User Permit Test System "Update"

◆ **Purpose**

◆ **How does it work?**

◆ **Protection & Safety**

◆ **Conclusion**

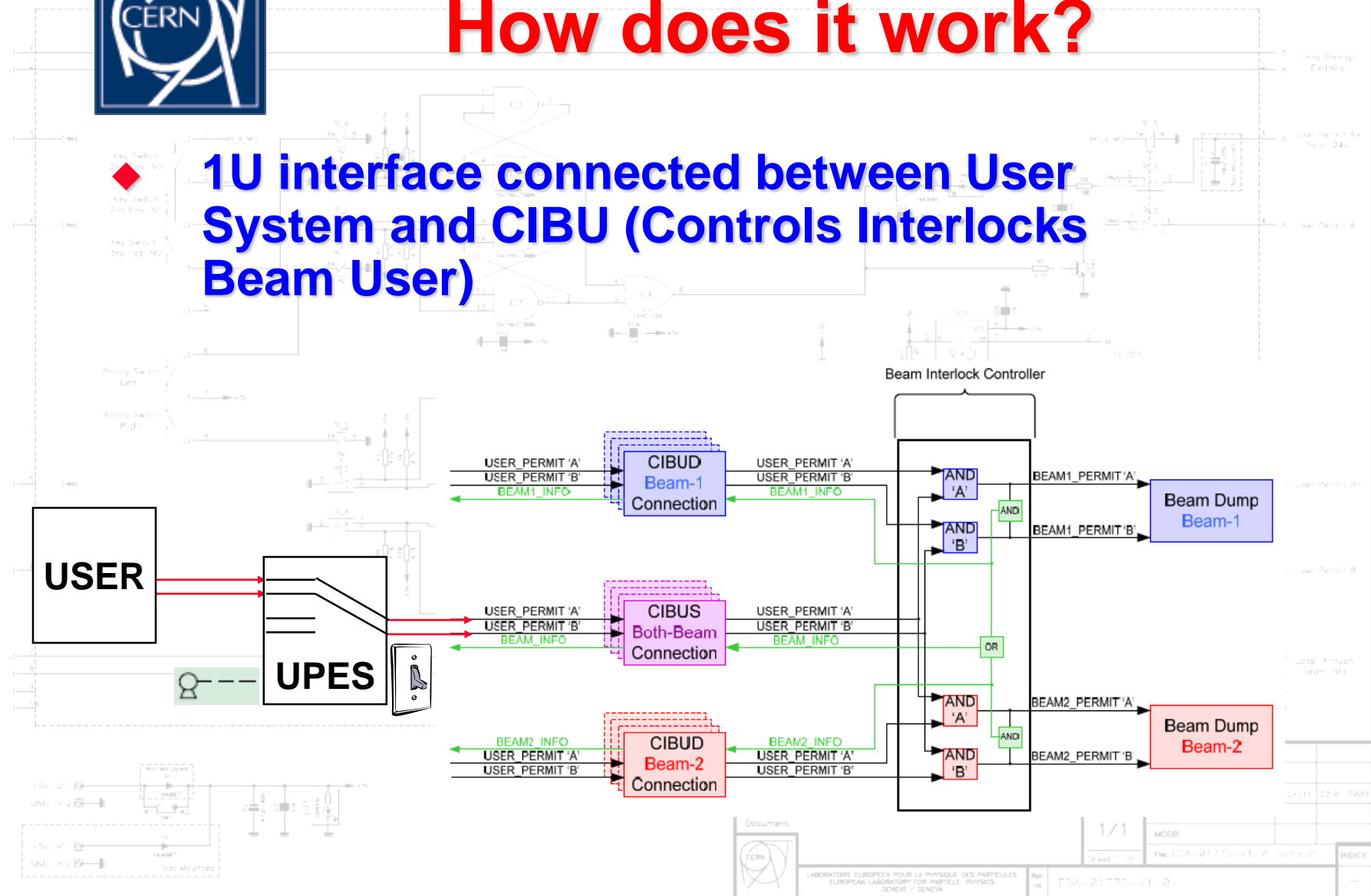# Purpose

◆ **Main aim:**

1) **Test the CIBU during commissioning and after shutdown to verify the link to the BIS.**

(Therefore: Full compatibility to the CIBU)

