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(57) Abstract :
The invention provides an IoT-based framework for remote animal tracking and monitoring comprising wearable devices (101) equipped with GPS (104), biosensors (105), environmental sensors (106), and microcontroller units (107). Data is transmitted via LoRa (109), NB-IoT (110), or satellite (111) to a cloud platform (103), where a database (112) and analytics engine (113) process health and movement information. A dashboard module (114) provides real-time visualization and alerts (115). The framework ensures energy efficiency through adaptive duty-cycling and solar-powered management unit (108), offering predictive insights for agriculture and conservation.

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