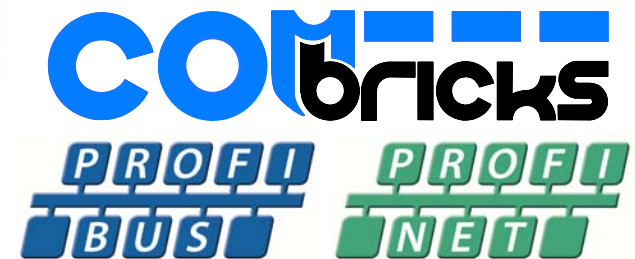


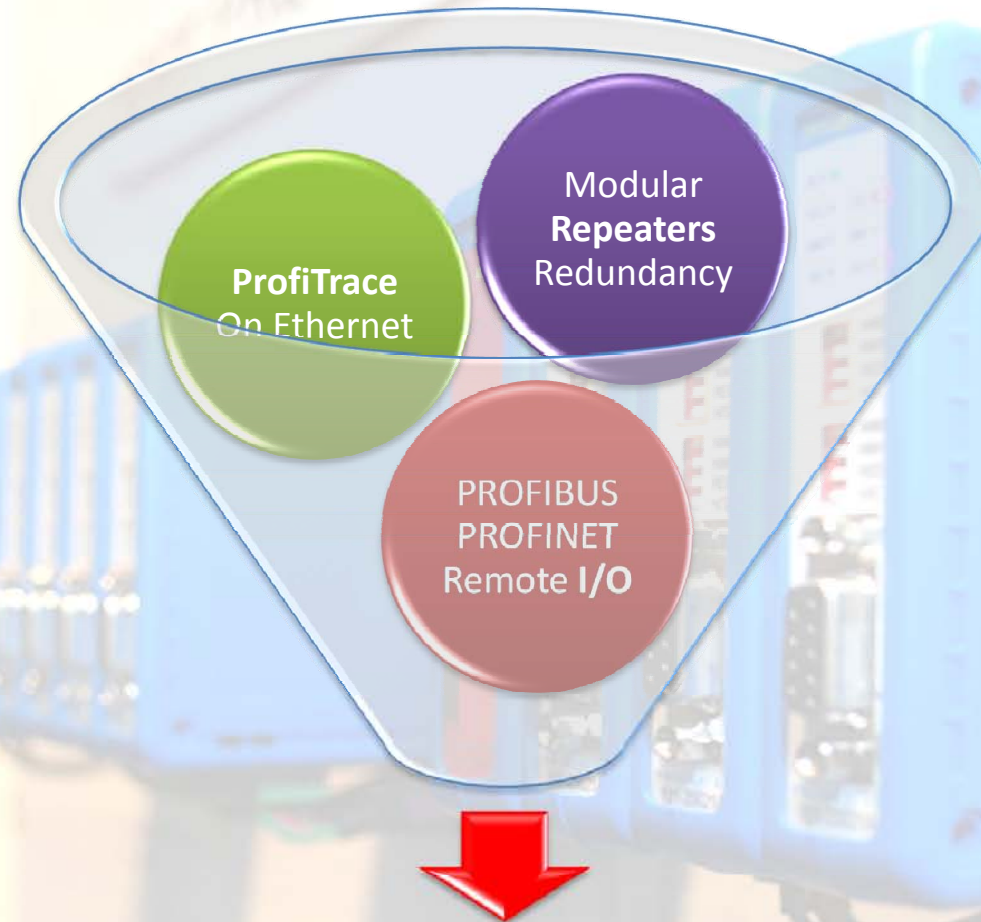
PROCENTEC

The PROFIBUS and PROFINET Company



COMbricks – Monitoring, Networking and Control

What is COMbricks?



The power of the backplane



Repeater
1c, 2c, ex



DP Slave
PN Device

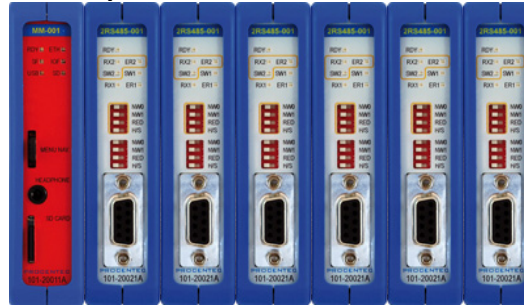


Head
Station



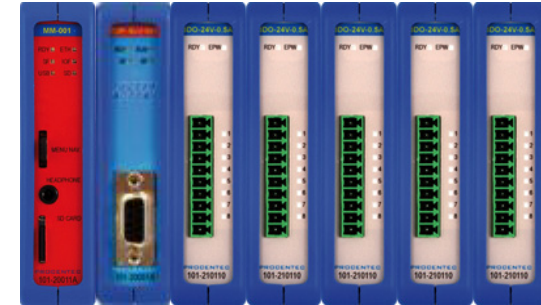
I/O
dig, rel, an

Example 1:



Modular repeaters

Example 2:



Remote I/O station
PROFIBUS and PROFINET

Example 3:



Mix of modules
Repeaters, I/O, etc.

Up to 32 modules
(10 high speed modules)

A blue circular graphic containing the text 'Modular Repeater Redundancy'. The background of the slide is a blurred image of several blue industrial repeater units mounted on a rack.

Modular
Repeaters
Redundancy

Segmentation is required



Segmentation is not just extending the limits.....

- Builds a bridge over the common faults the end-user makes
- Isolates sensitive areas and recovers glitches
- Solves the spur line limitation
- Enables live extension/reduction
- Creates an electrical barrier for production cells
- Protects the control systems

Modular repeaters



1 channel repeaters



2 segments

Mix of 1 channel and 2 channel repeaters

2 segments



3 segments

Maximum 10 modules (2 channel repeaters)



20 segments



Info:

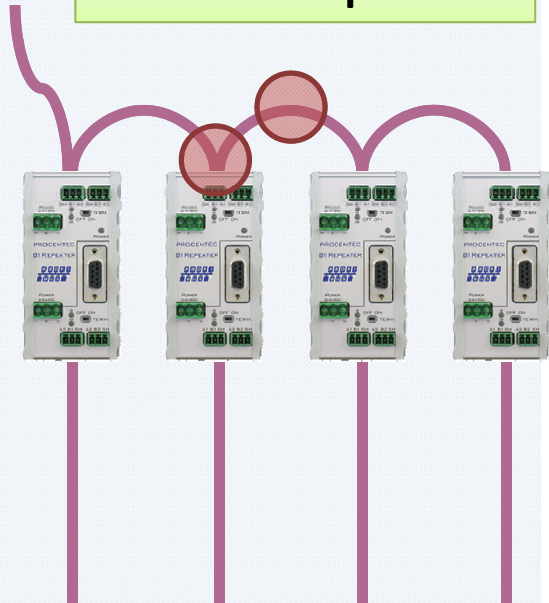
Segments comply with the PROFIBUS rules (31 devices, 12 Mbps = 100 m, 1.5 Mbps = 200 m)

Innovation:
Largest
backbone

Segmentation

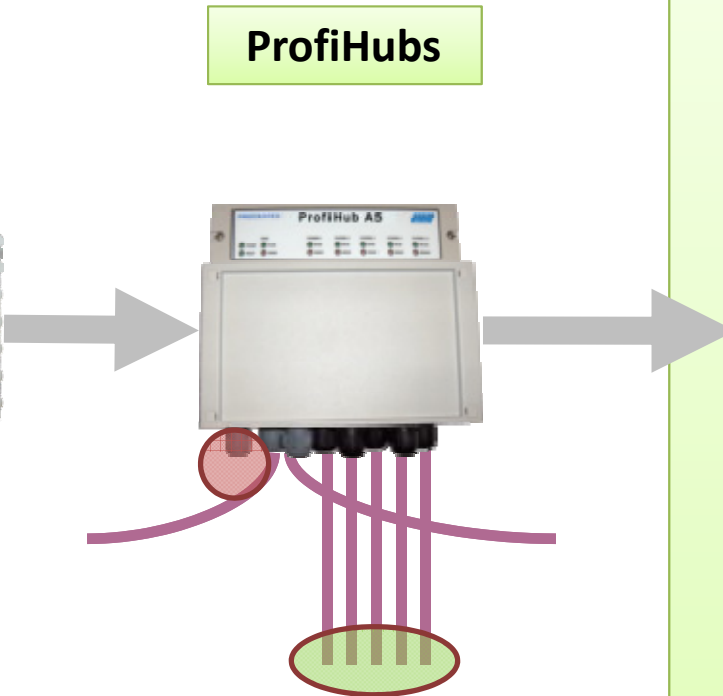


Standard repeaters



- 1 Meter rule problems
- Termination problems
- Power supply overload
- Costs and installation time

