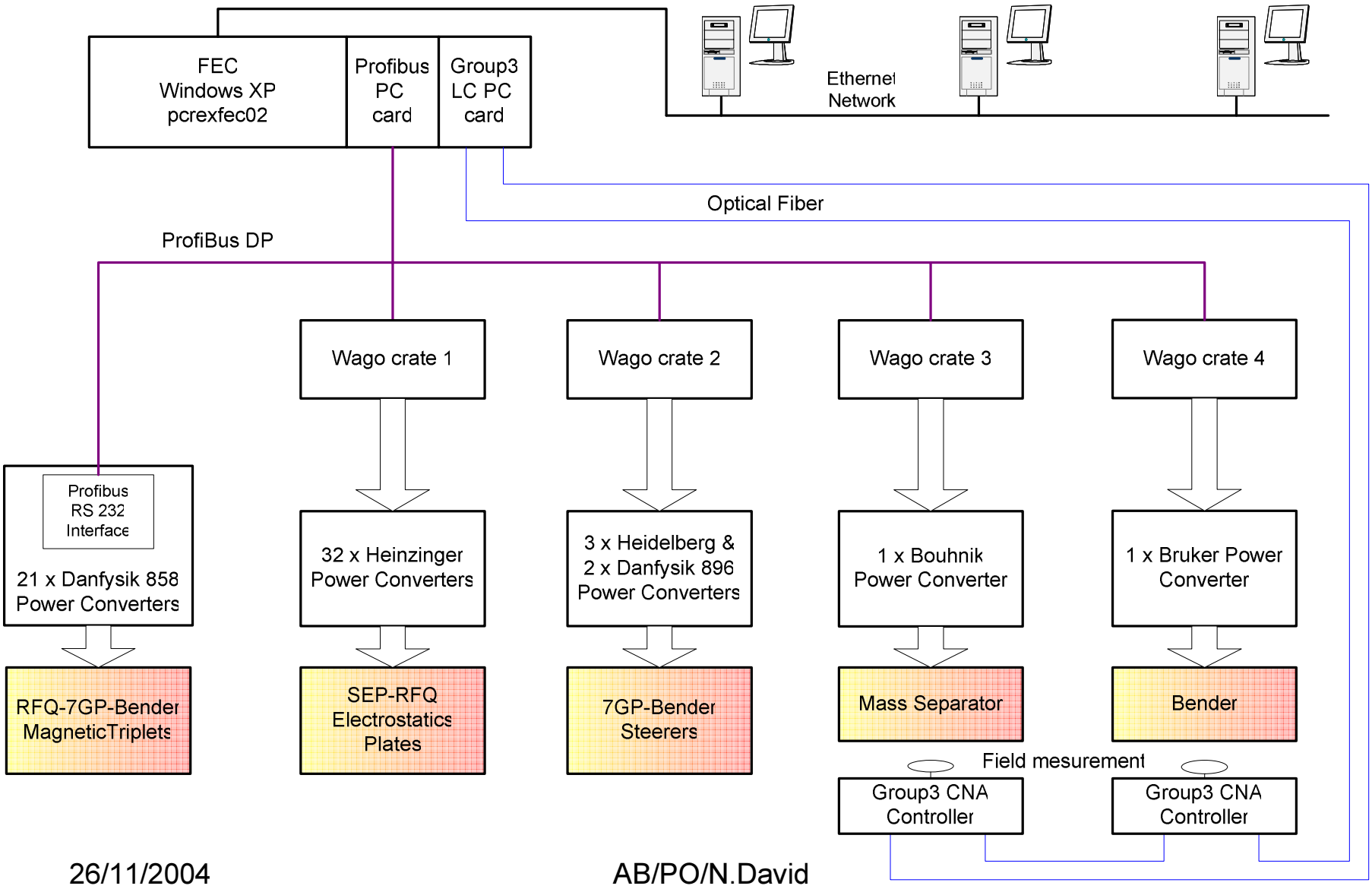
REX-Beam Optic Control System

- Actual PLC control layout
- PLC Wago crates in use
- Actual power converters in use
- Power converters & control system
- Actual Isolde control crates in use
- Possible modifications
- Possible PLC control layout

