how to improve the customer service quality, are problems which could not be ignored in the business operation of cable network. To establish a fast response system oriented to the whole business and the full network is becoming more and more important. According to the example of local cable network operation and maintenance, this paper proposes the design idea and implementation scheme of a novel comprehensive work order system, which is worthy of reference from our colleagues in the industry.

## [ 77 ] **Total Tower System of High-Power MW Antenna and High-Power FM Antenna**

With the development of city construction, FM coverage is becoming more and more complex and difficult. Henan People's Broadcasting Station carries out tests on high-power MW dual-band total tower through MW transmitting antenna in the suburb, and achieves good results. This paper introduces the design idea and implementation scheme. It is used for reference in various areas to enhance FM radio coverage by MW transmitting antennas.

## [ 101 ] **Monitoring and Supervision of Digital Wireless Coverage Based on Digital Recognition Technology**

This paper compares three monitoring and supervision schemes of digital wireless coverage, which are digital identification based, video and audio characteristic based and digital watermark based. It provides technical reference for the monitoring and supervision of digital wireless coverage. The experiment results show that the scheme based on digital recognition has comprehensive advantages in aspects of system construction, updating, development and cost. It realizes adding and detecting functions of digital identification when the digital TV programs are being coded.