



Search ExtremeTech



Fresh picks in your Fix

STITCH FIX

Take your style quiz

**PC**
Budget**St**
St

ADVERTISEMENT

Home > Extreme

Is Clearwire the savior of global LTE?

Clearwire's efforts to ensure 4G chipmakers are producing dual-mode chipsets may just end up saving global LTE interoperability after all.

By Ed Oswald May 9, 2012

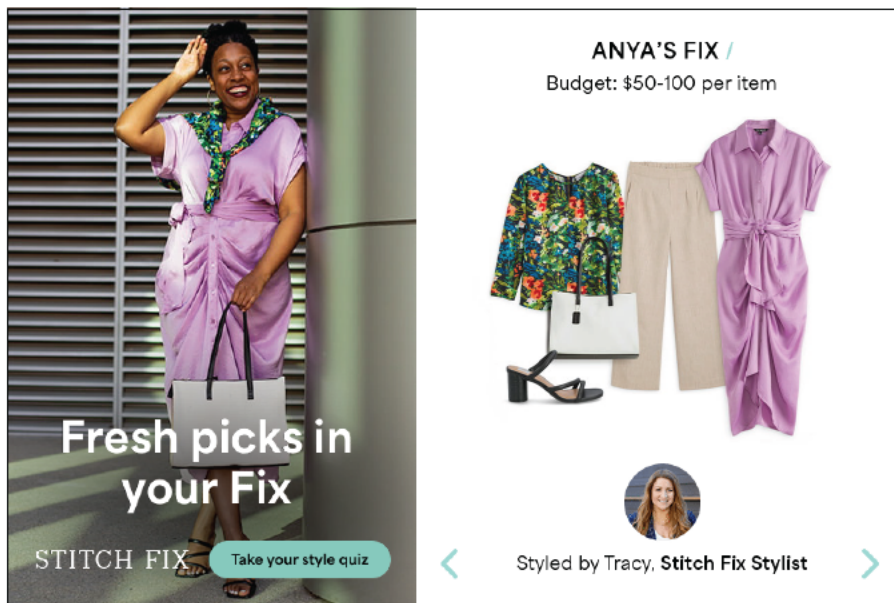




Clearwire is moving full-speed ahead with a flavor of LTE that is uncommon in the US, but used heavily overseas. Interoperability is high on its list of priorities, though: the company is spearheading the effort to promote multi-mode chipsets.

Two types of LTE currently exist: FDD (frequency division duplex) and TDD (time division duplex). FDD-LTE uses two separate frequency ranges for uplink and downlink, while TDD-LTE uses a single range of frequencies. Worldwide, TDD-LTE seems to have a good deal more traction, however here in the US FDD-LTE has so far been the mode of choice.





ANYA'S FIX /
Budget: \$50-100 per item

Fresh picks in your Fix

STITCH FIX [Take your style quiz](#)

Styled by Tracy, **Stitch Fix Stylist**

ADVERTISEMENT

China Mobile, India's Bharti Airtel, and Japan's Softbank are either planning or have deployed TDD-LTE. In Europe, the technology has supporters in Sweden's Hi3G (which plans a dual-mode network), and **UK Broadband**, who recently switched on its own TDD-LTE network in the London borough of Southwark.

So far Clearwire is the only US operator to move forward with TDD-LTE. That said, it must consider the reality of the US market if it hopes to strike agreements with other carriers. Major partner Sprint is moving towards LTE (and will likely want some capacity), and MetroPCS has expressed interest in buying capacity on Clearwire's network. These carriers use FDD-LTE, so any device currently available on these networks will be incompatible with Clearwire's.