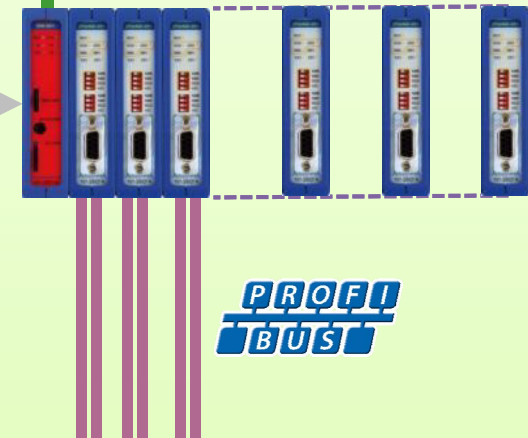
ProfiHubs



- 5 fixed channels
- RS 485 only
- No asset management
- Single power supply

COMbricks

ProfiTrace OE

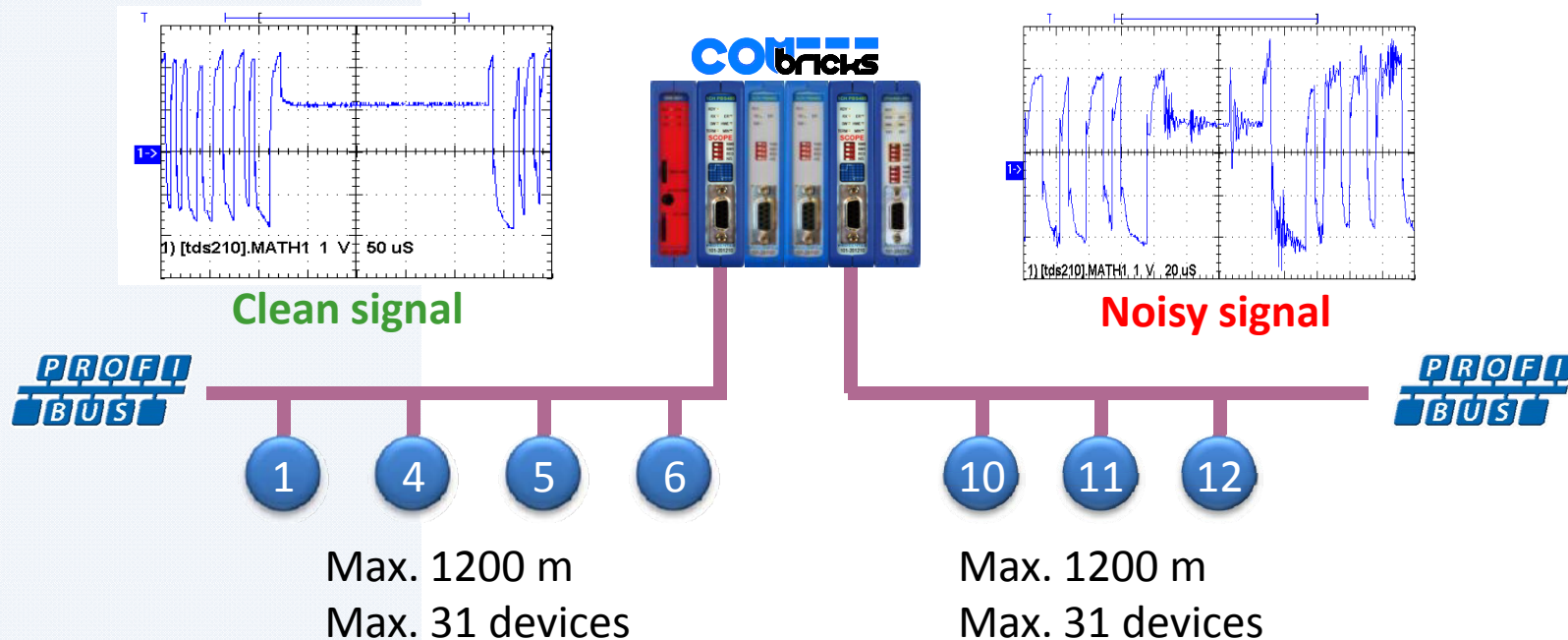


- Modular and hotswap
- ProfiTrace over Ethernet
- Bus redundancy integrated
- Fibre, I/O and PROFINET

Example: EMC Barrier

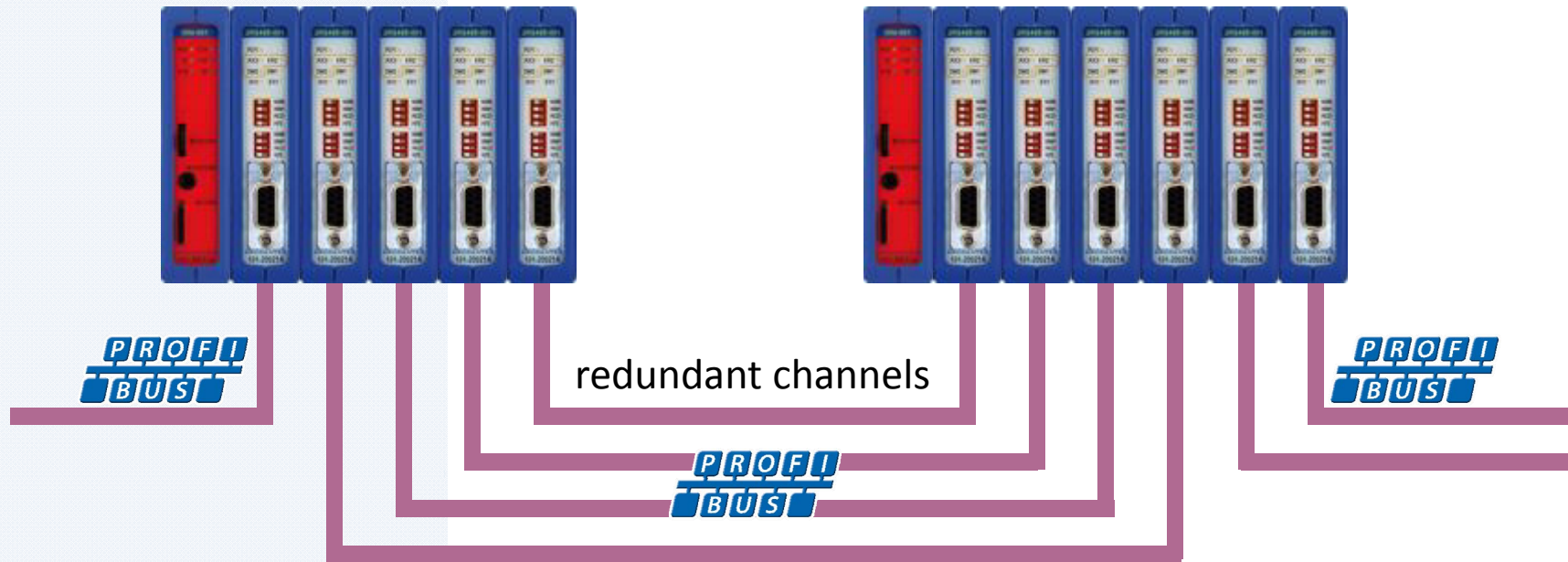
Info:

- 1 Network with 2 segments
- The isolation and bit recovery provide a barrier for electrical sensitive segments.



