

## Victor6000' life

- 1996 first trials
- 1998 first operational cruise.
- 2010 first Overhaul after 10 years,  
300 dives  
4000h at sea

## Main Aims of this Overhaul



- Obsolete equipments' Replacing
- Operational optimisation (costs, maintenance)
- One new 10 years' cycle of operational use

## Main Goals

- New Hardware and Software Architecture**
- New Imaging Equipment ( HD cameras, HID lights, Control room)**
- New Ergonomic Control Shelter .**
- Best payload capabilities**
- New Arms' robotic functions**
- New USBL much better performances**
- New Cable, new Tether**

## Key Points

- Ifremer Underwater Systems Unit coordinator manager**
- 100 subcontractors**
- 350 orders&contracts**
- More than 6000 pieces to control**
- More than 80000 hours**

## And Now at the end of 2011:

- 9 new cruises with dives at more than 5000m.**
- Sucess for Scientific objectives**
- Optimisation of costs**
- Interoperability on the European R/V Fleet**

## 1rst Overhaul 2010 Victor 6000



|                       |                    |
|-----------------------|--------------------|
| <b>caméra</b>         | <b>FCB H10</b>     |
| <b>manufacturier</b>  | Sony               |
| <b>sensor</b>         | 1 CMOS             |
| <b>size</b>           | 1/3"               |
| <b>Pixels/capteur</b> | 2M                 |
| <b>Format</b>         | 1080/ 50i 720/50p  |
| <b>Lens</b>           | 10X 5.1 -> 51 moto |
| <b>Aperture H</b>     | 70° in water       |
| <b>Sensibility</b>    | F1.8 12 lux        |
| <b>Weight</b>         | 7kg air            |
| <b>Output HD</b>      | HD YPrPb et HDSDI  |
| <b>Dome</b>           | Glass BK7          |
| <b>corrector</b>      | 5 lens             |



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| Type        | Efficiency | Temperature |
|-------------|------------|-------------|
| HMI         | 90lumen/w  | 5600°K      |
| HID         | 90lumen/w  | 3200°K      |
| Quartz iodé | 20lumen/w  | 3200°K      |

| Before 2010             | After 2010 |
|-------------------------|------------|
| HMI                     | HMI        |
| 3 * 400W                | 5*400w     |
|                         |            |
| Q/I                     | Q/I        |
| 3* 600w<br>et<br>2*300w | 3*300w     |
|                         |            |
| HID                     | HID        |
| 0                       | 3*250w     |