Actual Beam Optic Control Layout

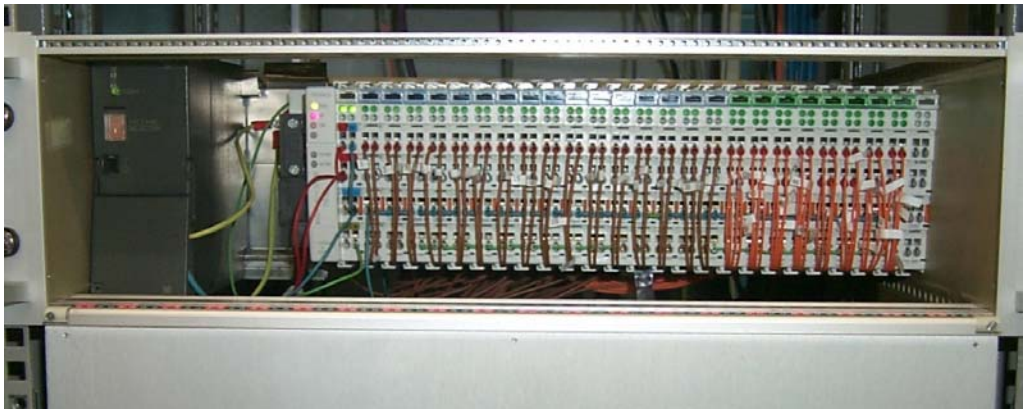


26/11/2004

AB/PO/N.David

PLC Wago Crates (1)

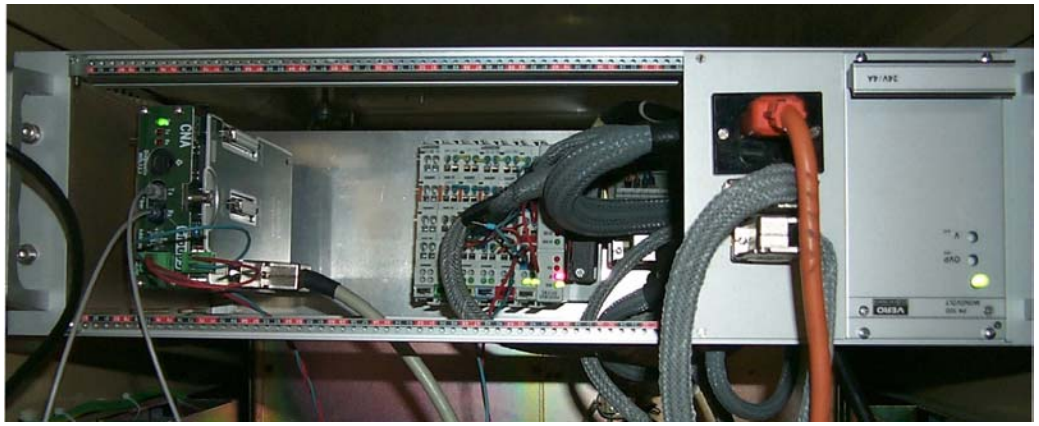
Front panel on Wago Control Crate for Heinzinger power converters



Rear panel on Wago Control Crate for Heinzinger power converters

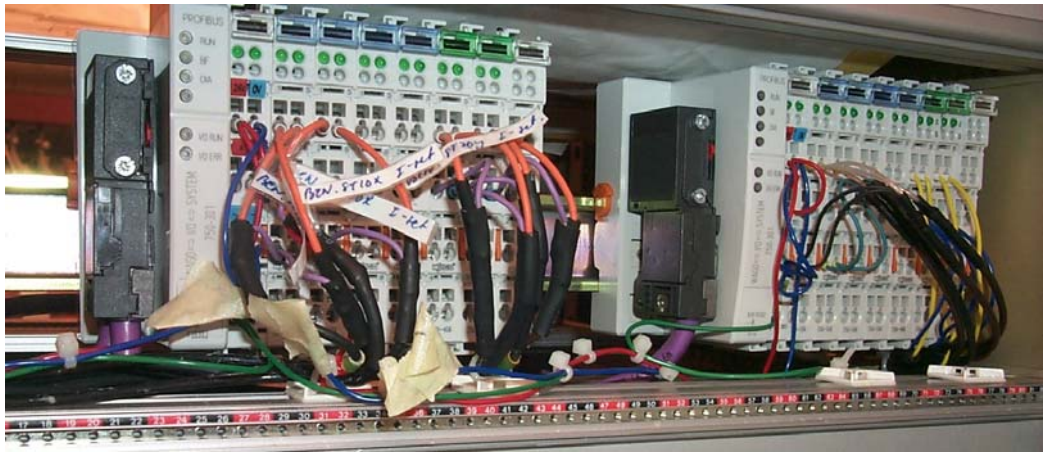
PLC Wago Crates (2)