Redundancy

Maximum 10 redundant channels



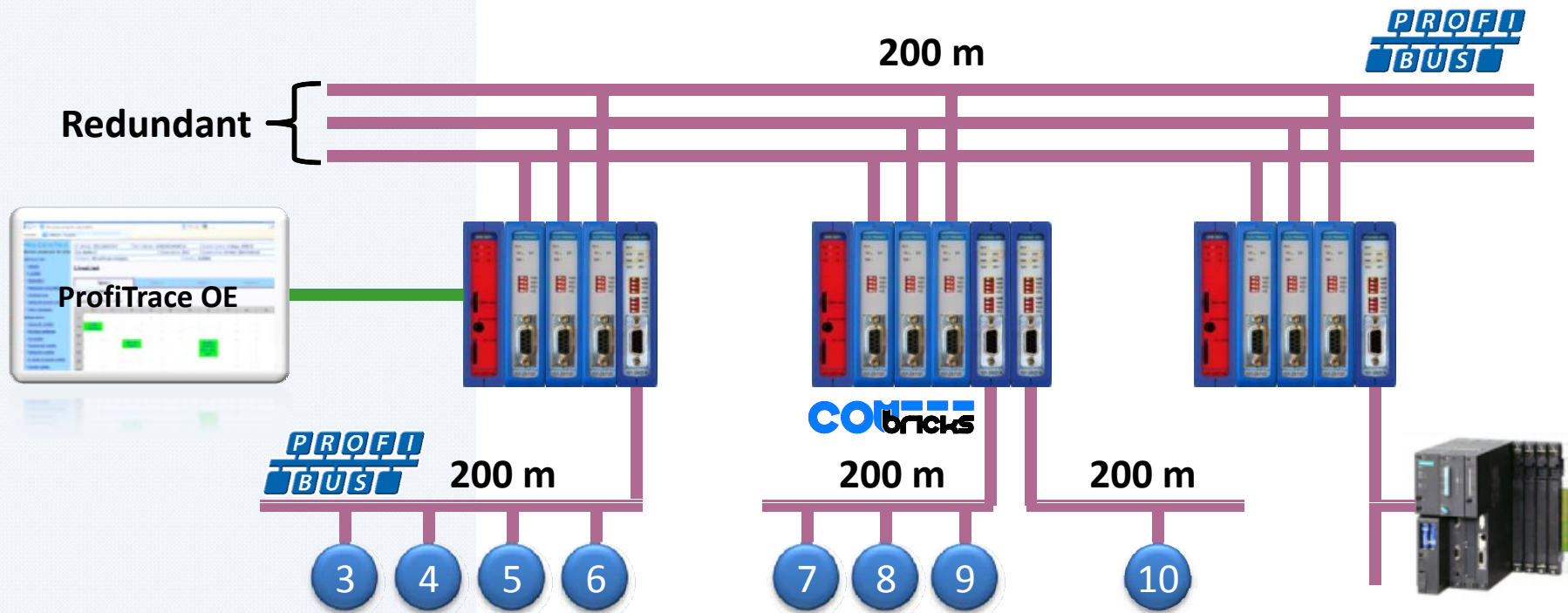
Innovation:
10 times
redundancy

Info:
Repeaters can be 1 or 2 channel types

Example: Redundancy with 3 segments

Info:

- 1 Network with 3 redundant segments
- 1CH repeater modules are recommended!
- The baudrate on this network is 1.5 Mbps (200 m)

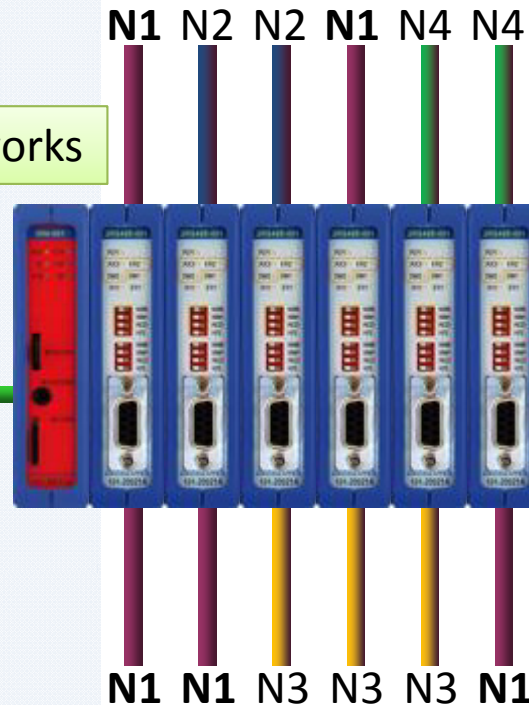


Multiple networks



Managing 4 networks

ProfiTrace OE



- N1 – 5 segments (exempl. 1.5 Mbps)
- N2 – 2 segments (exempl. 187.5 kbps)
- N3 – 3 segments (exempl. 1.5 Mbps)
- N4 – 2 segments (exempl. 12 Mbps)

Innovation:
Multi-Networks

Info:
The networks run on their own baudrate and have their unique 127 devices. The segments are transparent.

ProfiHub *versus* COMbricks



ProfiHub (simple)

- One component
- PROFIBUS
- RS 485 only
- Easy installation
- IP65 version
- Low cost

COMbricks (flexibility and high-tech)

- Modular
- Multi interface
- Multi network
- ProfiTrace OE
- Asset management
- Light weight

COMbricks - Procentec - Windows Internet Explorer
 http://wateringen.procentec.com:8080/

COMbricks - Procentec

PROCENTEC
 COMbricks webservice V0.30

- Status
- Monitoring:
 - Livelist
 - Statistics
- Configuration:
 - General config
 - Module config
 - Email config

IP: 192.168.1.230 Site: BP, Gulf of Mexico System uptime: 1 days, 5:35:34

LiveList

Cluster 1 Cluster 3 Cluster 4

Baud rate: 93.75 Kbps

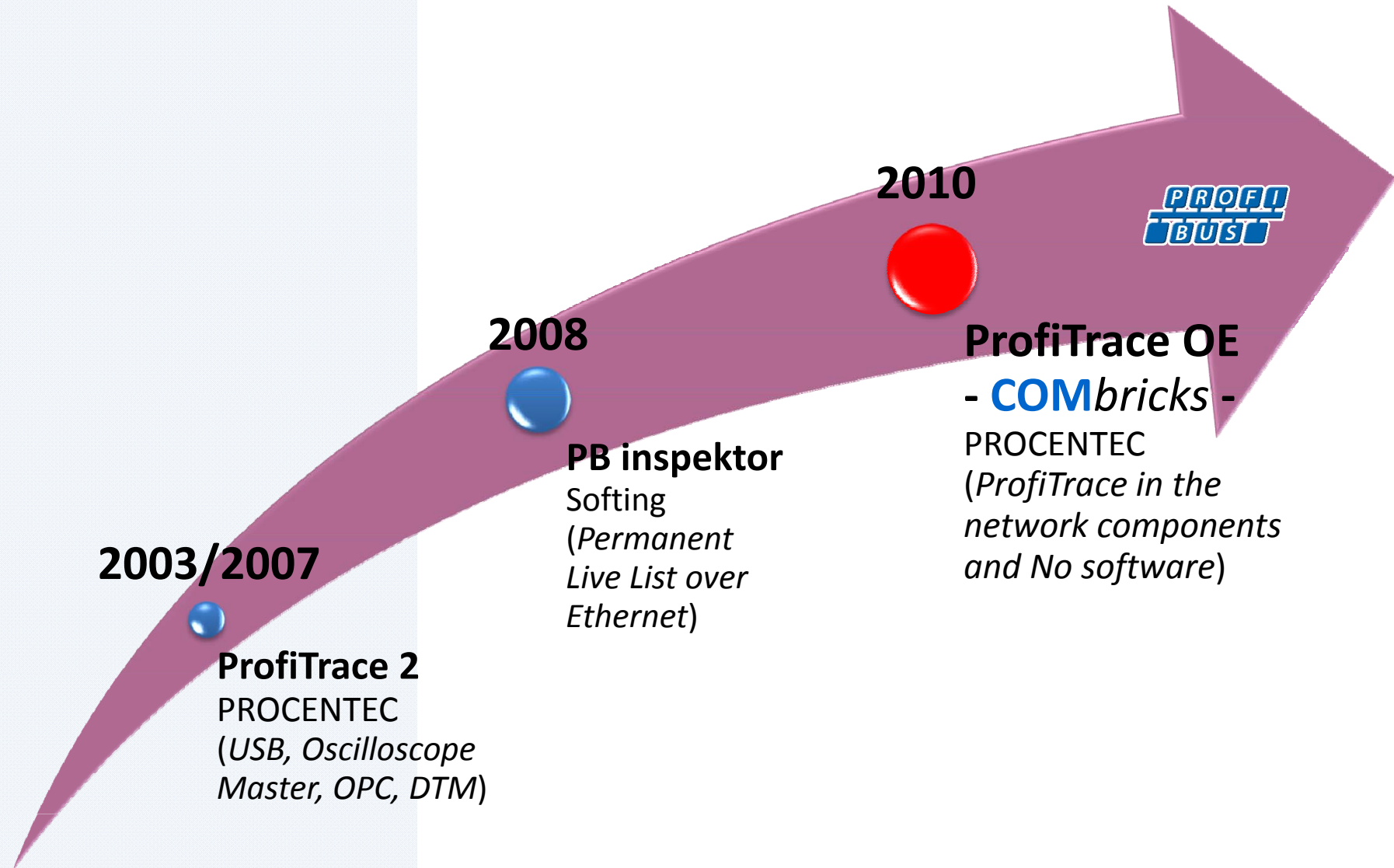
Reset livelist Model

| | | | | | | | | | |
|-----|-----|-----|-----|-------------------|-----|-----|-----|-----|-----|
| | 0 | 1 | | | | | 7 | 8 | 9 |
| 0 | 0 | 1 | | | | | 7 | 8 | 9 |
| 10 | 10 | 11 | | | | | 17 | 18 | 19 |
| 20 | 20 | 21 | | | | | 27 | 28 | 29 |
| 30 | 30 | 31 | | | | | 37 | 38 | 39 |
| 40 | 40 | 41 | | | | | 47 | 48 | 49 |
| 50 | 50 | 51 | | | | | 57 | 58 | 59 |
| 60 | 60 | 61 | | | | | 67 | 68 | 69 |
| 70 | 70 | 71 | 72 | | | 75 | 76 | 77 | 78 |
| 80 | 80 | 81 | 82 | IFC 090/IFC 090 I | 84 | 85 | 86 | 87 | 88 |
| 90 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 |
| 100 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 |
| 110 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 |
| 120 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | | |