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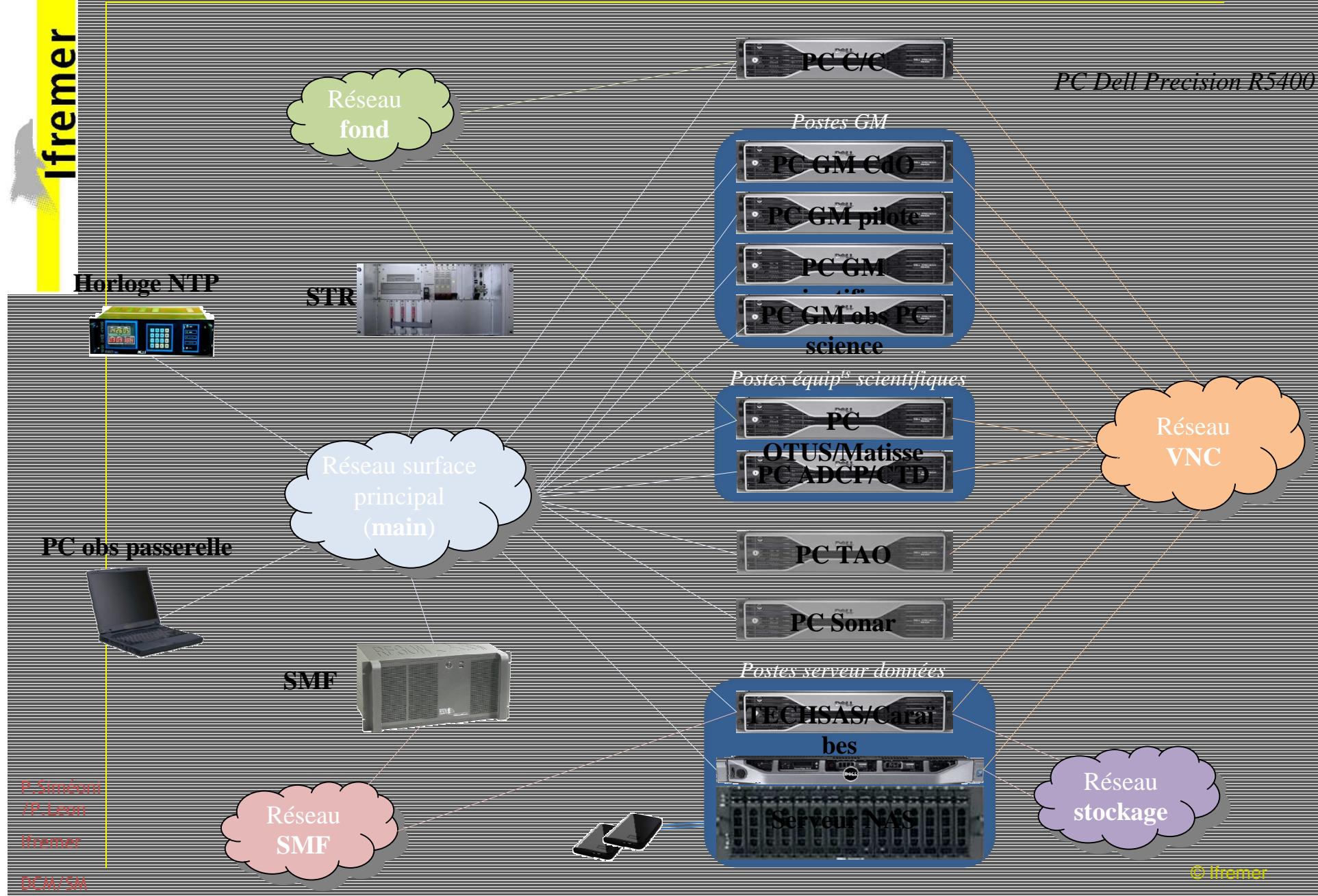
## New Control vidéo

- New Distribution and Matrix Switching
- Storage of Compressed Video
- Data overlayed
- Image Digitalisation

## Storage of compressed Video

|                                      | Format               | Datarate       | 1 dive 20h    | 1 dive 70h    | 20 dives 20h  |
|--------------------------------------|----------------------|----------------|---------------|---------------|---------------|
| Camera HD                            | HDV                  | 25 Mbits/s     | 220 Go        | 770 Go        | 4.3 To        |
| Caméra SD                            | DVD<br>(MPEG-2)      | 8 Mbits/s      | 70 Go         | 245 Go        | 1.4 To        |
| <b>1 Caméra HD<br/>+ 1 Caméra SD</b> | <b>HDV +<br/>DVD</b> | <b>33 Mb/S</b> | <b>290 Go</b> | <b>1.1 To</b> | <b>5.7 To</b> |

