



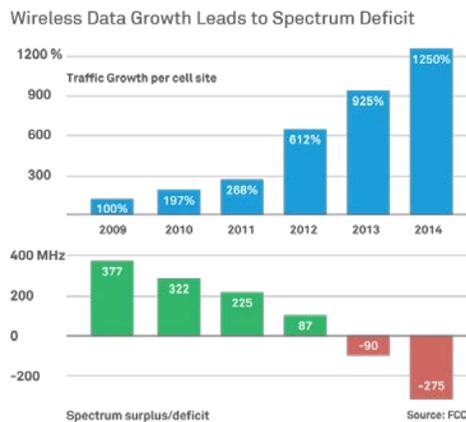
## pCell™ Wireless Breakthrough Delivers Fiber-Class Mobile to Everyone, All the Time

*No congestion, no dead zones, no weak signals: Mobile always feels like fiber*  
Developed by **Artemis Networks**, pCell is compatible with standard LTE devices such as iPhone™ and Android™ mobile phones

**San Francisco, CA – February 19, 2014** – Technology pioneer Steve Perlman, Founder and CEO of [Artemis Networks](#), today unveiled pCell™ technology, a radical new approach to wireless that consistently delivers full-speed mobile data to every mobile device concurrently, regardless of how many users are sharing the same spectrum at once. pCell technology ushers in a new era to mobile, where a ubiquitous fiber-class broadband experience will be delivered at all times to standard LTE devices, such as iPhone and Android mobile phones, eliminating the congestion, dead zones and unreliable connections we’ve come to accept with conventional cellular technology.

Steve Perlman will do a live demonstration of the revolutionary pCell technology at Columbia University in Uris Hall on Wednesday, February 19, at 12:15 PM.

In our increasingly mobile world of smartphones, tablets and connected devices, mobile data demand has skyrocketed, almost doubling in the last year<sup>1</sup> and projected to grow more than 25X<sup>2</sup> by 2020, far outpacing the physics limits<sup>3</sup> of conventional cellular technology, as the world’s mobile spectrum is exhausted<sup>4</sup>. Major metro areas like New York, Chicago, and San Francisco are already experiencing severe mobile congestion<sup>5</sup>, a bellwether for the relentless “tsunami” of mobile data<sup>6</sup> overwhelming mobile networks worldwide.



With existing cellular networks, each tower transmits a radio signal, forming a large cell that carefully avoids interfering with other cells. Mobile devices all share the cell’s capacity, taking turns so they don’t interfere with each other. This worked well until everyone started carrying smartphones and tablets, streaming videos and uploading photos. Taking turns among so many users, each demanding so much data, is slowing cell service to a crawl, despite the addition of more spectrum and small cells and innovations like MIMO and beamforming.

pCell technology turns the entire problem inside out. Instead of dodging interference, pCell exploits interference, combining transmitted radio signals from multiple pCell base stations to synthesize tiny “personal cells”—pCells—of wireless energy around each mobile device. So, rather than hundreds of



users taking turns sharing the capacity of one large cell, *each user gets an unshared pCell, giving the full wireless capacity to each user at once.*

“pCell technology is a complete reinvention of wireless,” said Steve Perlman, Founder and CEO of Artemis Networks, “pCell delivers on the long-sought dream of ubiquitous, fast Internet, with the reliability and consistency previously only achievable through a wired connection. pCell is effectively mobile fiber.”

Whether streaming HD video for long car rides, making a video call from Times Square, posting videos from a packed stadium...or even streaming 4K UltraHD to your big screen TV, pCell delivers consistent, high-speed service wherever you are.

pCell is compatible with standard, unmodified out-of-the box LTE devices, such as iPhone 5S and 5C, Samsung Galaxy S4, LTE dongles and MiFi devices. pCell enables a standard LTE device to run at full LTE speed throughout pCell coverage areas, and wherever pCell is not yet deployed, the device can hand off to conventional cellular, providing seamless coverage.