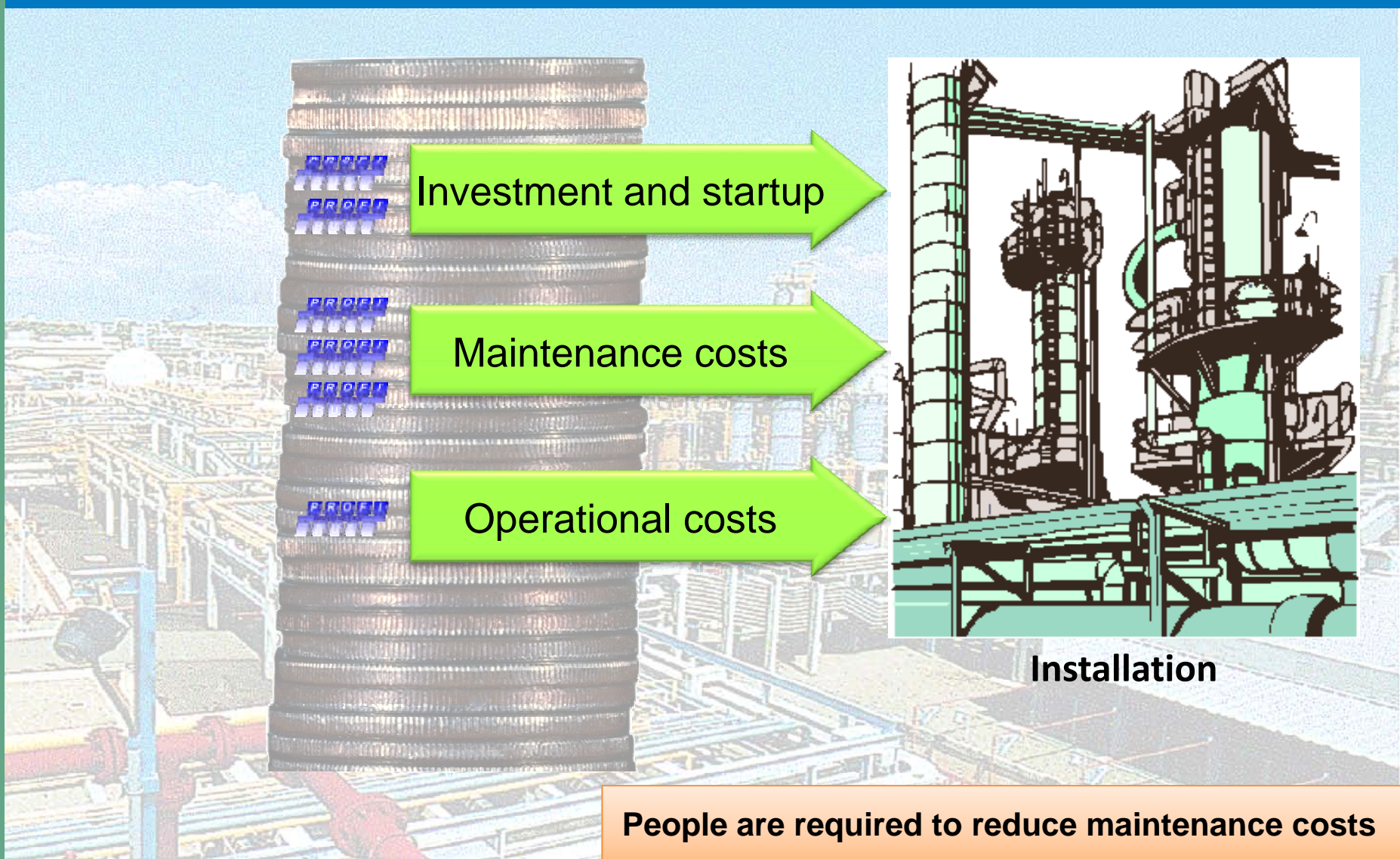
Copyright (C)2010 PROCENTEC. All rights reserved. - info@procentec.com - +31-(0)174-671800

ProfiTrace
 On
 Ethernet

Technology milestones PROFIBUS monitoring



Total Cost of Ownership



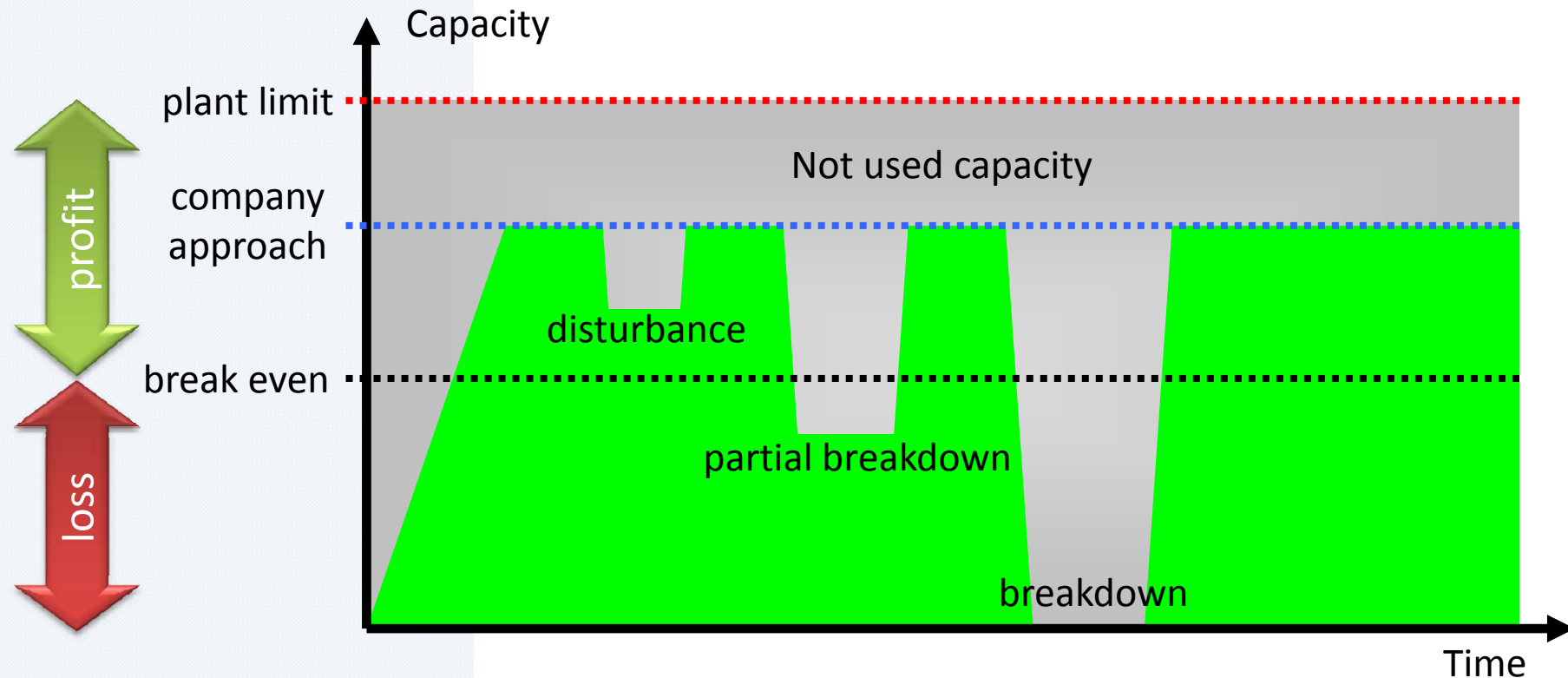
Impact on classic maintenance



- Shortage of skilled technical people
- Global projects outsourced and managed from 1 location
- “Unmanned” factories and processes
- Asset management
- Pressure on downtimes
- Extended life cycle of machines
- Logging, tracking and tracing