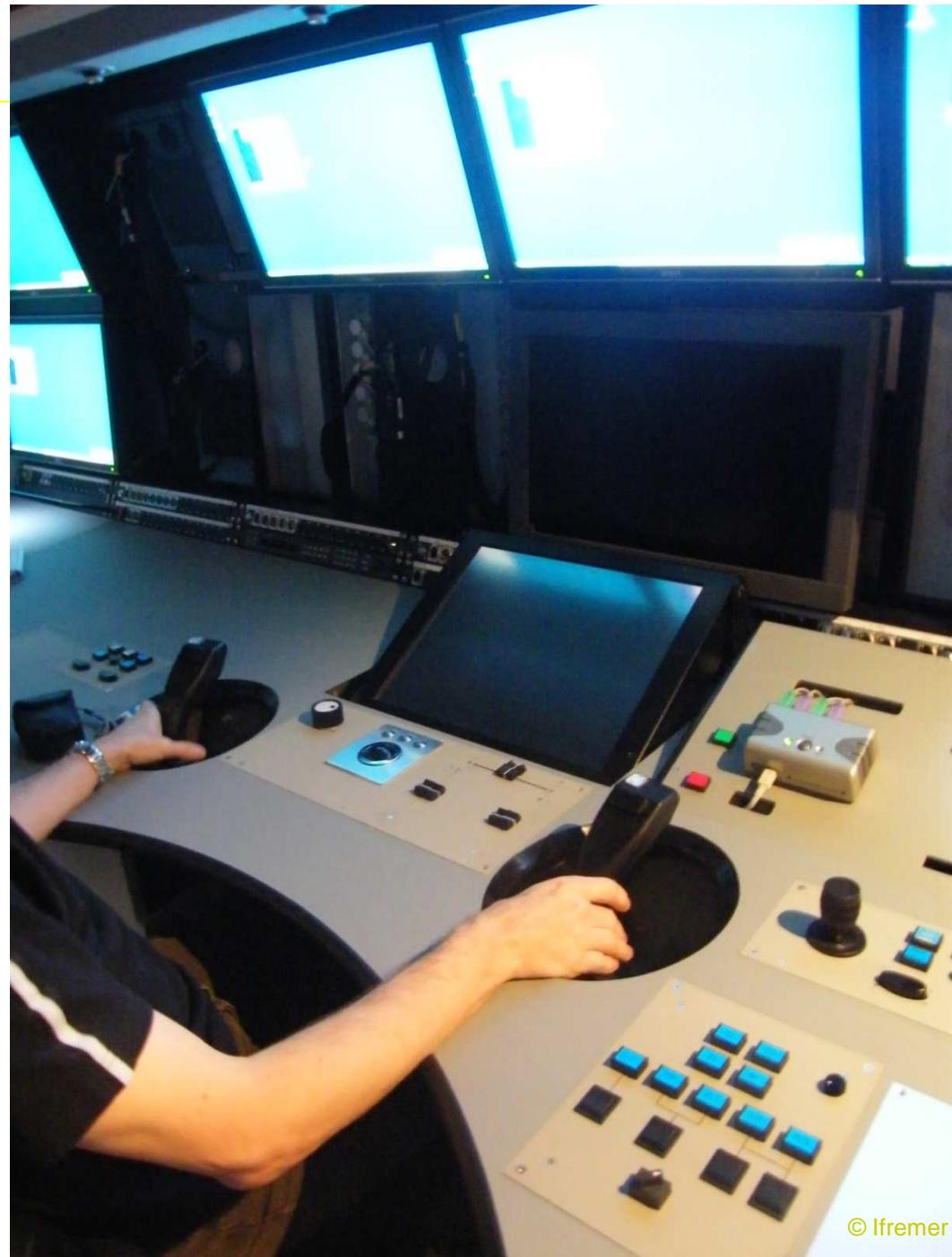
# Hardware and Network Architecture