Wireless carriers and independent ISPs can deploy pCell far faster and at lower cost than conventional cellular. Rather than cell towers, pCell uses simple, discreet pCell base stations, called pWave™ radios, that, rather than having their placement restricted to a cell plan, can be placed anywhere convenient, whether outdoor, indoor, visible or hidden. For example, locations can be chosen where there is free or low-cost rent and backhaul. pCell works in all mobile bands, as well as in unlicensed spectrum, such as 900 MHz in the Americas, sharing spectrum with other unlicensed devices, enabling deployment by both major carriers with licensed spectrum as well as local entrepreneurs using unlicensed spectrum.

“pCell is an authentic ‘moon shot’ disruptive invention, one of those rare but extraordinary moments when what previously seemed improbable in science becomes possible”, said John Sculley, former Apple CEO and founding MetroPCS boardmember, “The first time I saw a ‘moon shot’ was in 1982 when Steve Jobs showed me a prototype of the original consumer media computer—the Mac.”

pCell will be licensed to wireless carriers and independent ISPs for deployment worldwide. pCell is currently in trials with partners in San Francisco and will be ready for first commercial deployment in one market at the end of 2014, expanding to major markets in the US, Asia and Europe starting in 2015. The exact deployment schedule in each market will be determined by the carrier and ISP partners. Interested partners can contact Artemis Networks at [partners@artemis.com](mailto:partners@artemis.com).

pCell is the result of over a decade of R&D by a small, but highly innovative and dedicated team, who has succeeded in overcoming immense theoretical and implementation challenges in order to not only invent an entirely new approach to wireless, but to make it a practical system that can be rapidly deployed in major markets and is compatible with the hundreds of millions of LTE devices in the world.

To find out more about pCell technology, visit [www.artemis.com](http://www.artemis.com)

Contact: [press@artemis.com](mailto:press@artemis.com)

**About Artemis**



Artemis Networks LLC ([www.artemis.com](http://www.artemis.com)) is the pioneer of pCell technology, a breakthrough approach to wireless that consistently delivers full-speed data rate to every mobile device concurrently, regardless of how many users are sharing the same spectrum at once. Founded by technology pioneer Steve Perlman in early 2000s, and incubated for over a decade by Steve's Rearden Companies incubator ([www.rearden.com](http://www.rearden.com)), Artemis is based in San Francisco, California. pCell technology is protected by a broad portfolio of fundamental patents, both US and internationally.

*Artemis, Artemis Networks, pCell and pWave are trademarks of Artemis Networks LLC. All other trademarks are the property of their respective owners. Patents and patents pending.*

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<sup>1</sup> Dec 23, 2013, "U.S. Mobile Internet Traffic Nearly Doubled This Year," New York Times. [http://bits.blogs.nytimes.com/2013/12/23/u-s-mobile-internet-traffic-nearly-doubled-this-year/?\\_php=true&\\_type=blogs&\\_r=0](http://bits.blogs.nytimes.com/2013/12/23/u-s-mobile-internet-traffic-nearly-doubled-this-year/?_php=true&_type=blogs&_r=0)

<sup>2</sup> Feb 5, 2014, Cisco VNI Global Mobile Data Traffic Forecast Update 2013-2018. [http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white\\_paper\\_c11-520862.html](http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white_paper_c11-520862.html)

<sup>3</sup> Jan 7, 2014, Verizon CEO Lowell McAdams at Citi Global Internet, Media & Telecommunications Conference. <http://newnetworks.com/verizoncitijan2013a.pdf>

<sup>4</sup> Feb 21, 2012, "Sorry, America: Your wireless airwaves are full", CNN Money, referencing FCC study. [http://money.cnn.com/2012/02/21/technology/spectrum\\_crunch/](http://money.cnn.com/2012/02/21/technology/spectrum_crunch/)

<sup>5</sup> Nov 12, 2013, "Verizon admits network traffic pressure in big cities," CNET, [http://news.cnet.com/8301-1035\\_3-57612021-94/verizon-admits-network-faces-traffic-pressure-in-big-cities/](http://news.cnet.com/8301-1035_3-57612021-94/verizon-admits-network-faces-traffic-pressure-in-big-cities/)

<sup>6</sup> Mar 2013, IEEE Communications Magazine. Zander, Jens, Petri, Mähönen, "Riding the Data Tsunami in the Cloud: Myths and Challenges in Future Wireless Access", <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6476879>

