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(57) Abstract :
The present invention discloses a system (100) and method (200) for efficient burst processing in wireless communication systems. The system includes a burst detector (102), a processor (108), and a memory (110) containing essential instructions. The burst detector (102) is responsible for detecting burst signals received by a receiver (104), while the processor is configured to process the burst signal within a predetermined time interval based on the wireless communication system's characteristics. Various techniques, including frequency synchronization, error correction code, and optimization algorithms, are employed by the processor to enhance burst signal processing efficiency and accuracy. The processed data is transmitted to higher layers of the communication protocol through a transmitter (106). The system's adaptability and reliability in handling bursty data make it a valuable addition to wireless communication networks, ensuring timely and seamless data transmission.

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