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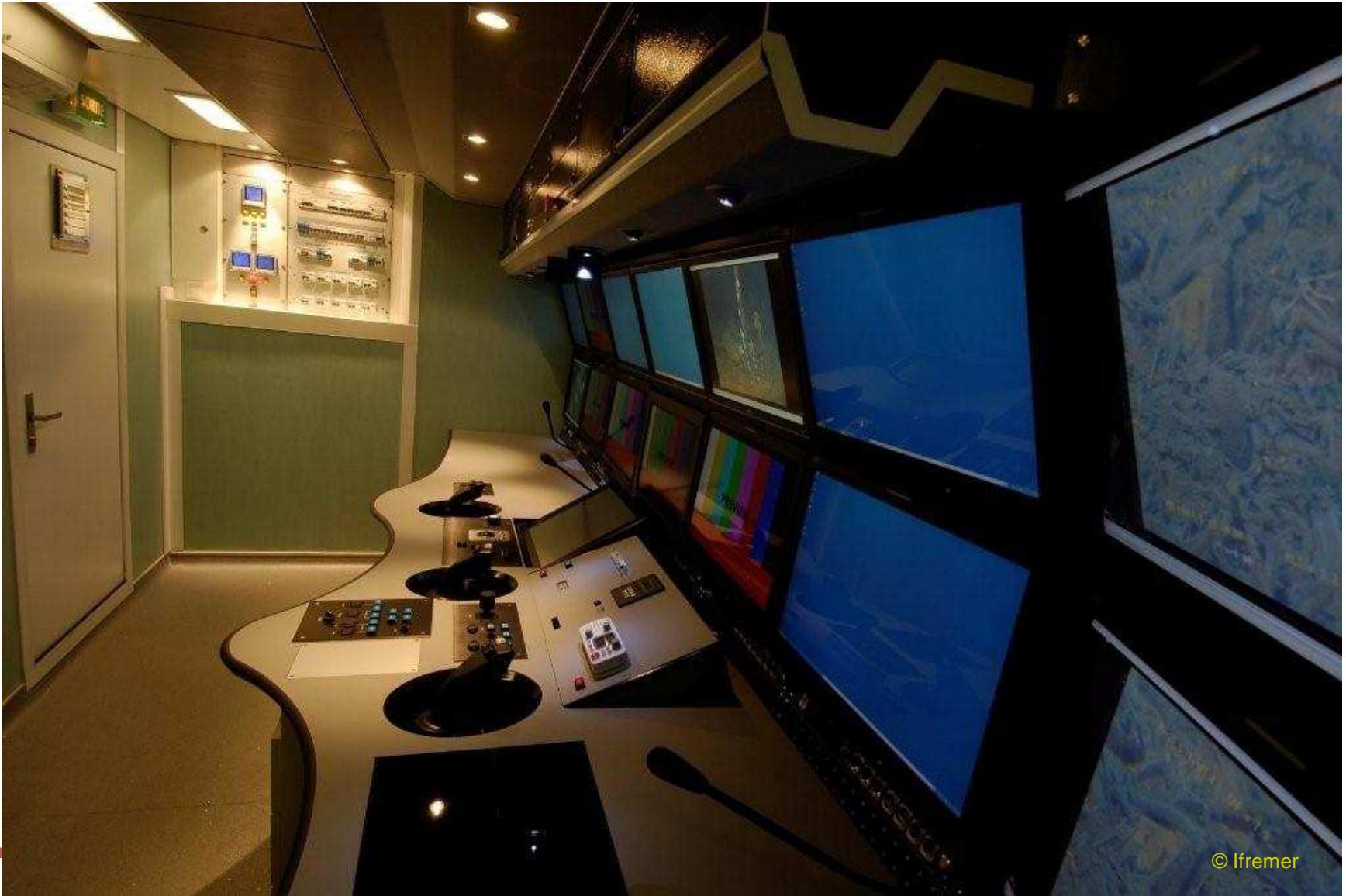
## New Ergonomical PC