Break downs



ProfiTrace is an excellent tool to find faults, but:

- You have to be on-site and quickly go to the location
- The technician on-site is also “the expert” to interpret information
- No pre-warning

Permanent monitoring



The end-user requires a 2nd tool that;

- Permanently** monitors the condition of the installation
- Can **be integrated** at the start of the project
- Gives a **warning** when problems (are about to) occur
- Over **Ethernet**/Internet
- No constant **PC connection**
- Operating system **independent**
- Doesn't need an **expert** on-site

Minimal configuration for remote monitoring

Browser

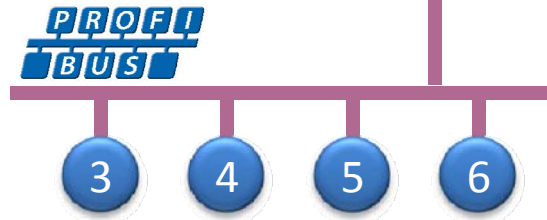


ProfiTrace OE

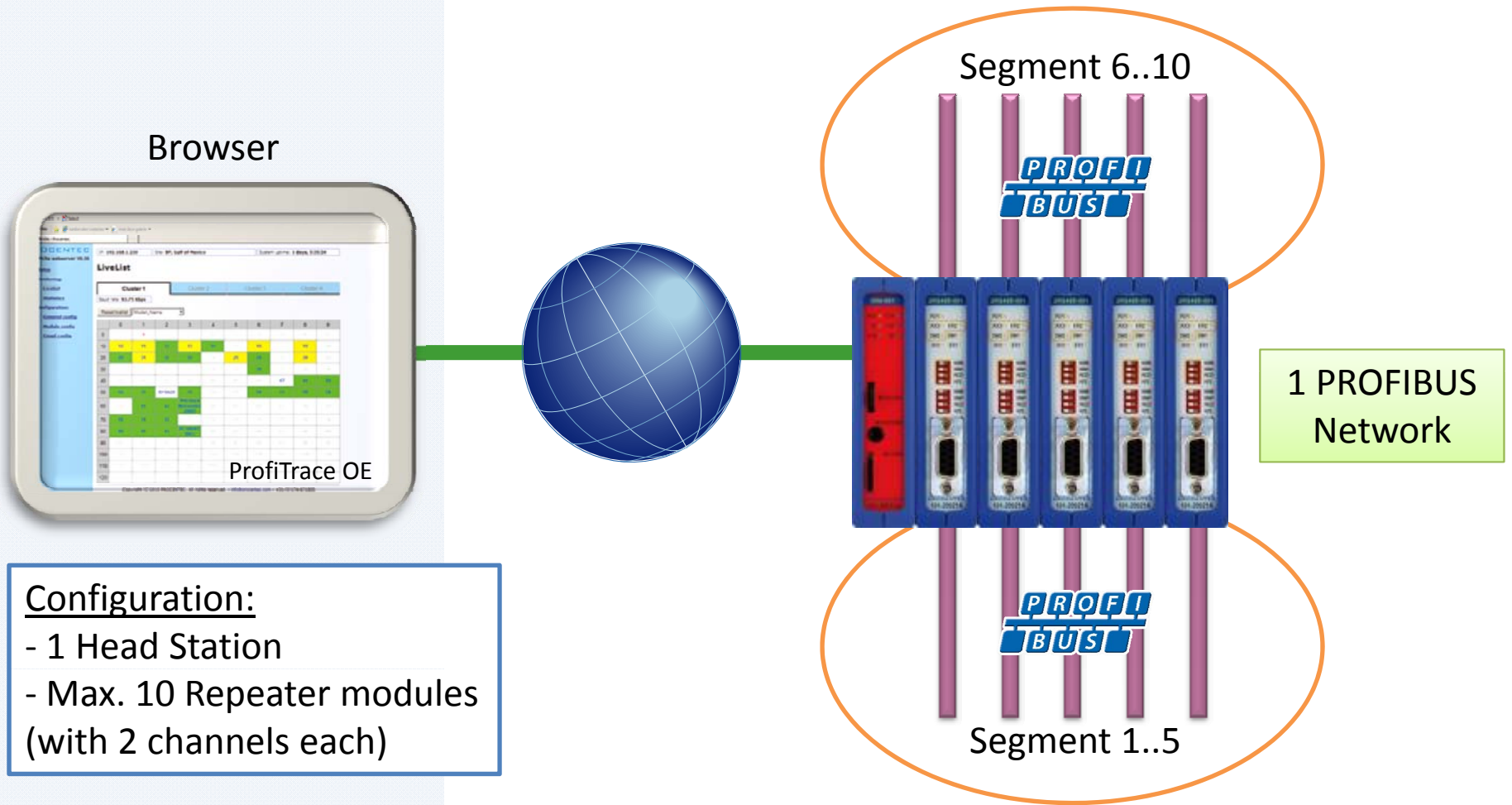
- Configuration:
- Head Station
 - 1CH repeater module



1 PROFIBUS network
1 PROFIBUS segment



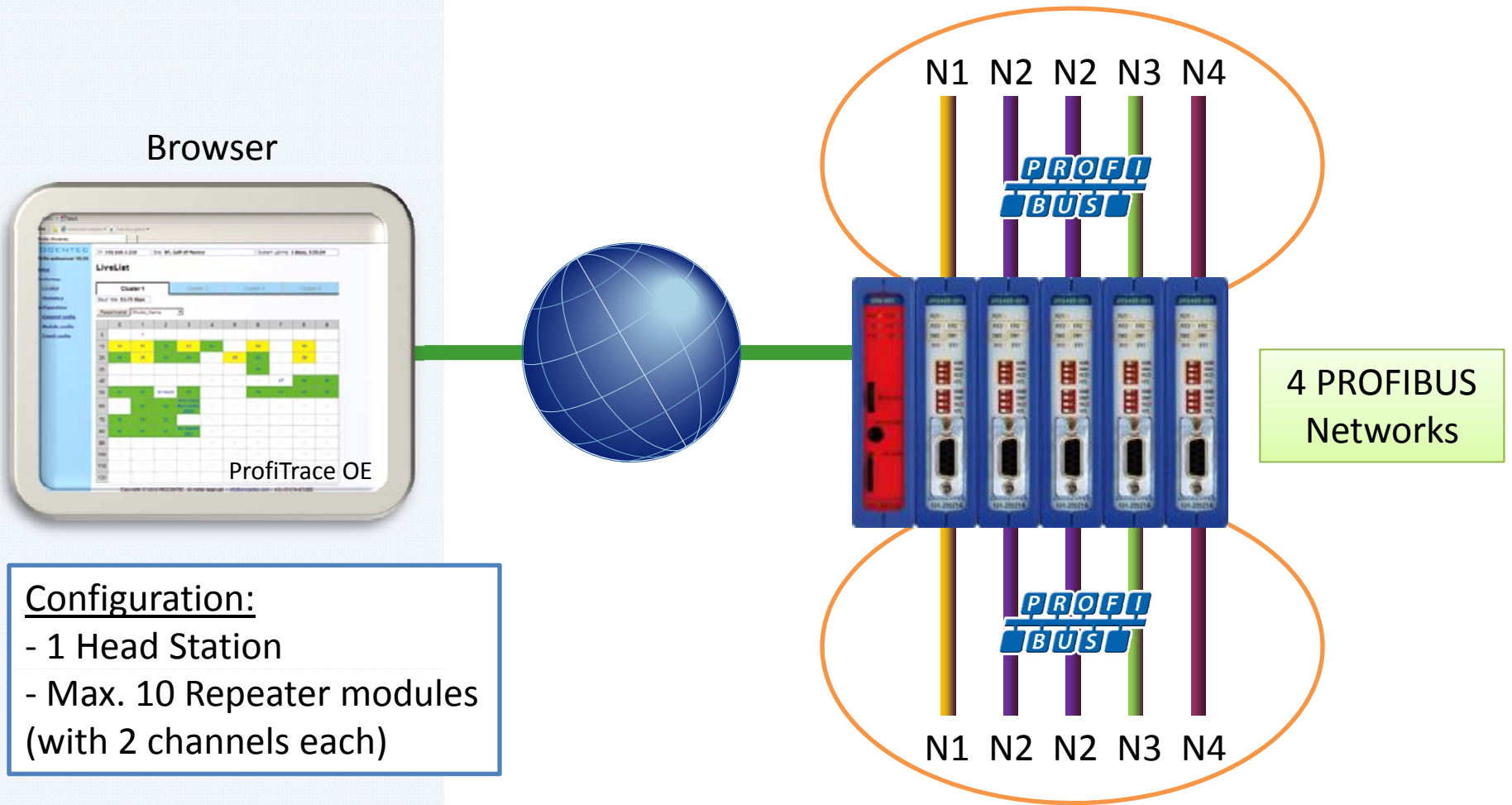
Monitoring multiple Segments



Configuration:

