

**Educational Communications Board  
Broadcast Core Systems Engineer  
IS Technical Services - Specialist**

**Position Summary**

ECB's Broadcast Core Systems Engineer serves as an expert point of contact for broadcast solutions providing real-time support for on-air and production staff to assure the quality, reliability, and consistency delivered broadcast products. They will identify and resolve complex and varied technical issues related to Educational Communications Board's (ECB) and Wisconsin Public Media's (WPM) radio infrastructure delivery. They will plan and oversee the design, installation, configuration, and maintenance of broadcast automation, digital audio workstations, broadcast content management systems, hardware, and security protocols. They will serve as end-user trainer for systems used to deliver Wisconsin Public Radio's (WPR) content.

This position reports to the Director of Core Engineering. Work is performed under general review with objectives and priorities established by overall work unit directives.

**Goals and Worker Activities**

40% A. Integrate, identify, troubleshoot, monitor, and resolve complex and varied supported services, systems, networks, and application problems according to agency's established processes and procedures and general engineering practices related to ECB and WPM's radio infrastructure delivery and production.

1. Provide real-time, on demand support for on-air and production staff to ensure the high quality, reliability, and consistency of delivered broadcast products.
2. Troubleshoot hardware and software related system failures for all broadcast infrastructure equipment, networks, applications, and services.
3. Design and perform quality control procedures related to infrastructure supporting radio automation systems, core routing control systems, automated events, log creation, log management, audio file management, audio processing, and program ingest.
4. Oversee development and implementation of automated alarm, control, and monitoring systems to improve radio operations and comply with FCC regulations.
5. Plans and directs technical implementation for WPR related infrastructure and studio systems statewide to include WPR regional bureaus.
6. Configuration and maintenance of complex hardware and software systems that support WPR production operations such as: Wide Orbit, News Boss, Music Master, Omnia Audio processors, Pathfinder, Telos/Altus, Comrex.

- 20% B. Plan and oversee the design, installation, configuration, and maintenance of broadcast automation, digital audio workstations, broadcast content management systems, hardware, and associated equipment according to internal and external customer specifications.
1. When necessary, perform emergency repairs or workarounds.
  2. Routinely update server operating systems, device firmware, and security software. Clone hard drives and store as emergency backups for critical systems.
  3. Provide after-hours emergency phone consultation and infrequent physical response to facilities for critical on-air operations.
  4. Research, develop, and recommend specifications for future implementation of new and replacement technical systems and devices as required by evolving technologies and standards. Plan for the purchase and integration of, or transition to, such technology.
  5. Make network adjustments to ensure the availability, accountability, and security of all attached systems and devices for optimal reliability and continuous operation.
- 15% C. Serve as an expert point of contact for internal/external stakeholders and IT partners regarding system integration, identified needs, broadcast solution options, and communicate issue updates and resolutions.
1. Represent ECB engineering with internal and external production staff and leadership to maintain streamlined and efficient broadcast operations.
  2. Confer with vendors and industry experts, and attend industry conferences, to gain knowledge of current and emerging technologies, trends, and workflows in the broadcast and IT industries.
  3. Establishes software, firmware, and hardware, configuration standards related to WPR studio and automation infrastructure systems.
- 10% D. Develop and facilitate end user training, answer questions, and provide information specific to the systems used to deliver WPR content and develop documentation to aid in knowledge-sharing and process improvement.
1. Provide staff training (one-on-one, group, and all-staff) in the operation, configuration, troubleshooting, and recovery of computer-based systems and devices.
  2. Develop and facilitates end-user training, answer questions, and provide information specific to the systems used to deliver WPR content.
  3. Author, update, and disseminate technical procedures, drawings, and documentation regarding broadcast systems, devices, and workflows.
  4. Document device configurations, IP setups, version updates, and cable assignments in accordance with ECB standards.

5. Develop documentation to aid in knowledge-sharing and process improvement.
- 10% E. Implement, plan, and coordinate system logistics for the integration of security protocols related to broadcast delivery infrastructure.
1. Perform upgrades of servers, systems, applications, and software to align with security best practices.
  2. Install, administer, and maintain firewalls, host and client access mechanisms, permissions, and user accounts.
  3. Adhere to and maintain all security controls, policies, standards, and procedures.
  4. Support end users in the proper and secure use of hardware and software components.
  5. Protect against and identify risks to technology systems, broadcast infrastructure and/or networks.
- 5% F. Other duties and activities as required and assigned.

### **Required Knowledge, Skills, and Abilities**

1. Comprehensive knowledge of broadcast engineering and production workflows and technologies.
2. Comprehensive knowledge of radio automation systems.
3. Comprehensive knowledge of audio processing systems and standards.
4. Knowledge of audio delivery codecs, protocols, and standards.
5. Knowledge of IT and networking standards as they pertain to broadcast infrastructure, systems, and equipment.
6. Knowledge of current LAN/WAN architectures, client/server technology, distributed database and data communications technology, and network security best practices.
7. Knowledge of signal flows and workflows through the integration of multiple broadcast systems.
8. Knowledge of Windows and Linux server administrator operations and privileges.
9. Scripting/coding skills in Python, PowerShell, Bash, and/or similar languages.
10. Knowledge of project management best practices.
11. Knowledge of industry standard safety and security procedures and practices as applied to broadcast facilities (OSHA, FCC, FAA, etc.).
12. Ability to communicate clearly, effectively, and accurately in both written and verbal communications.
13. Ability to develop and maintain logic systems supporting broadcast audio switching and alarming. (Pathfinder, Navigator, etc.)
14. Ability to provide clear, concise, and effective technical training.
15. Ability to maintain effective working relationships with other professionals internal and external to the organization.
16. Ability to work on multiple tasks simultaneously and independently.

17. Ability to complete complicated tasks under time constraints.
18. Ability to lift and carry equipment weighing at least 40 pounds.
19. Ability to climb, reach, bend, and kneel to move, install, and maintain equipment.

**Special Requirements**

- This position requires a variable, non-traditional work schedule including some nights and weekends.
- This position may require regular standby or on-call status.
- This position requires frequent in-state travel.