P.Siméoni  
/P.Leon  
Ifremer  
DCM/SM



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P.Siméon  
/P.Leon

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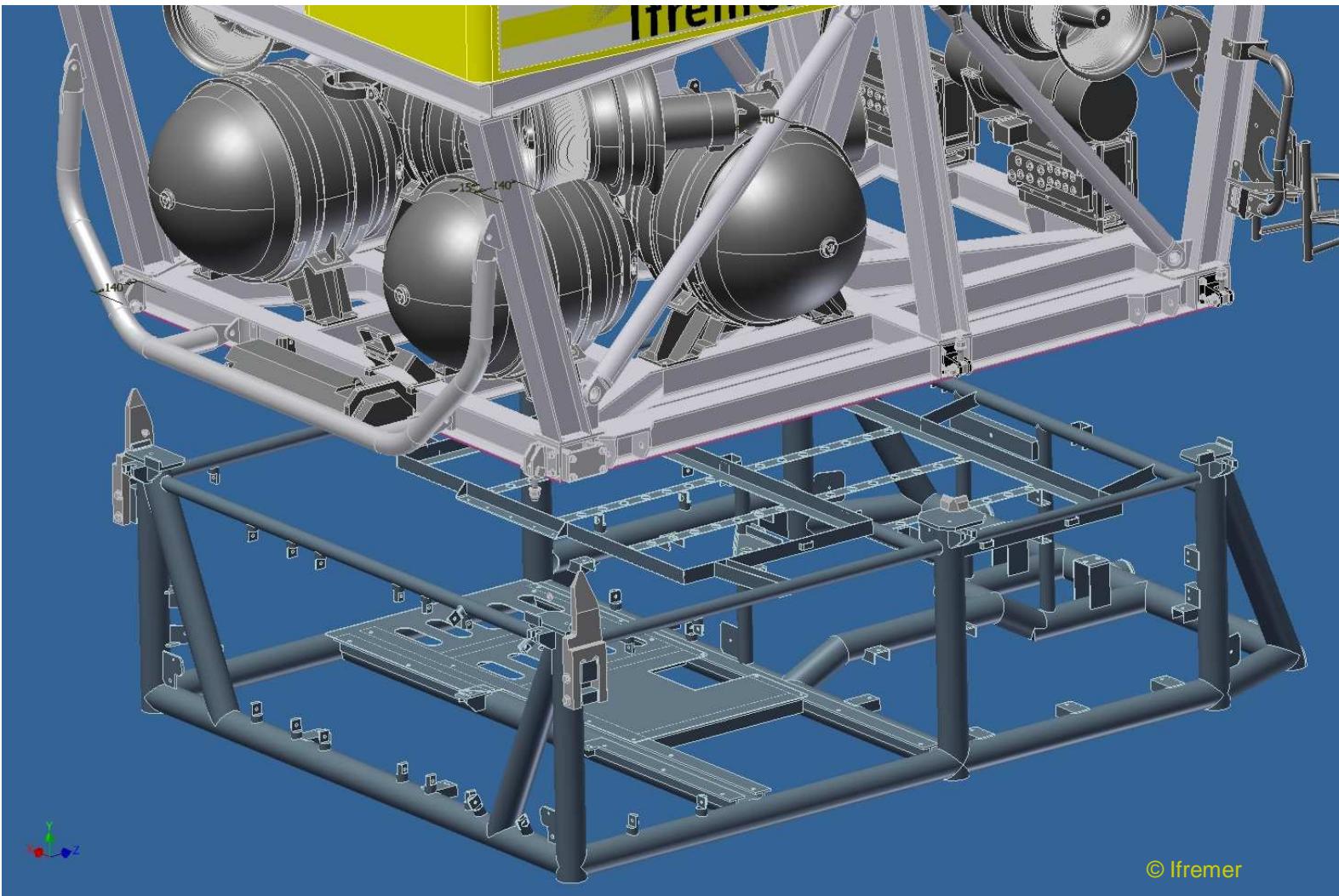
DCM/SM