- 1 Head Station
- Max. 10 Repeater modules (with 2 channels each)

Monitoring multiple Networks



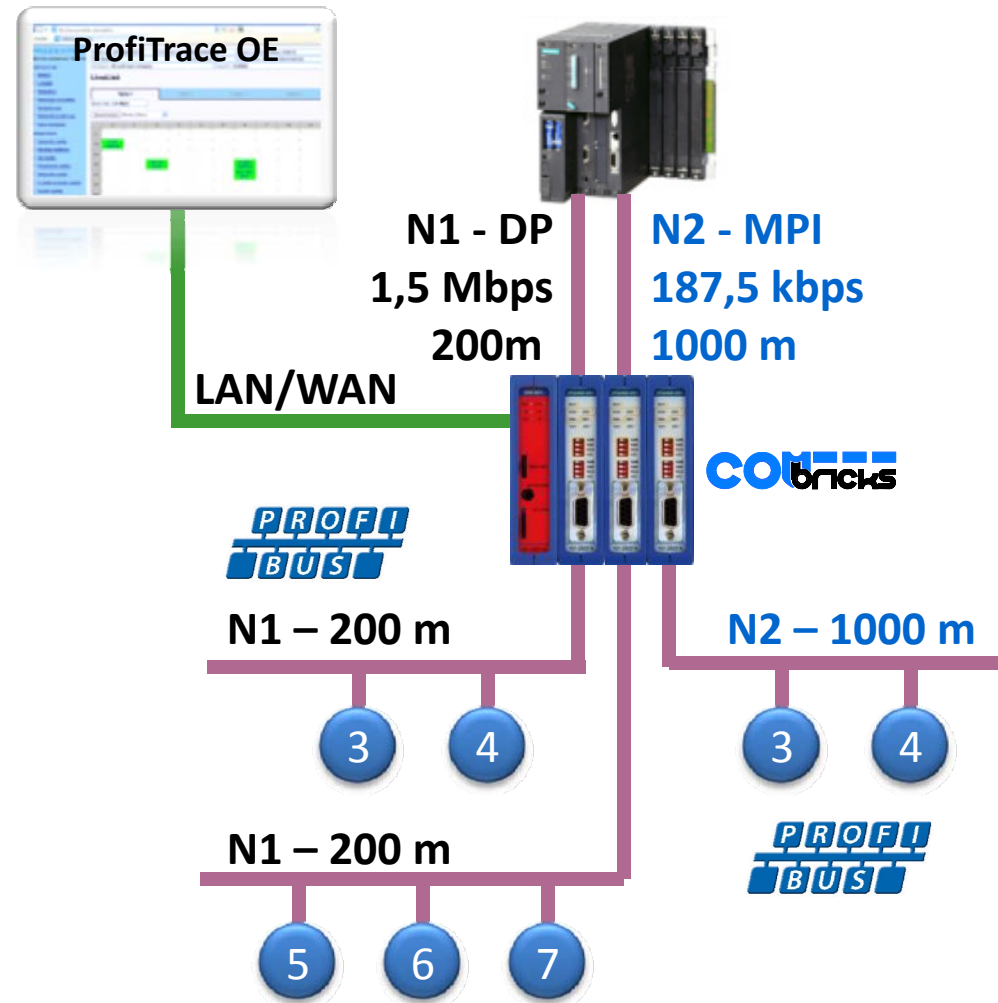
Configuration:

- 1 Head Station
- Max. 10 Repeater modules (with 2 channels each)

Example: Monitoring multiple networks

Info:

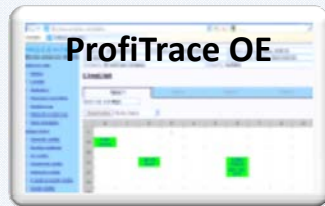
- 2 networks on different baudrates (N1, N2)
 - 5 segments (3 x N1, 2 x N2)
 - 2 protocols are used (DP and MPI)
 - PLC/DCS is electrically isolated
 - Double addresses are OK (3 and 4)!
-
- 1 Head Station
 - 3 x 2 Channel repeaters



