


[News](#)
[Articles](#)
[Videos](#)
[Images](#)
[Books](#)
[Health & Medicine](#)
[Mind & Brain](#)
[Plants & Animals](#)
[Earth & Climate](#)
[Space & Time](#)
[Matter & Energy](#)

Science News

[Share](#) [Blog](#) [Cite](#)

Zeroing In On Wi-Fi 'Dead Zones' To Inexpensively Fill Gaps In Wireless Networks

Just In:
[Artificial](#)
Scienc

ScienceDaily (Sep. 30, 2008) — Rooting out Wi-Fi "dead zones" in large wireless networks that cover whole neighborhoods or cities is an expensive proposition. Pre-deployment testing is so costly that most WiFi providers simply build their networks first and fill in the gaps later. But even that isn't easy, due to the paucity of inexpensive techniques for mapping out precisely which areas lack coverage.

See also:

Matter & Energy

- [Batteries](#)
- [Engineering](#)
- [Petroleum](#)

Computers & Math

- [WiFi](#)
- [Distributed Computing](#)
- [Communications](#)

Reference

- [Local area network](#)
- [Wi-Fi](#)
- [IEEE 802.11](#)
- [Computing power everywhere](#)

to efficiently characterize the performance of urban-scale deployments, and our techniques can be used to either guide network deployment or to assess whether a deployed network meets its performance requirements."

The new technique uses a small number of measurements to predict how well a wireless transmitter will cover a particular portion of a neighborhood. The only information required is basic topography, street locations and general information about land use.

Knightly and research collaborators Ram Swaminathan, senior research scientist at HP Labs, and Joshua Robinson, Rice graduate student, demonstrated their new method on two high-profile networks -- Google's system in Mountain View, Calif., and TFA-Wireless, an experimental network designed

Now, using an award-winning technique developed at Rice University and Hewlett-Packard Laboratories (HP Labs), Wi-Fi architects can test and refine their layouts using readily available information. The research, which recently won best-paper honors at the annual MobiCom '08 wireless conference in San Francisco, promises to make it cheaper and easier to get proper wireless coverage.

"In the real world there are many things than can interfere with signals and limit coverage," said lead researcher Edward Knightly, professor in electrical and computer engineering at Rice. "Our goal was

Ads by Google

[Advertise here](#)

1 rule of a flat stomach:

I cut down 16 lbs of stomach fat in 2 months by obeying this 1 old rule
[Wu-YiSource.com](#)

3.65 GHz WiMAX

Best ROI, lowest start-up costs. user deployment, made in USA
[www.solectek.com](#)

Prepare to be Shocked

Millions have already taken this amazing test. What's your RealAge?
[RealAge.com](#)

Heart Surgeon's Nightmare

Why MDs Worry "This" Supplement Could Put Them Out Of Business!
[HealthyHeartJournal.com](#)

Health Science

Find Hundreds of Online Colleges! AA, BA & Graduate Degree Programs.
[WashingtonPost.com](#)

Related Stories

IT Security Threats Caused By Wireless

'Parasites' (Aug. 27, 2007) — College students do it. Coffee shop customers do it too. Your neighbor in Apartment 3C is probably doing it right now. Many computer users search for an available wireless network to tap ... > [read more](#)

Bell Labs Geolocation Technology Pinpoints

Wireless 911 Calls Within 15 Feet (June 30, 1999) — Researchers at Lucent Technologies' Bell Labs have developed the most sensitive technology yet for pinpointing the location of wireless 911 emergency calls. The approach is accurate within 15 ... > [read more](#)

Santa Cruz To Lead Ambitious Multidisciplinary Research Project On Wireless Communication

Networks (Apr. 12, 2005) — Researchers at the University of California, Santa Cruz, are leading a


[Electri](#)
[Your F](#)
[Electri](#)
[Differe](#)
[Civil E](#)
[Asses:](#)
[more :](#)

Breaki
[Dark n](#)
[nanote](#)
[Nobel](#)
[U.S. s](#)
[poised](#)
[Mercu](#)
[Dark n](#)
[nanote](#)
[Nobel](#)
[Study](#)

and built by RDS and operated by Houston-based nonprofit Technology For All. TFA Wireless provides high-speed Internet access to more than 4,000 users in a working-class neighborhood in east Houston.



major collaborative effort to develop the technology for complex wireless communication networks that can be set up in rapidly ... > [read more](#)

[more science news](#)
Adapted from materials provided by [Rice University](#).

In Other News ...

Need to cite this story in your essay, paper or report? Use one of the following formats:
APA
Rice University (2008, September 30). Zeroing In On Wi-Fi 'Dead Zones' To Inexpensively Fill Gaps In Wireless Networks. *ScienceDaily*. Retrieved October 1, 2008, from <http://www.sciencedaily.com/releases/2008/09/080925114126.htm>
MLA
Europe scrutiny for bailout as Senate vote looms

Butts, Faces
Paper or report?
Identify
Friends
Space Smash-Up Turned
Carried Giant Boulders to
VIDEO:
Amazon Burned

Method Uses 'Bluetooth' To Track Travel Time For Vehicles, Pedestrians (May 28, 2008) — Engineers have created a method that uses pervasive Bluetooth signals from cell phones and other wireless devices to constantly update how long it takes vehicles and pedestrians to travel from one ... > [read more](#)

Number of stories in archives: 44,032

[GE to raise \\$15 billion, Buffett gets preferred stake](#)
[Mail carriers to bring drugs in anthrax attack](#)

Find with keyword(s):

Enter a keyword or phrase to search ScienceDaily's archives for related news topics, the latest news stories, reference articles, science videos, images, and books.

FDIC seeking [1 rule of a flat stomach](#): Cut down 10 lbs of stomach fat in 2 months by obeying this 1 old rule
[Chrysler's September U.S. sales fall 33 percent](#)
[more top news](#)

Arctic
Rabbits in Eco-War
Shark Fishers Try to Reel in Cash, Turn to Conservation
Subscribe to RSS feed

Science News
If It's Happening, It's Here - The Latest News from Around the World
[DailyMe.com](#)

Copyright Reuters 2008. See [Restrictions](#).

Free Subscriptions ... from ScienceDaily

Get the latest science news with our free email newsletters, updated daily and weekly. Or view hourly updated newsfeeds in your RSS reader:
[Email Newsletters](#)
[RSS Newsfeeds](#)

Feedback ... we want to hear from you!

Tell us what you think of the new ScienceDaily -- we welcome both positive and negative comments. Have any problems using the site? Questions?

Your Name:
Your Email:
Comments:

[About This Site](#) | [Editorial Staff](#) | [Awards & Reviews](#) | [Contribute News](#) | [Advertise With Us](#) | [Privacy Policy](#) | [Terms of Use](#)

Copyright © 1995-2008 ScienceDaily LLC — All rights reserved — Contact: editor@sciencedaily.com