

Menlo Park Fire Protection District

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Revolutionary Firefighting Technology

C-THRU Vision Enhancement for Firefighters in Air Mask Innovator Qwake Technologies Signs Partnership Agreement with the Menlo Park Fire District

Menlo Park - California

Qwake Technologies, located in San Francisco, CA, has invented an Augmented Reality solution that vastly improves how firefighters can see in smoke-filled zero-visibility environments. It is a monumental leap forward in firefighting and fire safety.

The system uses augmented reality glasses and a thermal camera integrated inside the Self Contained Breathing Apparatus (SCBA) mask, and a small Graphics Processing Unit (GPU) attached to the SCBA. The GPU processes the image from the thermal camera, which is then presented to the firefighter in his/her field of view through the augmented reality glasses. The image that the firefighter sees looks like a wireframe of the environment, which is much simpler for the brain to process in high-stress situations. This allows firefighters to better focus on the hazards at hand, instead of analyzing complex imagery provided by traditional thermal cameras in use today. With C-Thru, firefighters can navigate smoke-filled zero-visibility environments 267% faster and with 300% greater accuracy.

Qwake was founded by Omer Haciomeroglu, Dr. John Long, Sam Cossman and Bahar Wadia. It is the company's mission to leverage innovations in the consumer space and reimagine them for use by first responders. The company says, "the Menlo Park Fire Protection District has been instrumental in helping us perfect C-Thru for use by firefighters. We believe we are simply listening to the needs of firefighters and figuring out ways to solve their problems."

On March 20th, 2018, Fire Chief Harold Schapelhouman received unanimous authorization from the District's elected Fire Board allowing the public/private partnership to move forward and

officially enter into a landmark memorandum of understanding (MOU) between the parties, which will collaboratively improve and advance this revolutionary technology for future Fire Service standardization, acceptance, adoption and use.

"We've been meeting, training and testing with Qwake Technologies since June of last year, discussing how to best collaborate and drive this specialized equipment and its evolving technology forward to a more useful, functional and beneficial purpose for the ultimate safety, success and scalable efficiency of the firefighting first response community" Battalion Chief Tom Calvert said. "

In the last two decades, most firefighting agencies have adopted and accepted hand held Thermal Imaging Camera's or TIC's, which have greatly improved interior firefighting operations because of their unique ability to help find victims faster, help firefighters see what they are doing as they move around inside a burning building, monitor fire and smoke temperatures, locate hidden fire in walls and many other benefits.

While a huge improvement from previously working blindly in smoke filled environments, hand held devices are cumbersome and present operational challenges because they must be placed up against the firefighters air mask to be utilized. They can be difficult to move around with or leave in place as a fire team often works their way into a smoke filled burning building under dangerous conditions, searching for victims, pulling fire hoses, navigating hazards, using tools, talking on the radio, or just combating a fire where both hands are often needed..

Fire Chief Schapelhouman said "There is absolutely nothing safe about working in a smoke filled building that is on fire. It's an extreme environment filled with risk, danger and surprises that can hurt or kill a firefighter, let alone the victim(s) we may be searching for. Time is certainly not on our side and this new, hands free, combined revolutionary technology is probably the single greatest safety and effectiveness enhancement I have ever seen in my 37 years on the job."

This is the fourth technology enhancement and development agreement the Fire District has entered into in the last year. The other three were with Drone developers DJI, Intel and Matternet. The Fire District is located in the heart of Silicon Valley and provides essential fire and emergency services to its areas in the Town of Atherton, Cities of East Palo Alto and Menlo Park, Unincorporated Areas of San Mateo County and on contract to the SLAC National Accelerator and Laboratories as well as for Specialized Urban Search and Rescue missions for the California Governor's Office of Emergency Services and Federal Emergency Management Agency.

"We're focused on guiding individuals, or groups, using strategic partnerships to create positive results that make sense to first responders so that developers are actually creating useful tools, not toys, that can enhance and improve real world emergency operations. Our commitment to Qwake Technologies is to make sure that their technological enhancements are available in some form, to every Firefighting Agency in the Country in the next two to five years because it will vastly improve the ability of all firefighters to better save lives, preserve property and minimize the amount of time that they need to operate in dangerous, extreme smoke filled fire conditions", the Fire Chief said.

Menlo Park Firefighters train and experiment with the Qwake Thru Technology – See the link below.

https://vimeo.com/258559020

What the agreement stipulates:

- 1) Product Development: Menlo Fire will help Qwake, work with thought leaders in the fire service to ensure C-THRU's roadmap is meeting the most critical needs of the end users /fire service.
- 2) Data Collection / Testing: Menlo Fire will assist Qwake to measure effectiveness of the various permutations of the product with field studies and test C-THRU's evolving product in various conditions during live fire training scenarios and conditions
- 3) Policy / Standards: Menlo Fire will collaboratively push for updated NFPA standards and municipal policies that ensure next generation technologies can be brought to market improving safety / performance of first responders.
- 4) Outreach: Menlo Fire will promote MPFD and QT innovative efforts in the fire service to a broad and global audience through mainstream media and to inspire the next generation of innovators in the public safety space.

END