JMA

The Only Enterprise Distributed Radio SystemMNO

CASE STUDY: TEKO CELL HUB

Virtualized multi-service enterprise wireless for CBRS and cellular

OVERVIEW

The First Distributed Radio System

The mid-size enterprise market represents 49 million square feet of office space in the United States, which is occupied by one third of today's workforce. The CIOs of these businesses are often perplexed about the easiest way to enable mobile wireless coverage and capacity in their buildings. Now, CIOs can receive what they are looking for in a solution specifically designed to meet their needs.

SITUATION

TEKO Cell Hub – The Mid-Market Solution

TEKO® Cell Hub, a fiber connected node that is not a small cell or a DAS, uniquely addresses today's needs of the mid-size enterprise market (facilities from 20K square feet to one million square feet) while enabling performance and services to support the evolving business environment, including a smooth transition path to 5G capabilities. With fiber, a single Cell Hub delivers multiple mobile operators' licensed bands as well as the new CBRS (Citizens Broadband Radio Service) spectrum. The TEKO Cell Hub integrates directly with the JMA Wireless XRAN® technology, the only RF source in software that operates on off-the-shelf servers. Together, they provide a scalable, flexible and easy to deploy solution that uniquely address the needs of buildings to ensure best-in-class mobile performance.

Cloud Provisioned & Operated

MNO Network

↓

Data Center Spec'd Server

XRAN

↓

Fiber Multi-Spectrum Cell Hubs

TEKO

Case Study: TEKO Cell Hub

Utilizing a common fiber infrastructure, multiple Cell Hub units can connect to the XRAN server or can be cascaded. **Each Cell Hub** provides MIMO (multiple input, multiple output) and is **capable of covering up to 20K square feet of space**. Using a DC power system that meets Class 2 in-building powering requirements, Cell Hubs can be easily and cost-effectively wired into existing or new buildings. Cell Hub with XRAN aligns with the new Distributed Radio System (DRS) segment, but uniquely adds virtualized RAN to the solution (see graphic above).

Unlike small cells that are based on third party chip sets, Cell Hub utilizes XRAN for its baseband processing; therefore, capabilities can be expanded or adjusted with just a simple software change. Its adaptable sectorization allows each operator individual sector mapping, enabling RF engineers to virtually eliminate the battle against SINR (signal to interference plus noise ratio) experienced with small cells while optimizing in-building performance by further segmenting the sectors by tenant.

Cell Hub and XRAN can be utilized in conjunction with an existing TEKO DAS platform as a **hybrid solution, resulting in even further flexibility** to address unique in-building needs and be used as a private CBRS network solution.

Key Attributes of TEKO Cell Hub with XRAN:

VIRTUALIZED EDGE RAN

XRAN Adaptive Baseband software drives out cost and increases the flexibility of the RAN. As a technology partner in the Intel® Network Builders ecosystem, XRAN is optimized for standard Intel® Xeon® processors.

ADAPTIVE BUILDING CAPACITY

XRAN Adaptive Baseband applies resources to sites when and where they are needed, increasing utilization efficiency dramatically. This approach empowers a new age of RAN utilization, more than doubling the utilization efficiencies in the operator network.

MODERNIZED INTELLIGENT OPERATIONS

Configuration, policy setting, and monitoring are founded on web-centric interfaces to provide easy visualization and streamlined work flows. XRAN adapts to the operations hierarchy with flexible role-based definitions.

ANYWHERE IN THE NETWORK

The architecture enables XRAN software to be deployed in central data centers, within regional sites and campuses, or in MDF or technical rooms within individual buildings. It allows operators to capitalize on the best economics for back haul or front haul connectivity, and brings the benefits of Cloud economics to wireless.

STANDARDS-BASED HIGH-PERFORMANCE MOBILITY

The solution is designed to comply with 3GPP standards, including carrier aggregation capabilities, and support for both existing and forthcoming spectrums, to ensure buildings are empowered with the 5G evolution of mobile capabilities.

RESULT

A World of Change for the Mid-Size Enterprise

The mid-size enterprise market is being impacted in many new ways and JMA Wireless is addressing its changing wireless communication needs with the flexible and easy to deploy Cell Hub. In conjunction with XRAN, this solution will enable CIOs to easily meet their current and future goals at a fraction of the cost of today's solutions. No other offering in the market today operates on off-the-shelf servers, integrates with exiting IT infrastructure and provides Cloud economics like JMA Wireless has made possible with Cell Hub and XRAN.

For further information on please visit our **Cell Hub product page.**

> **JMA Wireless' Cell Hub is a clear example of emerging multi-carrier Distributed Radio Systems that can offer scalable coverage for mid-size enterprises. By utilizing the new XRAN platform for Cell Hub, JMA Wireless has essentially moved the DRS segment into the virtualized RAN world."**

**PRINCIPAL ANALYST MOBILE EXPERTS
KYUNG MUN**

JMA

About JMA Wireless

JMA Wireless is the leading global innovator in mobile wireless connectivity solutions that ensure infrastructure reliability, streamline service operations, and maximize wireless performance. Employing powerful, patented innovations their solutions portfolio is proven to lower the cost of operations while ensuring lifetime quality levels in equipment and unrivaled performance for coverage and high-speed mobile data.

JMA Wireless solutions cover macro infrastructure, outdoor and indoor distributed antenna systems and small cell solutions. JMA Wireless corporate headquarters are located in Liverpool, NY, with manufacturing, R&D, and sales operations in over 20 locations worldwide.

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