## 1rst Overhaul 2010 Victor 6000



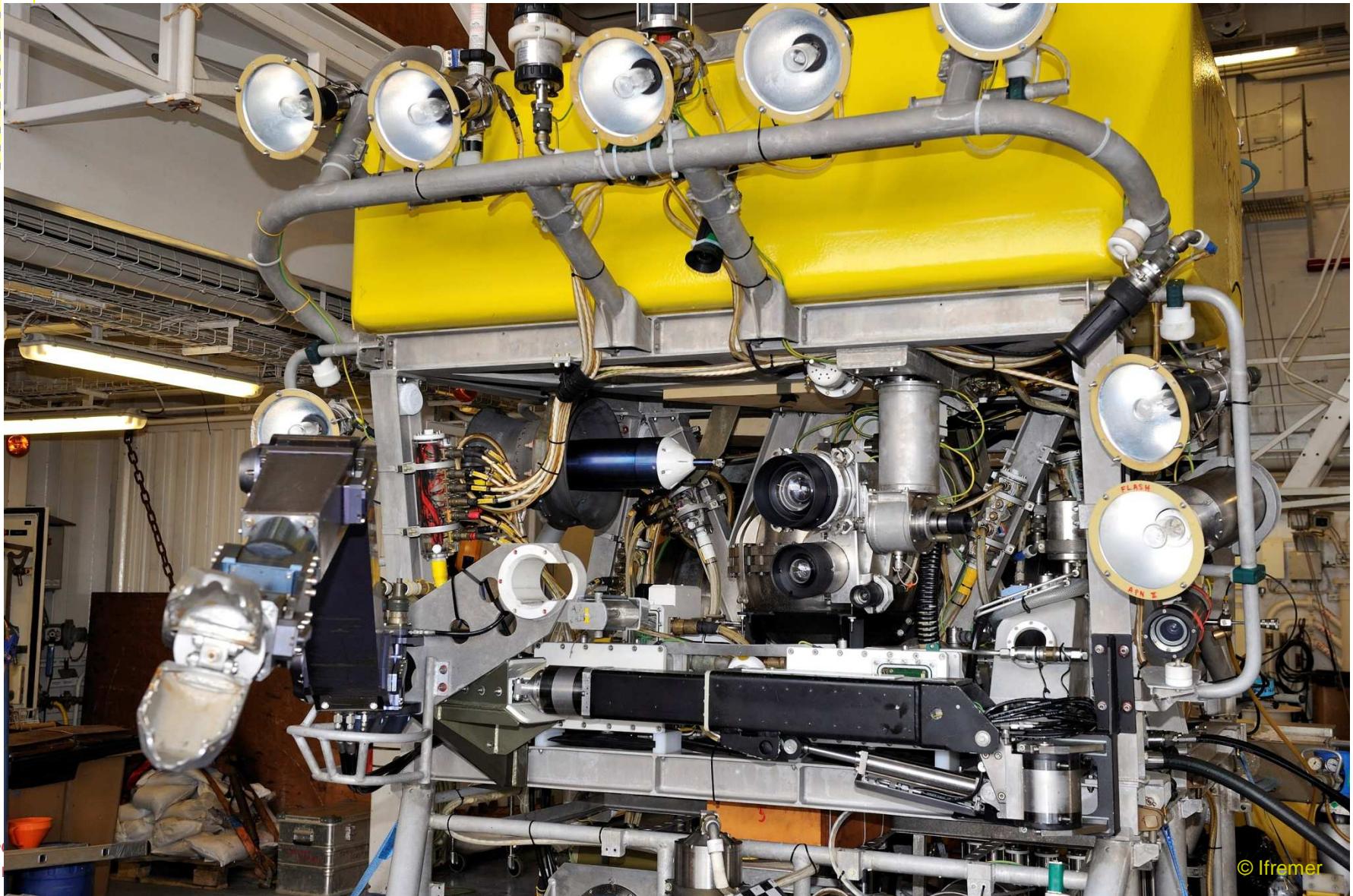
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## New Optimized Module Replacing