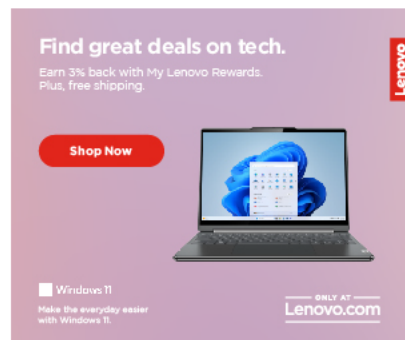
Clearwire

With a vested business interest in somehow solving this problem, Clearwire is announcing agreements with major chipmakers to develop and promote dual-mode (FDD+TDD) chips. Sequans penned a deal with Clearwire on Monday, and



Qualcomm signed a deal on Tuesday. The partnership with Qualcomm is especially significant, considering the company supplies a significant portion of the cellular chipsets in use today. Dual-mode chips are expected to debut by the end of this year.

This is good news, but before you get too excited, consider these caveats. Clearwire says its LTE network will not be available until the first half of 2013 at the earliest. Only Bharti Airtel and UK Broadband have launched TDD-LTE commercially worldwide, and other European operators are just now in the planning stages. This means widespread TDD-LTE deployment is likely several years away.



Then you must consider the issue of frequencies. As many as 38 difference frequency ranges may be used for LTE worldwide by 2015, a study from Wireless Intelligence predicts. That's a heck of a lot of fragmentation, and there's almost no possible way manufacturers will be able to squeeze support for all those frequencies onto one chip.

"Every country in the world will have at least one TDD network and several FDD networks. The major problem lies in the frequencies being used in each country for the networks," ExtremeTech's wireless analyst Neal Gompa explains. "TDD-LTE is not going to be the roaming savior that Clearwire's deluded CEO [Erik Prusch] hopes it to be."

AD



Tagged In

Lte

4g Lte

Sprint

MetroPCS

FDD

More from Extreme



What Is Dark Matter?

04/01/2024 By Adrianna Nine, Graham Templeton



How Do SSDs Work? The Inner Details, Explained

03/24/2024 By Joel Hruska, ExtremeTech Staff



What Is Artificial Intelligence? From Generative AI to Hardware, What You Need to Know

03/22/2024 By Jessica Hall



SpaceX Starship, Explained: What You Need to Know About Elon Musk's Biggest Project of Them All

03/02/2024 By Ryan Whitwam



4K vs. UHD: What's the Difference?

02/10/2024 By Josh Norem, Joel Hruska

Top Deals are waiting.

Don't miss out on these featured offers at Best Buy. Find great savings on TVs, laptops, appliances and much more.

Shop Now >

**BEST
BUY**

**Save today
with Top Deals.**

Shop Now

© 2024 Best Buy

Subscribe Today to get the latest ExtremeTech news delivered right to your inbox.

Email Address...

Sign Up

This newsletter may contain advertising, deals, or affiliate links. Subscribing to a newsletter indicates your consent to our [Terms of use](#) and [Privacy Policy](#). You may unsubscribe from the newsletter at any time.

[Aerospace](#) [Cars](#) [Computing](#) [Defense](#) [Electronics](#) [Energy](#) [Gaming](#) [Phones](#) [Science](#) [Security](#) [Deals](#) [Shop](#)



askmen®

IGN

lifehacker

Mashable

Offers.com

PCMAG.COM

RetailMeNot

SPEEDTEST

GROUPBLACK

ExtremeTech supports Group Black and its mission to increase greater diversity in media voices and media ownerships.



© 2001-2024 ZIFF DAVIS, LLC., A ZIFF DAVIS COMPANY. ALL RIGHTS RESERVED.

ExtremeTech is a federally registered trademark of Ziff Davis, LLC and may not be used by third parties without explicit permission. The display of third-party trademarks and trade names on this site does not necessarily indicate any affiliation or the endorsement of ExtremeTech. If you click an affiliate link and buy a product or service, we may be paid a fee by that merchant.

[About Ziff Davis](#) [Privacy Policy](#) [Terms of Use](#) [Advertise](#) [Accessibility](#) [Do Not Sell My Personal Information](#)

[About ExtremeTech](#) [Contact Us](#) [Editorial Guidelines](#)