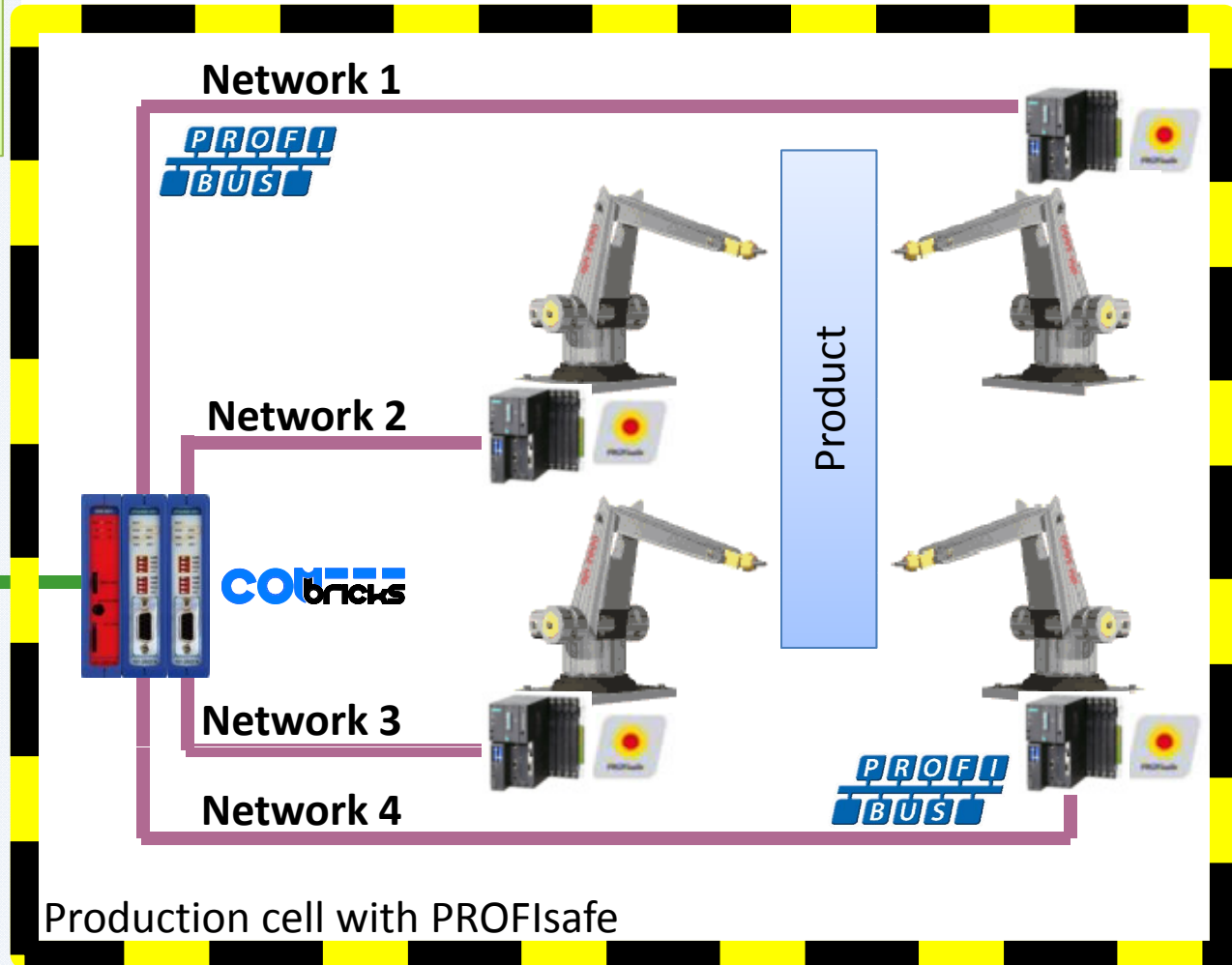
Example: Monitoring multiple networks



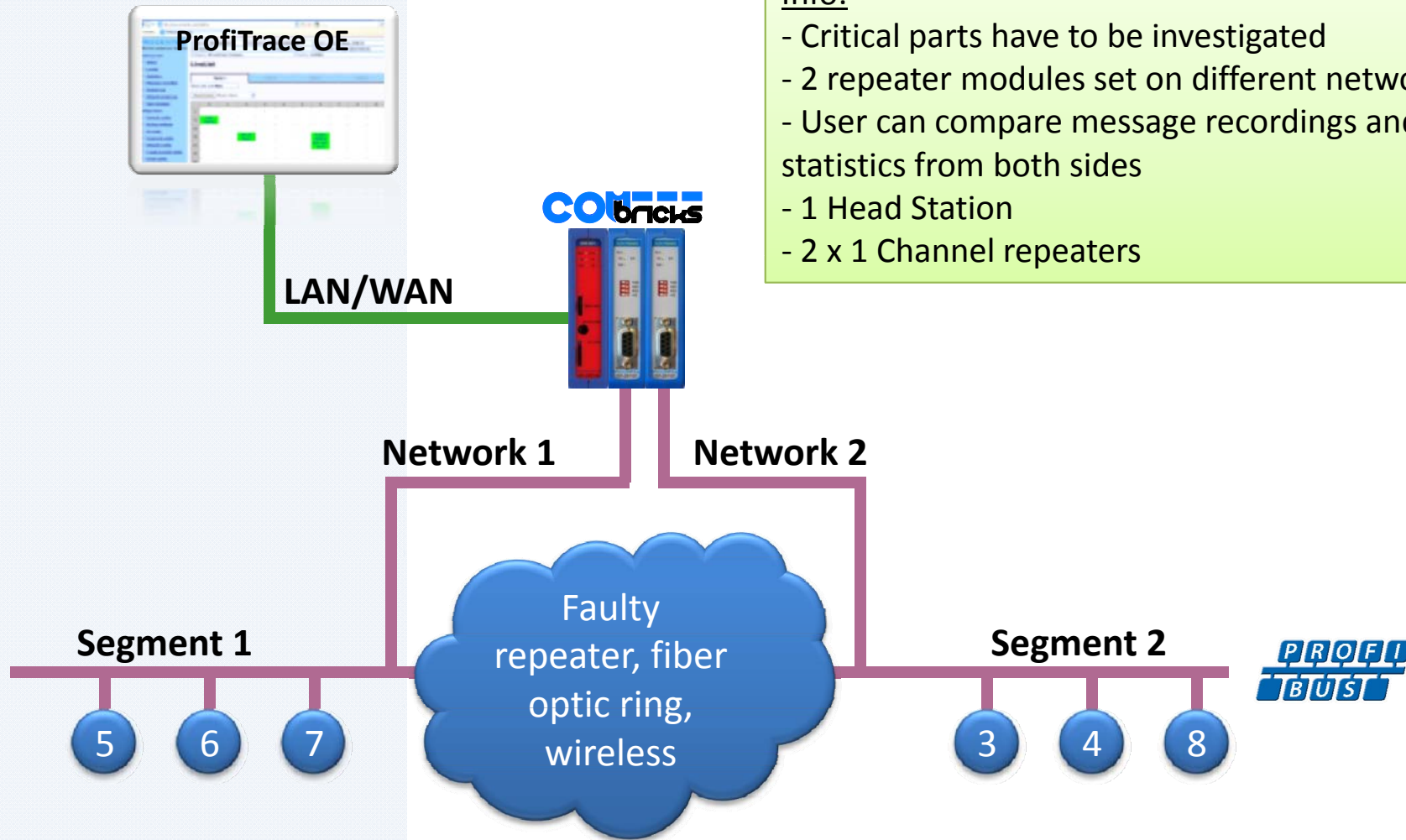
Info:
Monitoring without somebody crossing the safety border that could force a machine shutdown.



LAN/WAN



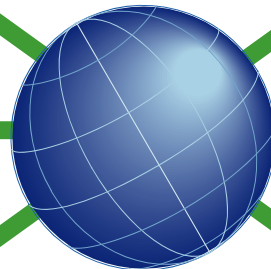
Example: Monitoring “failing” components



Info:

- Critical parts have to be investigated
- 2 repeater modules set on different networks
- User can compare message recordings and statistics from both sides
- 1 Head Station
- 2 x 1 Channel repeaters

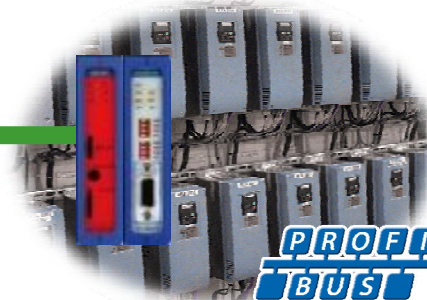
Monitoring worldwide with multiple PCs/laptops and phones



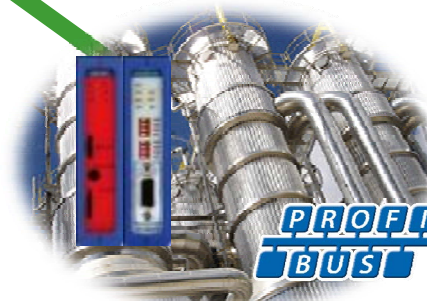
Access to any COMbricks system with multiple PCs



4 PROFIBUS Networks

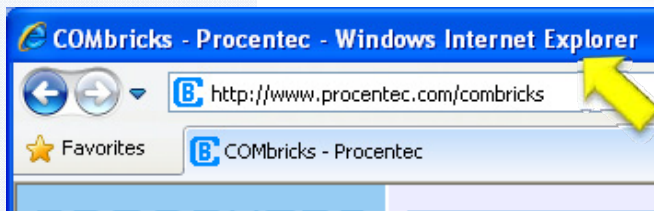


4 PROFIBUS Networks



4 PROFIBUS Networks

NO SOFTWARE Just the web browser



ProfiTrace (troubleshooting on-site)

- USB (power supply)
- Mobile
- Software

- C1/C2 Master
- Triggers and filters
- Large file recording
- Reporting
- Fast
- Also PROFIBUS PA

COMbricks (watchdog)

- Ethernet / Internet
- Permanent installation
- Web server

- Multi network monitor
- Multi access
- Email and Log
- No constant PC connection

A red circular graphic containing the text "Technical Specifications" in white, centered over a background image of a blue industrial device with orange cables.

Technical
Specifications

Backplanes (1)