Front panel on Wago Control Crate for Bouhnik power converter



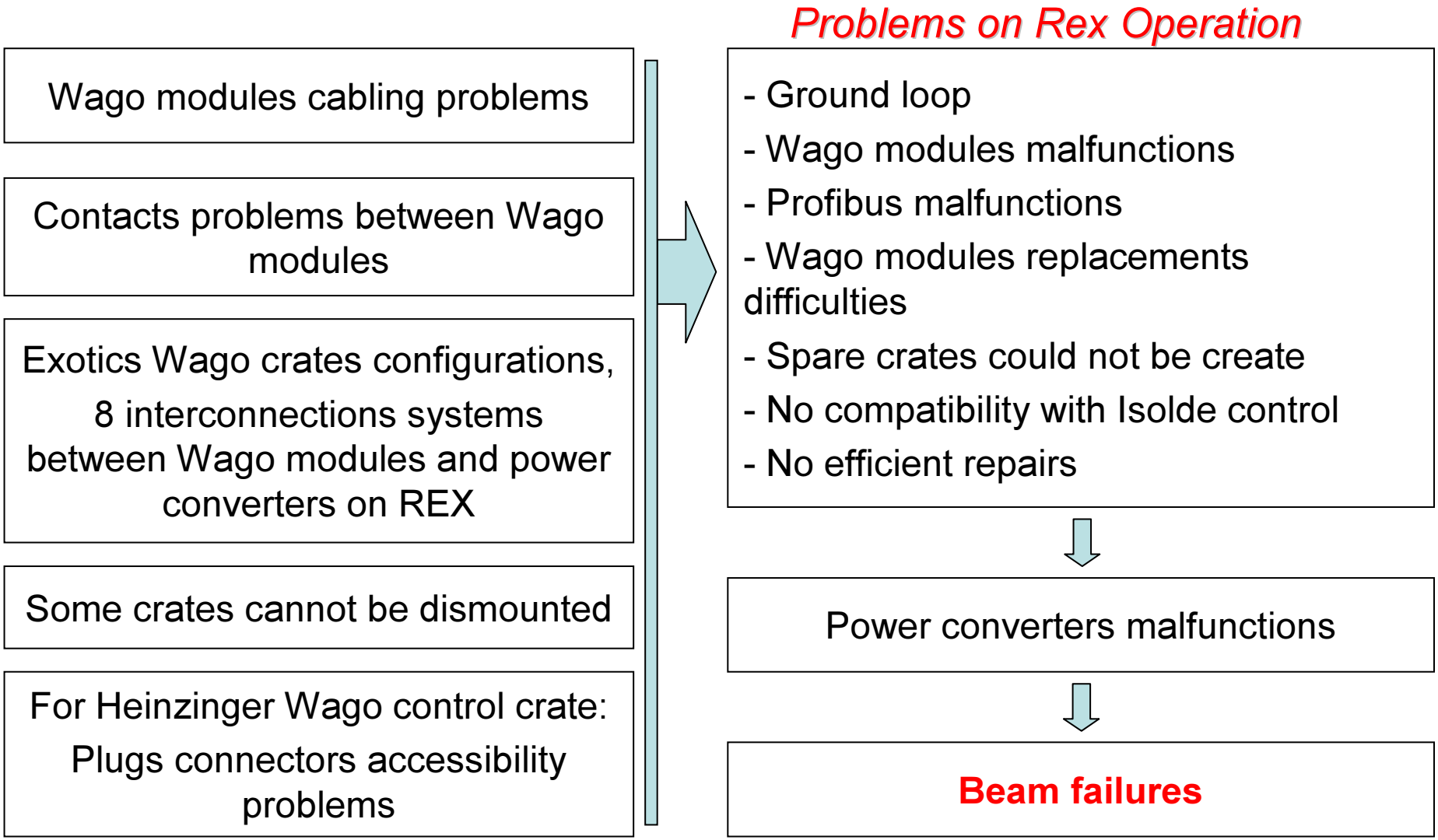
PLC Wago Crates (3)

Front panel on Wago Control Crate for Heidelberg and Danfysik 896 power converters



Front panel on Wago Control Crate for Bruker power converter

PLC Wago Crates (4)



Actual Beam Optic Power Converters

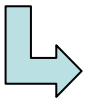
21 x Danfysik 858
Triplet in RFQ, 7GP and Bender sections