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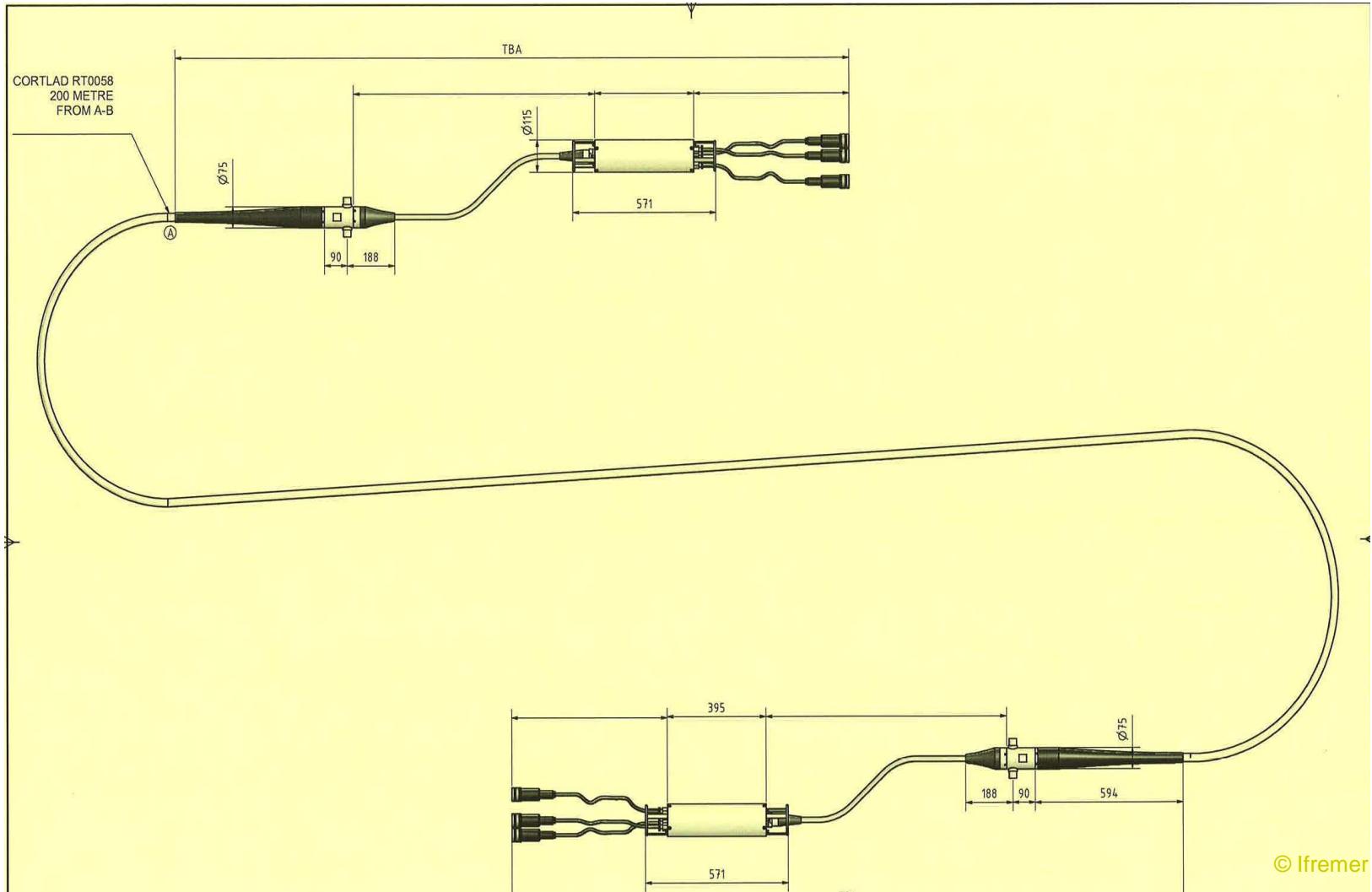
P.Siméon  
/P.Leonard

