## **MAN/MACHINE INTERFACES & MONITORS**

the expert approach

### Custom made solution for Dredging International

Dredging International is the owner of Nile River, a modern high tech dredger. Five monitors on board of the ship need to be replaced. These monitors are part of a console in the control room and play an important role in controlling and checking the entire process of dredging. Standard monitors don't fill the need of Dredging International. The company is aware of the fact that custom made hardware is the only solution.

#### The Challenge

There are three major problems. Dredging International demands a higher resolution than the currently used 15" CRT monitors can offer. 15" TFT monitors with that resolution do exist, but are no longer available. To obtain a higher resolution, a larger monitor is the only option, but will not fit in the console.



The second problem is the small amount of production: only five monitors are needed. Moreover, the custom design involves not only the implementation of the larger monitors, but also the demand for deep dimming backlight and ARcoated high contrast glass.

The third problem is the available time of delivery.

A custom-design assignment of that magnitude takes, approximately, twelve weeks time. Dredging International demands that the new version of the console can be used only eight weeks after the application.

#### The Solution

Despite the very limited time and number of monitors, M-H decides to accept the challenge. An extra problem soon occurs. The only option for a monitor with a 1280 by 1024





pixels resolution is a larger version. The available panels for the smallest monitor (17") with the demanded resolution are 292 mm high; the available space in the console is 300 mm.



So, on both sides, only 8 mm remain for the frame. If the thickness of the metal is 1.5 mm, the remaining space on each side is not more than 2 mm.

The solution is a 17" panel mount monitor with a custom built frame that doesn't exceed the available space in the console. Besides, the monitors must be provided with a remote controlled and dimmable backlight - for various light conditions - the AR-coated high contrast glass and a front panel in a custom made color.

#### The Implementation

With these facts in mind, M-H writes a concept for the manufacturer, with drawings and specifications. Within the concept, manufacturer KME designs a custom frame and moni-

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tor. After the approval of concept and design, the hard ware is built, delivered and implemented within the given time schedule.

#### The result

The custom designed and built hard ware fits perfectly in the console. In every aspect, the product is exactly what Dredging International had in mind.

Moreover, the result has been achieved in eight weeks time. Normally, a design job of this magnitude takes at least four weeks more. The engineers of the company are aware now of the flexibility and possibilities of Mulder-Hardenberg. Future assignments are most likely.





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