32 x Heinzinger 6000
Electrostatic element in SEP & RFQ section

3 x Heidelberg BSPS & 2 x Danfysik 896
Steerers in 7GP & Bender sections

1 x Bouhnik AF99032
Mass separator

1 x Bruker MN65/352
Bender



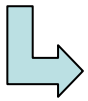
60 Power converters

Beam Optic Power Converters & Control System

- 21 x Danfysik 858 → directly connected to Profibus
- 32 x Heinzinger 6000 → needs 32 DAC and 32 ADC
- 3 x Heidelberg BSPS → needs 6 DAC and 6 ADC
- 2 x Danfysik 896 → needs 2 DAC and 2 ADC
- 1 x Bouhnik AF99032 → needs 1 DAC - 2 ADC - 8 DI - 3 DO
- 1 x Bruker MN65/352 → needs 1 DAC - 2 ADC - 8 DI - 3 DO

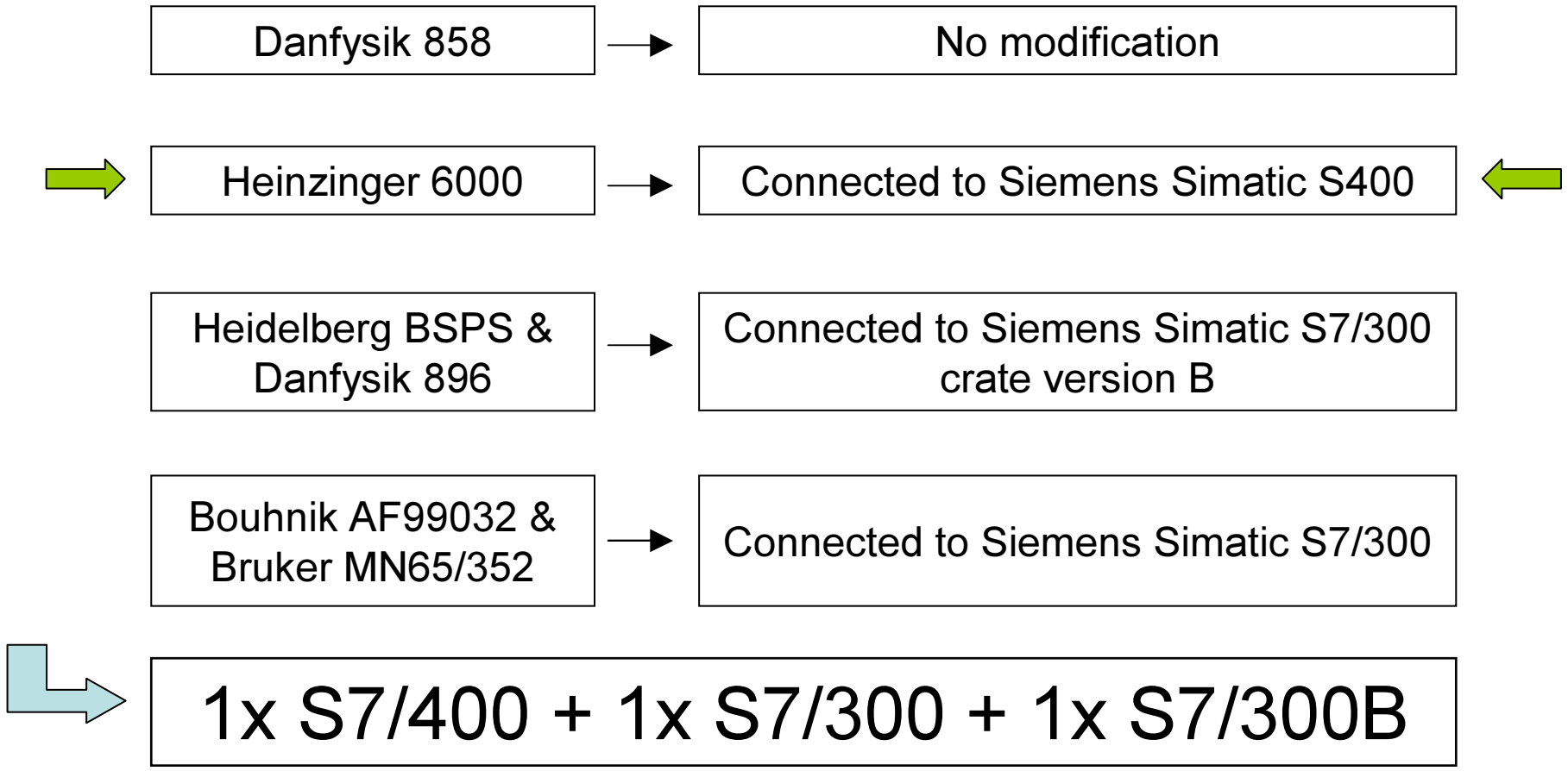
Actual Isolde Control Crates for Power Converters

