

ABSTRACT

The development of broadcasting technology offers opportunities for community radio to utilize a practical and cost-effective broadcast monitoring system, particularly for stations broadcasting via both internet radio and FM RDS. This study develops a web-based monitoring system capable of displaying real-time broadcast information from the Mixxx application, aiming to enable station managers to monitor without directly accessing the broadcasting software. The system is designed using a Raspberry Pi as the server, leveraging the Flask framework for website development, along with HTML, CSS, and JavaScript for a simple and user-friendly interface. Displayed data include Mixxx application status, song title, artist name, broadcast timeline, and connection status, retrieved from JSON-formatted metadata. Test results show that the system can present information accurately and in real-time, supporting features such as adding songs directly from the website, listener song requests, and displaying the top three most-played songs. The implementation of these features operates smoothly with consistent data updates and short response times, making monitoring more interactive, efficient, and supporting the transition toward modern digital broadcasting.

Keywords: Raspberry Pi, Mixxx, Broadcast Monitoring, Website, Flask, Internet Radio, FM RDS, Community Radio