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CEST

UHF Wi-Fi: A Way to Maximize Bandwidth

● Tuning into UHF to boost Wi-Fi performance

By Olga Kharif



ILLUSTRATION: 731

Innovator: Edward Knightly

Age: 46

Co-founder of three-year-old startup Vuum and professor at Rice University in Houston

Form and function

Watch, an app that can be installed on a smart TV or remote control to increase Wi-Fi bandwidth by up to six times, recycles idle or unused spectrum typically given to ultra-high-frequency (UHF) TV channels.

Background

Global wireless-data traffic grew 69 percent last year, Cisco Systems estimates, reaching about 2.5 exabytes (2.5 billion gigabytes) a month.





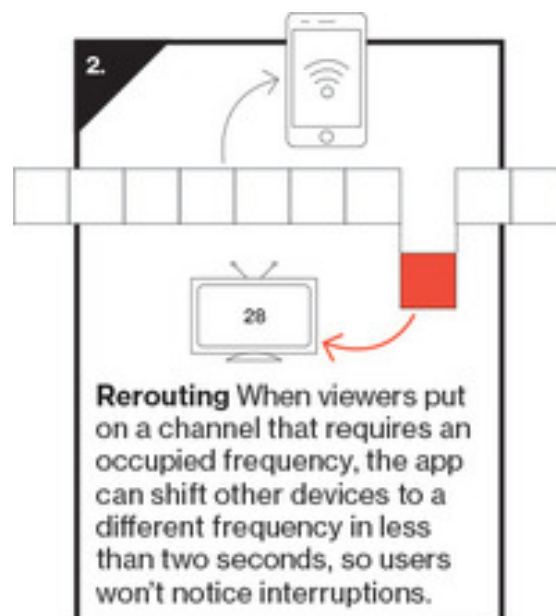
Origin

Knightly and grad student Xu Zhang began work on the UHF Wi-Fi app at Rice in 2013.

“Allowing the UHF spectrum to be inefficiently used makes little sense today and will make even less sense in the future” —Edward Knightly

Funding

Grants totaling \$500,000 from Intel, Cisco, and the National Science Foundation, among others, have covered the project's costs.



Price

Within a year, Vuum says it plans to start selling modems using parts of Watch's technology for about \$500.

Next Steps

Chief Executive Officer Ryan Guerra says Vuum is in talks with several Internet providers to test its technology over larger areas. The Federal Communications Commission authorized a small public test of the Watch app in Houston last year, but would have to approve broader implementation. Still, for now, “it looks quite promising,” says independent wireless analyst Chetan Sharma.

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