- Siemens Simatic S7/400 crate with maximum 48 DAC - 96 ADC
- Siemens Simatic S7/300 crate with 2 DAC - 2 ADC - 16 DI - 8 DO
- Siemens Simatic S7/300 crate version B with 8 DAC - 8 ADC
- Only 2 interconnection systems between control crates and power converters (Lemo 00 & Burndy)

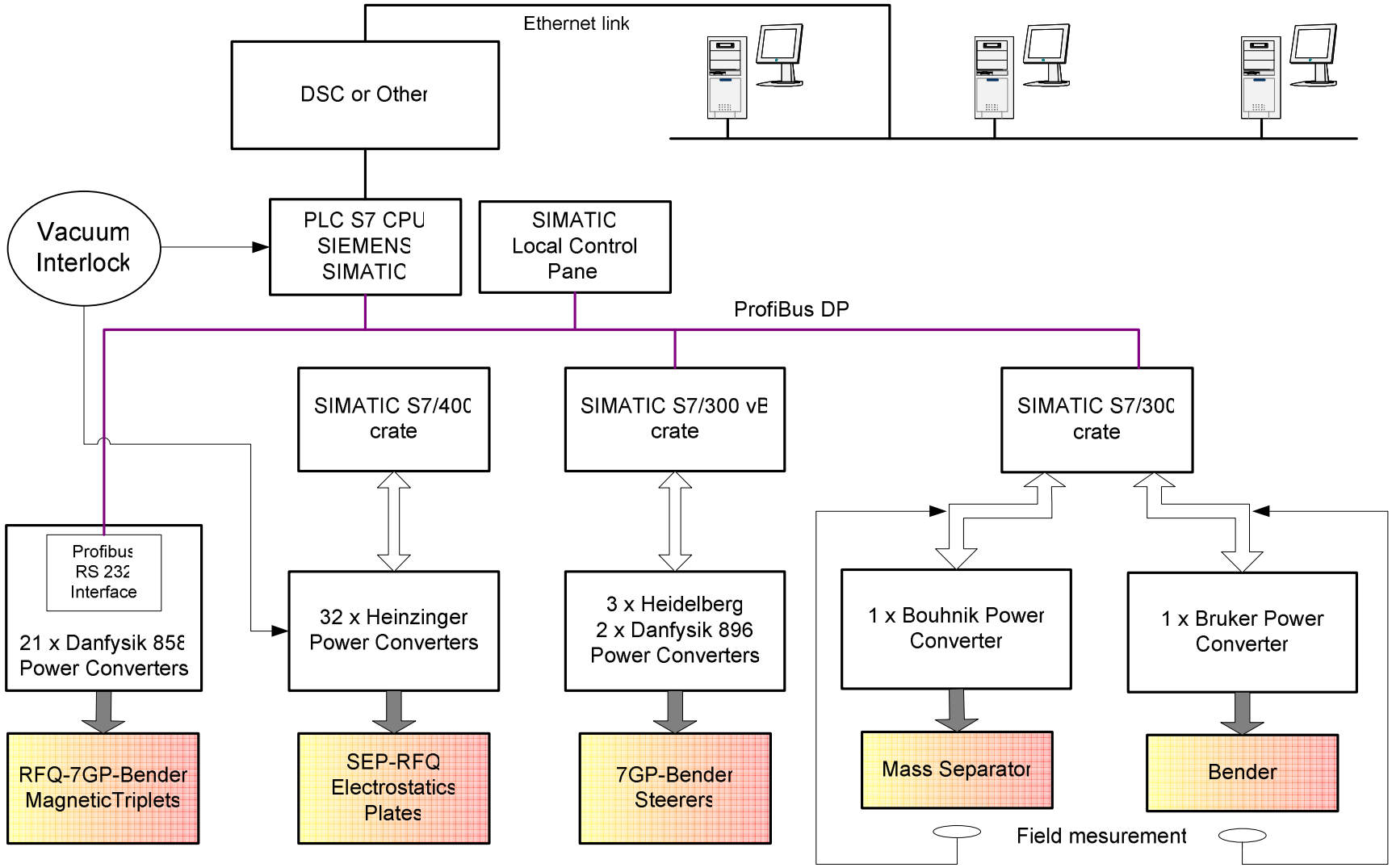


To foreseen to have same control crates for REX

Beam Optic Power Converters & Control Possible Modifications



Possible Beam Optic Control Layout



First Step Modification on Beam Optic Control Layout ?