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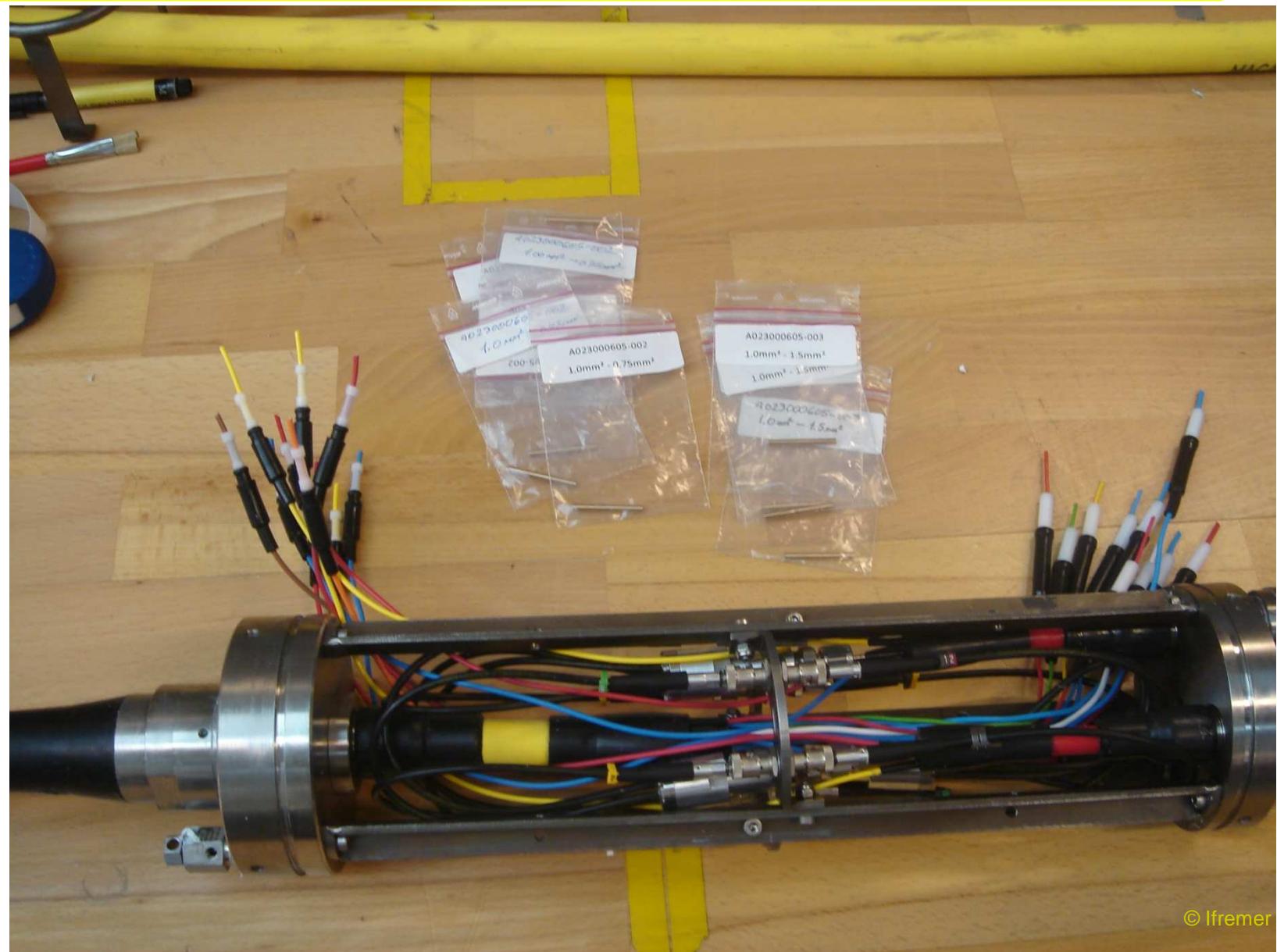
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## New Tether and Cable Termination



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