

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202511100941 A

(19) INDIA

(22) Date of filing of Application :17/10/2025

(43) Publication Date : 05/12/2025

(54) Title of the invention : A COMPUTER MODEL FOR OPTIMIZED WIRELESS NETWORK TRAFFIC CONTROL

(51) International classification	:G06F0016245300, H04W0088100000, H04L0041147000, H04L0043087600, H04L0047830000	(71) Name of Applicant : 1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY Address of Applicant :19, Knowledge Park-II, Institutional Area, Greater Noida – 201306, Uttar Pradesh, India. Uttar Pradesh India
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(86) International Application No	:	
Filing Date	:01/01/1900	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The invention discloses a computer model (100) for optimized wireless network traffic control that integrates a data input layer (101), traffic prediction module (102), resource allocation engine (103), optimization controller (104), and wireless interfaces (105). The model forecasts traffic surges, dynamically allocates resources, and adapts to real-time conditions using machine learning. Experimental validation demonstrates significant improvements in latency, bandwidth utilization, and energy efficiency. The modular and scalable architecture enables seamless integration with existing wireless infrastructure, offering a predictive, adaptive, and efficient solution for modern heterogeneous networks.

No. of Pages : 14 No. of Claims : 6