

## New monitors for the fire brigade: a challenge!

The fire brigade in Terneuzen serve various purposes. Besides the residential areas, the ten fire stations are concerned with much industry, a harbour and the Westerschelde tunnel. The fire engines have been equipped with a unique computer system with which the commander can access crucial information about the incident on the way to the disaster area. Mulder-Hardenberg played an important role in supplying a practical, extremely rugged version of this system. Mulder-Hardenberg provided clear and motivated advice, particularly in the field of HMI, which was eventually implemented.

### The Challenge

The demands made on a monitor in the back of a fire engine are specific and unique. That the strength of construction must not be stinted on is beyond dispute. 'Survival' is the only



correct term in this case. Moreover the construction must not obstruct the view, all the crew must be able to follow the information on the screen at the same time, the light from the screen must not blind at night and the commander must be able to operate the screen remotely. In addition it must be possible to operate the integrated touch controls with thick gloves on as well as with bare fingers and it must be resistant to (fire) water.

### The Solution

The fire brigade initially thought in terms of a 19" monitor. However after inspection it emerged how small the available space in the engine actually is and 17" diagonal was chosen. A VESA bracket was ordered to attach the monitor. This



Foto: Erik Schwartz



component is designed to be fitted to the ceiling. The construction of the bracket was applied in reverse so that the view out of the windows was in no way obstructed, so that the monitor via the bracket can rest on the ground; the view outside is therefore not obstructed. A monitor with a large horizontal viewing angle was chosen so that the whole crew can follow the information on the screen. M-H advised a deep dimming backlight. By tempering the light intensity the crew will not be blinded at night by the bright light from the monitor. Single knob control has been chosen for dimming: a single rotary knob with which the firemen can determine the degree of dimming.

### The Implementation

Besides the modified bracket the monitor has custom-made, extra strong M5 attachment points on the back. The monitor



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has also been reinforced internally for this application. A touch screen has been chosen as input medium to allow the commander to control the PC functions. M-H advised touch technology that is resistant to (fire) water and that can be operated with or without gloves, and also with a pen. In the first instance the fire brigade chose a touch screen with serial controller. This option proved not to work well. Although the problem was not caused by equipment from M-H, we did rid the world of it. After extensive tests, which proved that M-H was correct, the final choice was made for an USB controller. The already supplied monitor is modified for this.

## The result

The prior information the commander now has access to with this system is very varied; the fastest route, for example, or where the fire hydrants are. The implemented 'crash & recover system' can show the places to cut open a car to remove victims from the wreck. Up-to-date information about the substances stored, the number of employees in certain buildings, maps etc, can also be read off quickly. The commander can also keep an eye on how much oxygen a member of the crew carrying out his duties still has available and take action if necessary.

This project is considered to be a pilot scheme. In view of the good results, this solution from M-H will be considered elsewhere. Without doubt our company will once again be noticed as HMI specialist.

## Our Websites



- mulder-hardenberg.com
- mh-hminterfaces.com
- mh-fiberoptics.com
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### Contact details:

The Netherlands  
Mulder-Hardenberg B.V.  
Westerhoutpark 1a  
2012 JL Haarlem  
Tel.: +31 23 531 91 84  
info1@m-h.biz

Belgium, France, Luxemburg  
Mulder-Hardenberg N.V.  
Hoge Weg 129  
B-2940 Stabroek  
Belgium  
Tel.: +32 3 660 13 20  
info2@m-h.biz

Germany  
Mulder-Hardenberg GmbH  
Nordring 13  
D-65719 Hofheim/Ts  
Tel.: +49 6192 - 97 91 85  
info3@m-h.biz

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