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(57) Abstract :
METHOD AND SYSTEM FOR NEURAL NETWORK-DRIVEN DYNAMIC SPECTRUM ACCESS FOR INTELLIGENT COMMUNICATION NETWORKS ABSTRACT The invention presents a method and system for dynamic spectrum access in intelligent communication networks. The method involves employing a neural network-driven system to conduct real-time analysis of spectrum conditions. Utilizing the insights gained, the system determines optimal frequency bands for communication, considering factors such as signal strength, interference, and traffic load. Subsequently, the system dynamically adjusts spectrum allocation, optimizing overall communication performance. The system, comprising a neural network module for spectrum analysis, an adaptive spectrum allocation module for dynamic frequency adjustments, and a communication interface for seamless transitions, provides a comprehensive solution. This neural network-driven approach enhances adaptability to varying network conditions, ensuring efficient spectrum utilization and improving the overall quality of communication in intelligent networks.

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