2) **Optional: Simulate User Permit to allow injection when client system is off-line.**
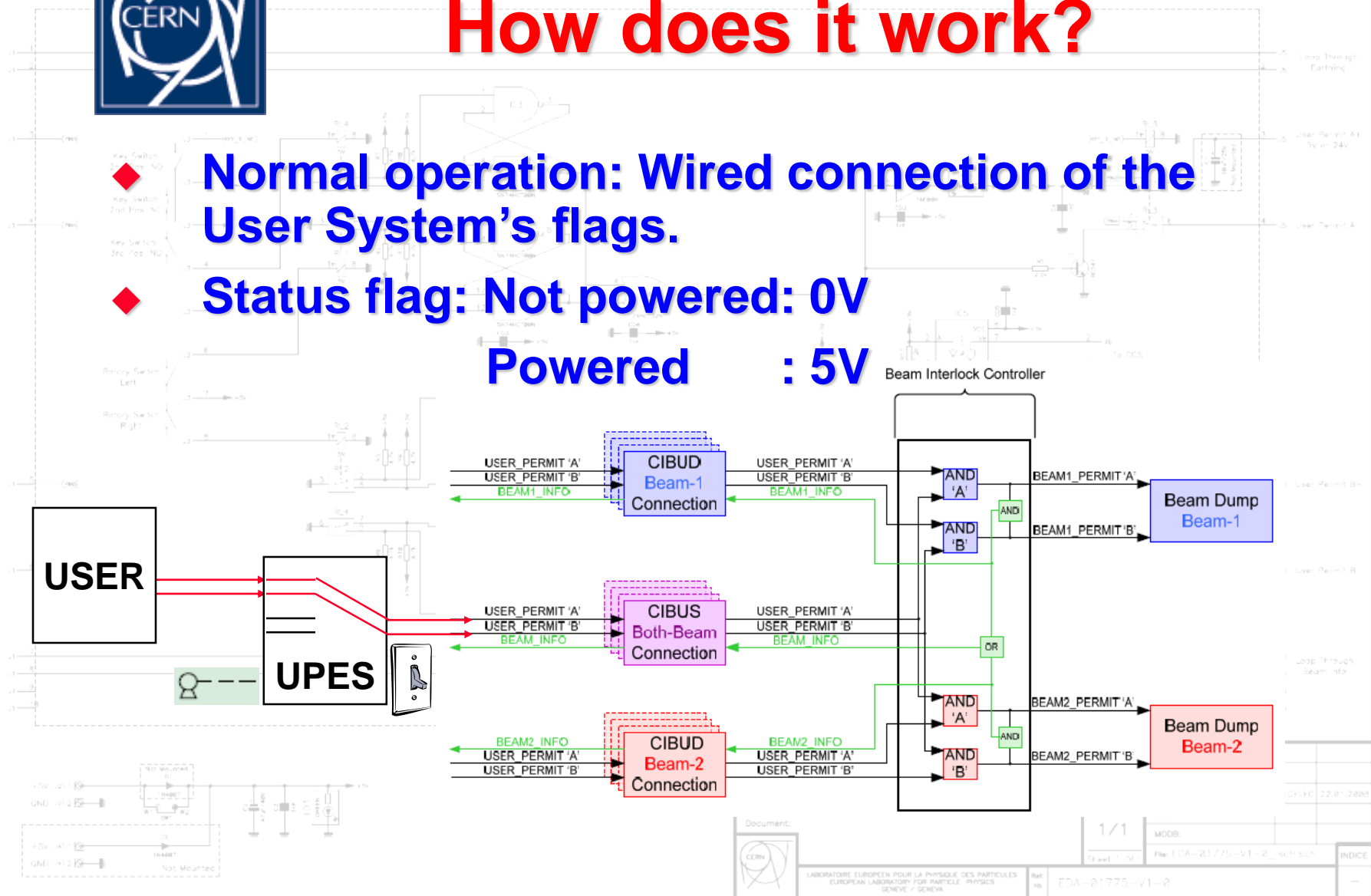
How does it work?

◆ **1U interface connected between User System and CIBU (Controls Interlocks Beam User)**

How does it work?

