

Connecting Wi-Fi and 5G possible, according to research team

April 23 2020, by David Bradley



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It is possible to integrate conventional wireless internet, Wi-Fi with the fifth generation of cellular mobile phone networks, so-called 5G. Writing in the *International Journal of Wireless and Mobile Computing*, a team from the U.S. discusses how Wi-Fi traffic can move flexibly between 5G cells and Wi-Fi cells. It does this through overflow, vertical

handoff, horizontal handoff, and take-back operations, the team explains.

Shensheng Tang of St Cloud State University, in Minnesota, John O'Rourke of Altec Industries in Joseph, Missouri, and Grace Tang of Central High School, also in St. Joseph have proposed a traffic modeling method that allows for generally distributed user-dwell times.

"We consider an integrated wireless network using 5G [cellular architecture](#) as mobility support for Wi-Fi traffic and perform traffic modeling of the integrated architecture with generally distributed user-dwell times. In the integrated architecture, the Wi-Fi traffic takes on complete user mobility," the team explains.

The researchers add that the same approach to [quality assurance](#) might also be extended to 5G integrated with other types of system, such as sensor networks, intelligent vehicle networks, and Internet of Things applications.

More information: Shensheng Tang et al. Traffic modelling of an integrated 5G/Wi-Fi network with generally distributed user-dwell times, *International Journal of Wireless and Mobile Computing* (2020). [DOI: 10.1504/IJWMC.2020.106772](#)

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