101-200023



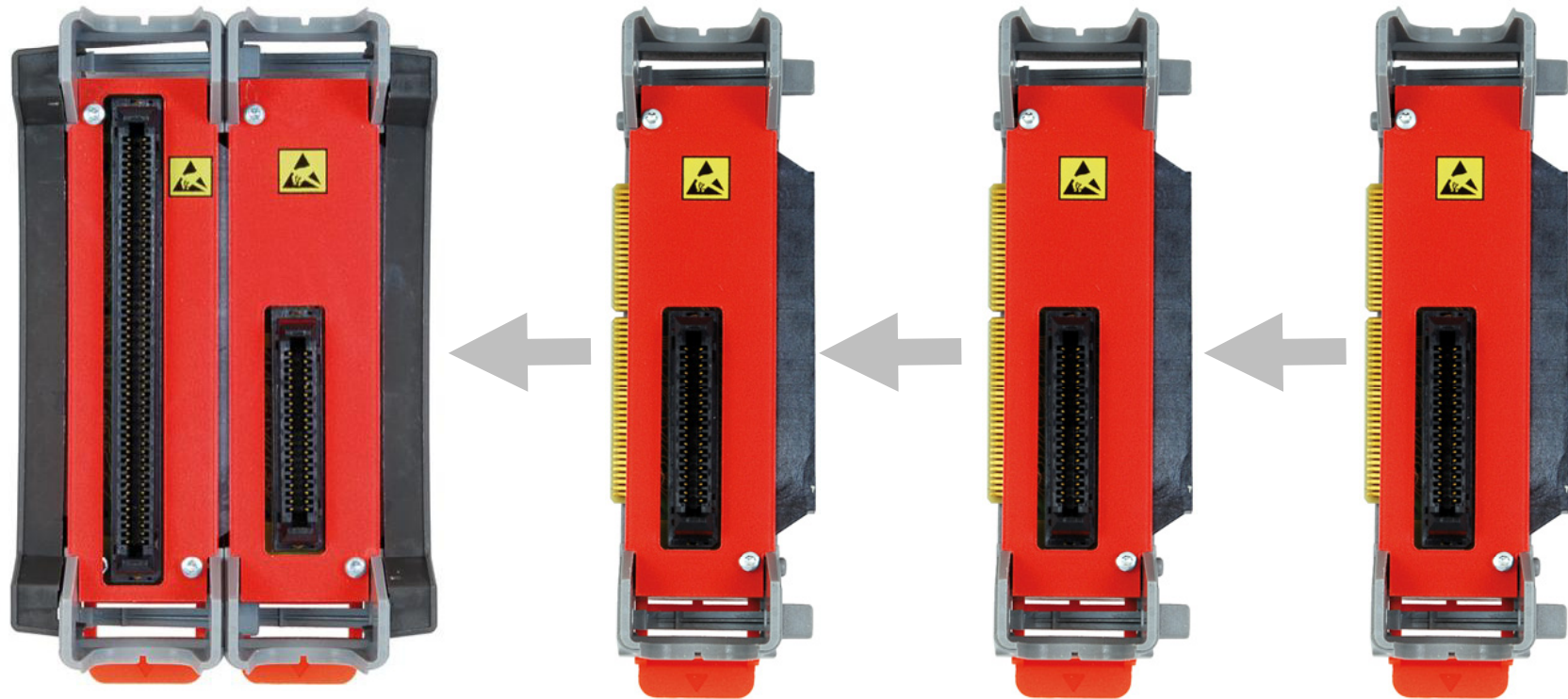
101-200012



101-200011

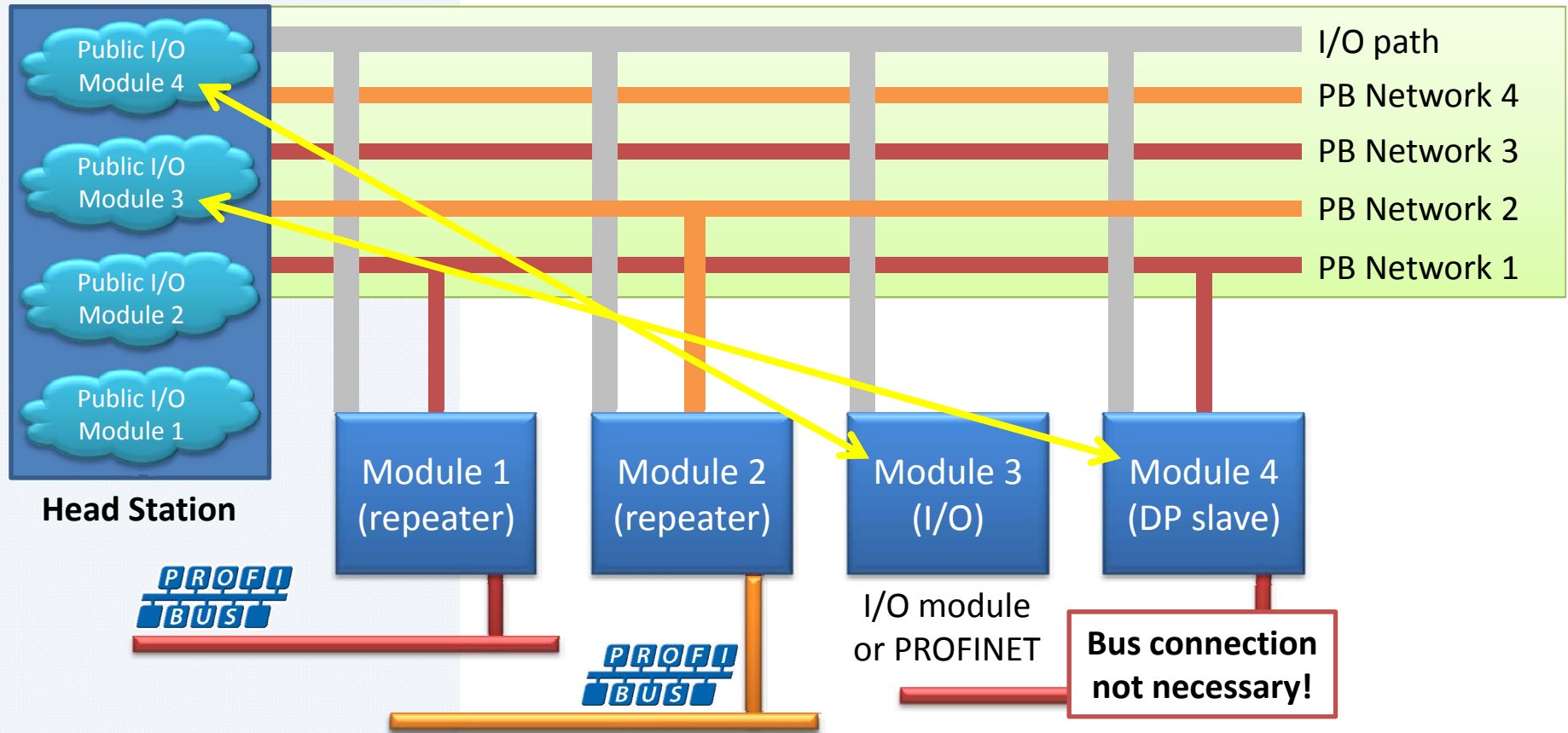


Backplanes (2)



Maximum 32 standard backplane units

Backplane structure



Data Exchange on 2 levels:

- Network (repeaters, slaves, masters and other devices)
- I/O (masters, slaves and I/O modules)

Recommended Price List



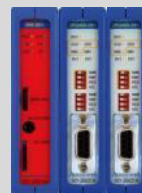
Products



Monitoring Kit 2 Networks
101-200Q1B
EUR 1100.-

- Basic kit**
containing:
- 1 x 1B Head Station
 - 1 x 2C Repeater
 - 1 x Backplane

**RECOMMENDED
FOR STARTERS!**



Monitoring Kit 4 Networks
101-200Q1C
EUR 2250.-

- Supreme kit**
containing:
- 1 x 1C Head Station
 - 2 x 2C Repeaters
 - 1x Backplane



Head Station Type 1C
101-20011C
EUR 1750.-

- ProfiTrace OE on 4 networks
- uSD card
- Ethernet port
- Redundant power
- 32 Modules
- Backplane socket



Head Station Type 1B
101-20011B
EUR 850.-

- ProfiTrace OE on 2 networks
- uSD card
- Ethernet port
- Redundant power
- 32 Modules
- Backplane socket



2 Channel Repeater
101-201102
EUR 300.-

- 2C repeater
- 12 Mbps
- 31 devices per C.
- Screw terminals
- DB9 connector
- Redundancy
- Termination
- Backplane socket



1 Channel Repeater
101-201101
EUR 240.-

- 1C Repeater
- 12 Mbps
- 31 devices per C.
- Screw terminals
- DB9 connector
- Redundancy
- Termination
- Backplane socket

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COMbricks - Networking, Monitoring and Control for...

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- New firmware
- New docs
- New modules

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Search

[Advanced Search](#)

This Week's Top Influencer

Dennis van Booma Solution for unsecured email connections



This member has contributed to some of the most active discussions in the group. Why not join the conversation?

New Members: Last 7 Days

1st

Joost van der Nat,
Sales Engineer at
Modelec Data-Industrie
BV
Nijmegen Area,
Netherlands

Members (84)

Sorted by: most relevant

Showing 1 -



Dennis van Booma (YOU)

PROFIBUS & PROFINET Specialist | Owner and
General Manager PROCENTEC, The Hague Area,
Netherlands
309 followers | [See activity »](#)

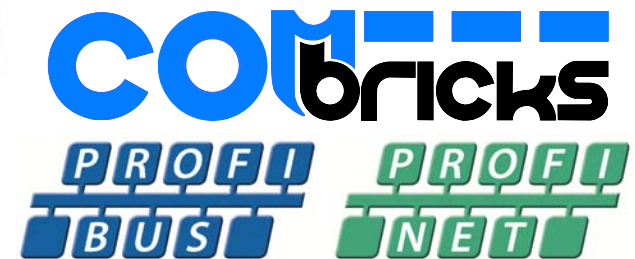


Oscar Abbenhuis (1st)

Engineer at TNO, The Hague Area, Netherlands
486 followers | [Unfollow](#) | [See activity »](#)

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