◆ **Normal operation: Wired connection of the User System's flags.**

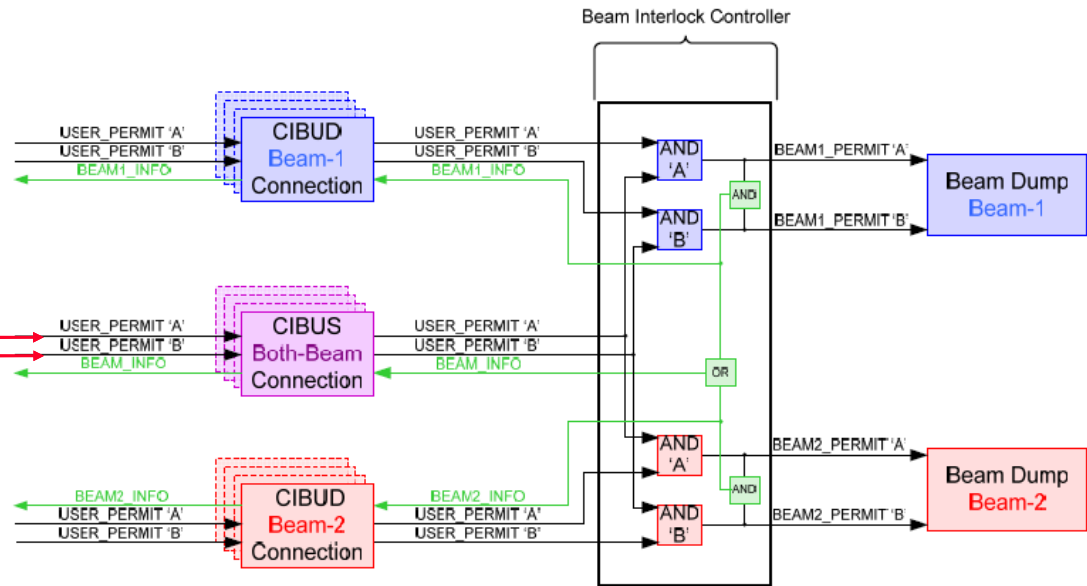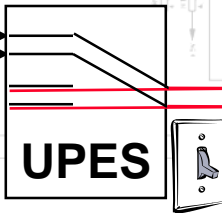◆ **Status flag: Not powered: 0V**
   Powered : 5V

How does it work?

◆ **Test mode: Status flag: 0.15V**

- Decoupling the User System with a Key.
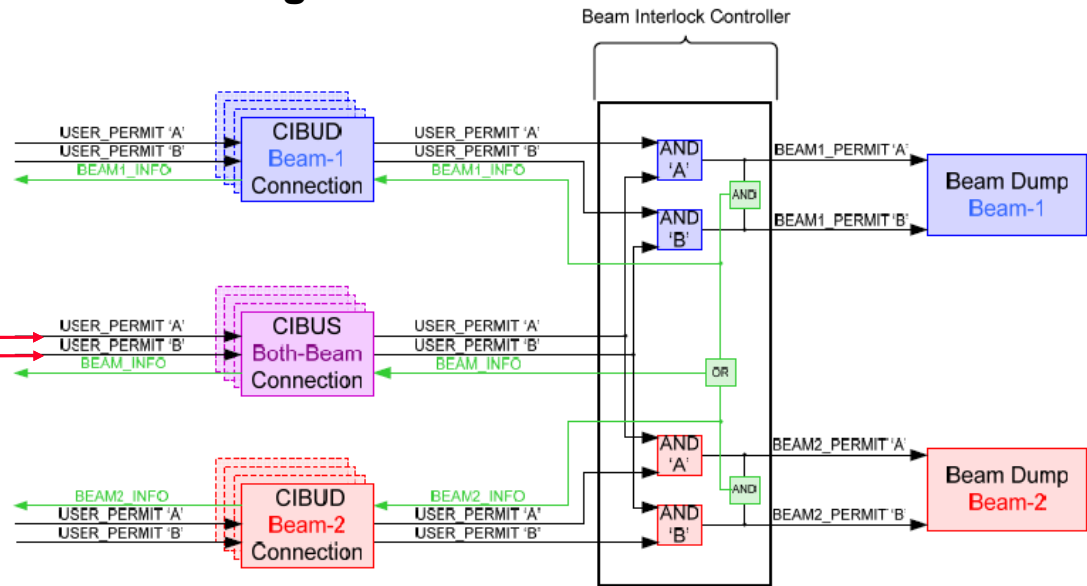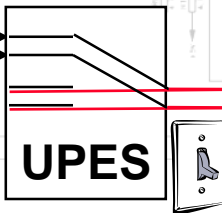- Test each User Permit channel seperately.

How does it work?

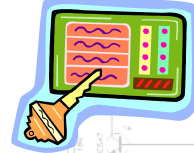◆ **Optional: In case User system down or off-line:**
Status Flag: 0.15V

- Decoupling the User System with a Key.
- Simulate User Permit flag on redundant CIBU channels.

Protection & Safety

◆ **Mounted inside rack**

◆ **Key switch protected**

◆ **On-board 5V power supply (option for 2nd redundant power supply)**

◆ **Status flag for the Detector Control System.**

Status	Output voltage
Not powered or signal cable failure	0V
Powered (Off position)	5V
Powered (CIBU Test Mode)	0.15V
Powered (Override Mode)	0.15V
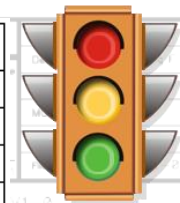
Conclusion

- ◆ **Transparent for the interlock chain.**
- ◆ **Any other state is visible via the status flag.**
- ◆ **No functionality without key.**
- ◆ **Fail-safe state is a hardwired connection to the user.**
- ◆ **Main function is to test the connection to BIS.**
- ◆ **No need to change any cable connections.**
- ◆ **Test function is identical for all users.**
- ◆ **Override is an optional byproduct of the main function.**

Thank you for your attention