

## Durst and Richland Team up on Single-frequency Transmission

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**NEW YORK:** The Durst Organization has announced a partnership with Richland Towers to provide a single frequency network transmission system at 4 Times Square in New York City.

Richland Towers will be the first to utilize distributed transmission in New York City. The license agreement is for 15 years and Richland will sublicense space to local broadcasters.

A **distributed transmission system** uses multiple transmitters operating on the same frequency transmitting at the same signal. The precise time the signal is sent from each transmitter is adjusted to minimize interference to TV receivers in locations receiving signals from more than one of the transmitters. Distributed transmission uses less power and has greater penetration than conventional digital signals as well as offering a superior RF profile at its transmission site.

"Richland Towers is proud to be associated with John Lyons and the team at 4 Times Square to offer Distributed Broadcasting and Mobile Media options for the NYC broadcasters," said Dave Denton, senior vice president and chief marketing officer of Richland Towers.

Doug Lung, vice president of technology for NBC Universal, who conducted much of the testing said, "Richland's agreement with 4 Times Square will benefit broadcasters with primary or backup DTV transmitters located in New Jersey. Field measurements conducted soon after WNJU began broadcasting DTV from Richland's West Orange N.J., tower site revealed reception problems in Long Island and parts of Queens where the Manhattan skyline blocked the West Orange signal.

"Propagation studies predicted a synchronized transmitter on the east side of Manhattan would improve reception and cause little interference. With support from John Lyons, The Durst Organization, Richland Towers, Rohde and Schwarz, WNJU and ION Media, we installed and tested a distributed transmission system using transmitters at West Orange and 4 Times Square. The second transmitter at 4 Times Square provided reception at several locations where West Orange alone could not be received."

Lung, a long-time contributor to *TV Technology* magazine added, "4 Times Square could be useful in fixing 'wrong side of the street, wrong side of building' reception problems for all NYC broadcasters. A distributed transmission system demonstration at this year's NAB show in Las Vegas using Telemundo station KBLR showed the addition of low power transmitters in an urban area can improve both fixed and mobile DTV reception."

John Lyons, assistant vice president and director of broadcast communications for The Durst Organization said, "Single frequency networks are the vanguard for the future and we are happy to be on the forefront with the technology."

The 385-foot broadcast antenna at 4 Times Square was constructed in 2003 and tops the building out at 1,118 feet. The new tower allowed for the displaced World Trade Center broadcasters to find a new home after 9/11/2001. The tower is home to 12 FM radio stations, seven TV stations and has the capacity to handle the nine other FM stations as well as all the digital TV stations in the market. -- from *TV Technology*