RAJANT CORPORATION:

HOW RAJANT REDEFINED "CONNECTIVITY"—THE ANGLO AMERICAN SUCCESS

F ounded in 1917, Anglo American has built its reputation as one of the world's leading mining companies whose products play an essential role in almost every aspect of modern life. Made to re-imagine mining to improve people's lives, the company is leading in the industry today with a portfolio of world-class competitive mining operations and undeveloped resources providing the metals and minerals that enable a cleaner and more electrified world. By using less water, less energy, and more cutting-edge extraction technologies, Anglo American is reducing the human "physical footprint" for every ounce, carat, and kilo of precious metal or mineral. This approach also helps meet the fast-growing consumer-driven demands of the world's developed and maturing economies. On the economic front, the company is paving the way for an advanced society by introducing better jobs, education, and businesses in its host countries and is ultimately aiming to do the same for billions around the world.

"We pride ourselves in the way we leverage innovative practices and cutting-edge technologies to discover new resources and mine processes, then move and market them to customers across the globe in a safe, responsible, and sustainable manner," says Theo Van Staden, Head of IM Regional Support (EMEA & APAC), Anglo American. "As a predominant and highly responsible miner of various commodities like diamonds, copper, platinum group metals, iron ore, coal, and nickel, we are the custodians of what are precious natural resources. We work together with our business partners and diverse stakeholders to unlock the sustainable value that those resources represent for our shareholders, the communities, the countries in which we operate, and for society as a whole."

With a vision that can change lives and the future of the planet, the company makes no mistake in picking the right technology solutions that can help them achieve it. And the best example of their excellent choice in solution providers is their eight-year-long partner, Rajant Corporation—an enabler of secure communications-on-the-move through a real-time, portable wireless technology.

WI-FI NOT SPOTS

Eight years ago, Anglo American came across certain loopholes within their operation. They seemed to be lacking proper connectivity in their production system—which was an open cut environment. The firm had in place, point-to-point Wi-Fi, which had coverage and latency issues. As a successful miner, the firm realized that both these challenges could pave the way for several devastating production errors in the future.

Seeking decent connectivity in an open pit environment, Anglo American decided to go for a mesh solution "that moves and evolves with their connectivity demands." In their pursuit to find the best, the company found Rajant Corporation, which already was leaders in the mesh industrial wireless space. "We thought that they would be a good fit for our mining environment. Their ability to implement Kinetic Mesh BreadCrumb technology (wireless nodes) atop our mobile equipment (which becomes a part of the bigger network) convinced us to go into a pilot with them," says Theo van Staden, Head of IM Regional Support (EMEA & APAC), Anglo American.

HOLISTIC "CONNECTIVITY" SOLUTIONS

The partnership began to flourish through the successful implementation of the solution at a South African project at Mogalakwena. Engaging with Anglo American, Rajant scanned Anglo's entire mining environment to understand their existing problems and needs better, and designed the Kinetic Mesh solution accordingly.

Rajant answered the challenge with its Kinetic Mesh, which comprises BreadCrumb nodes with Rajant's patented InstaMesh protocol, that offers adaptable, scalable, and readily deployable private mobile broadband networks. It enabled Anglo American to deploy networks into places where communications infrastructure had been destroyed or damaged, achieving real-time mobility. Rajant's Kinetic Mesh renders a "living network" where all nodes communicate with each other—regardless of the environment—to provide stability and flexibility. It utilizes a patented "peer-to-peer InstaMesh networking technology" to perform real-time evaluation and direct data traffic between any wired or wireless points while in motion. This results in achieving optimal connectivity across an enterprise's dynamic, fixed, and mobile assets environment, delivering robust application data in real-time. Now, to maximize the connectivity, Rajant leveraged its BreadCrumb wireless nodes that ensure flexible and reliable communication networks. Each BreadCrumb contains up to four radio transceivers that operate on different frequencies, also providing conventional Wi-Fi access point services for localized handheld wireless devices. Instamesh ensures 100% connectivity with multiple peer BreadCrumb nodes at the same time. The BreadCrumbs support many transceivers. Two BreadCrumbs, when paired with each other, can have nearly four redundant wireless links in addition to all of their other peers.

With the solution, Anglo American got rid of the unreliable network landscape that once supported their production system, and there was a significant reduction in the latency. Inconsistency in bandwidth was another major hurdle for Anglo American. Rajant met their bandwidth requirement to move data rapidly out of the wireless mesh environment. "We unlocked massive value in terms of connectivity. The full-fledged implementation is yet to happen, but we are confident enough to drive this relationship further," says Van Staden.

Theo van Staden, Head of IM Regional Support (EMEA & APAC), Anglo American.

Robert Schena, CEO of Rajant Corporation, says, "Anglo American had a very clear idea of their need and worked with us collaboratively, from day one. This enabled us to address their business-specific needs seamlessly and increased the probability of successful implementation."

As a provider of robust mesh technology and pervasive multi-frequency wireless solutions, Rajant had successfully redefined the term "connectivity" by allowing Anglo American's data networks to be completely mobile and effective. Through the firm's unmatched ability to turn mobile assets into network infrastructure, many organizations like Anglo American are empowered to take private network applications and data everywhere. Perhaps that is the reason why an array of industries, like oil & gas, transportation, utilities, public safety, and agriculture, plus the military leverage Rajant solutions. CR

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