KOGNITIV SPARK INNOVATION HIGHLIGHT

KOGNITIV SPARK

COMPANY OVERVIEW

Focused on empowering frontline workers by connecting them with the knowledge and support they need to complete any task, Kognitiv Spark builds augmented reality task support tools for the Microsoft HoloLens. Its flagship software, RemoteSpark, is an industrial-grade, remote worker support tool that allows remote technicians to establish a secure, low-bandwidth call with subject matter experts to complete complex tasks remotely. RemoteSpark facilitates a secure audio-video connection between the expert and the remote technician while allowing the expert to transfer files, take photos, annotate the worker's field of view, and transfer multi-step animated holograms.

LOCATION: FREDERICTON, NB

TECHNOLOGY

Data Centre and Cloud

A NEED FOR EXPERT SUPPORT IN A TIME OF CRISIS

A large amount of technical knowledge and expertise is needed to support industrial enterprise operations across a city, country, or continent. However, workers are not always equipped with the knowledge and skills they need to handle unexpected tasks or emergencies while on the job. If the technician on-site can't solve the problem or troubleshoot with an expert via phone and email, companies must address this time-sensitive crisis by having a subject matter expert sent to the location as soon as possible. This harms an organization's bottom line in a variety of ways including:

1. Costly equipment downtime - In the manufacturing sector, production downtime is can cost thousands, sometimes tens of thousands of dollars a minute. In industries like nuclear energy production, unscheduled downtime can cost millions daily.

2. Expert travel expenses – Sending experts to a job site is costly and takes a senior resource out of the rotation for hours or even days.

REMOTESPARK – PROVIDING EXPERT INFORMATION THROUGH AUGMENTED REALITY

In response, Kognitiv Spark created RemoteSpark. Designed as a software solution for the Microsoft HoloLens, RemoteSpark provides remote workers access to the expertise they need immediately, resulting in reduced travel costs, equipment downtime, and time to service. The user wears a HoloLens, launches the RemoteSpark application, and can then call an expert through a secure, low-bandwidth, live voice-and-video connection. Photos, files, and multi-step animated holograms appear for the user in their real-world environment as interactive, spatially aware content.

FROM 30 MINUTES OF PERFORMANCE TO 15 HOURS

Kognitiv Spark came to CENGN looking to quantify their software's ability to operate reliably over a variety of poor network conditions without performance loss.

More than 10,000 RemoteSpark calls simulating poor connectivity in various remote areas were made throughout the testing. RemoteSpark's testing was a success as the platform handled up to 15 hours of operation over a poor satellite connection with the lowest usable bandwidth identified at 100Kbps and the highest latency tested at 500ms. Just a year ago, RemoteSpark could only handle 30 minutes, with upwards of 256Kbps of bandwidth needed for optimal performance.

"CENGN's knowledge and efficiency let us set up quickly for rigorous testing. Even when we requested last-minute components, CENGN went out of their way to ensure we had what we needed."

Paul Archer, Director of Security, Kognitiv Spark

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