DARIX   Bullard   EPFL

AUGMENTED REALITY FOR FIREFIGHTERS

Problem – Challenge

All firefighters, volunteers and professionals alike, have to learn how to deal with flames. But fire is not the only risk they face. Toxic, impenetrable smoke and darkness add to the dangers and slow the firefighters' progress. Clad in protective gear weighing over 20 kilos, firefighters may also be dragging a firehose behind them and carrying a thermal imaging camera to help orient them, analyze their surroundings and locate victims.

Solution

Adrien Birbaumer and Martijn Bosch, two engineers at the Image and Visual Representation Lab (IVRL) of Prof. S. Süsstrunk came up with a solution that frees up the firefighters' hands. Their solution consists of placing a mini infrared camera on the helmet and incorporating a transparent screen in the oxygen mask.

Thus equipped, firefighters see two images in their field of view: what their eyes see and what the thermal imaging camera records and displays in real time. This allows firefighters to move around more easily and avoid obstacles without having to interrupt the search process.

This solution allows in particular to have the best representation of hot and cold zones using red and blue but with the right tones that would be visible on a transparent surface.

This technology has been patented by EPFL and licensed to Darix sarl a spinoff created by the two engineers.

Recently Darix has been acquired by Bullard a global leader in personal protective equipment.