

Introduction

CERN

Safety information

Alarm system

Monitoring system



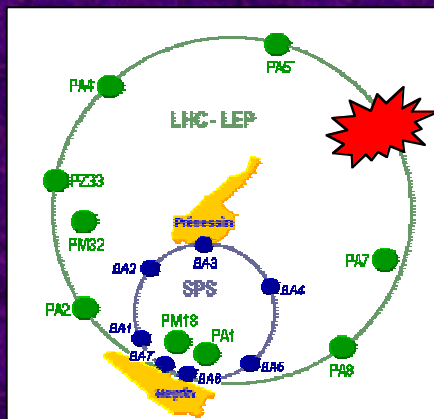
Introduction

CERN Safety Alarm Monitoring

= CSAM



Background

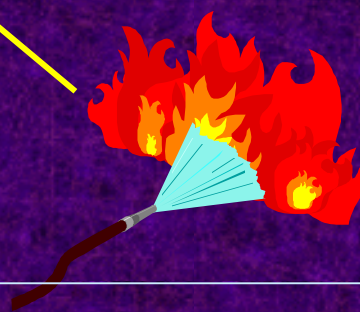


Fire CDIN-00052 B104-R-02

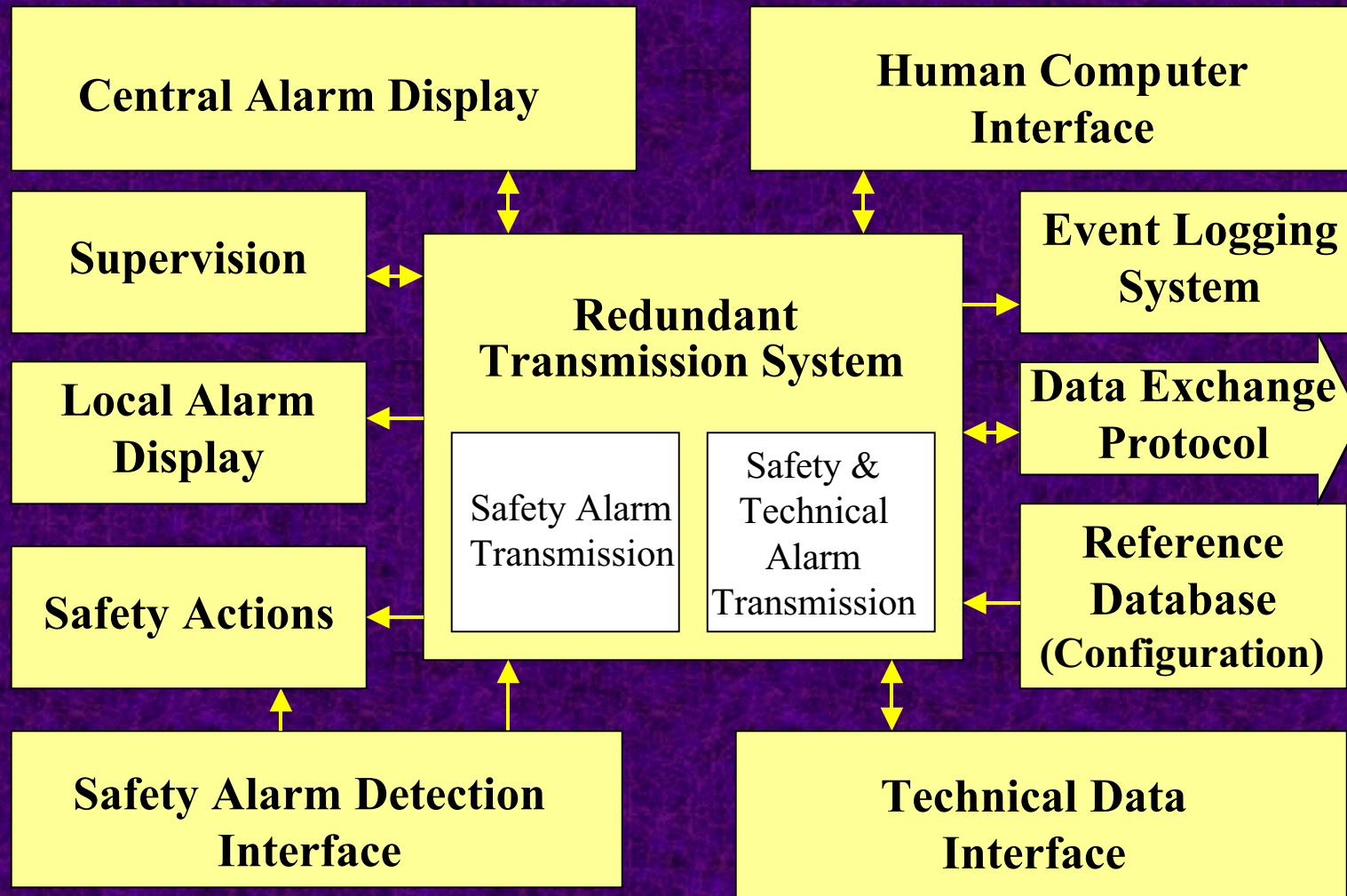


Hard-wired network

Computer-based network



Functional diagram



Commercial aspects

➡ **Market Survey**

➡ **Technical Specification**

➡ **Invitation to tender**

➡ **CONTRACT**

Prototyping

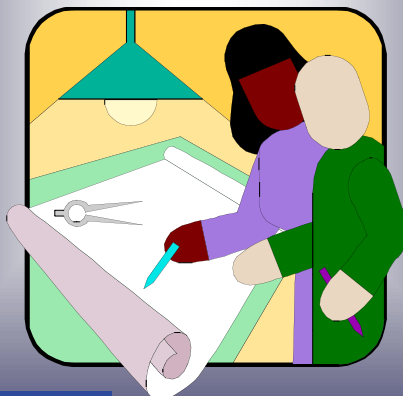
INDUSTRIAL
ETHERNET



OPC FOUNDATION

applicom
international
opening up the industrial communication universe

SIEMENS



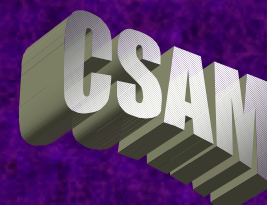
PROFI[®]
PROCESS FIELD BUS
BUS

Schneider
Electric



Standards

**International Standards =
Systematic approach**

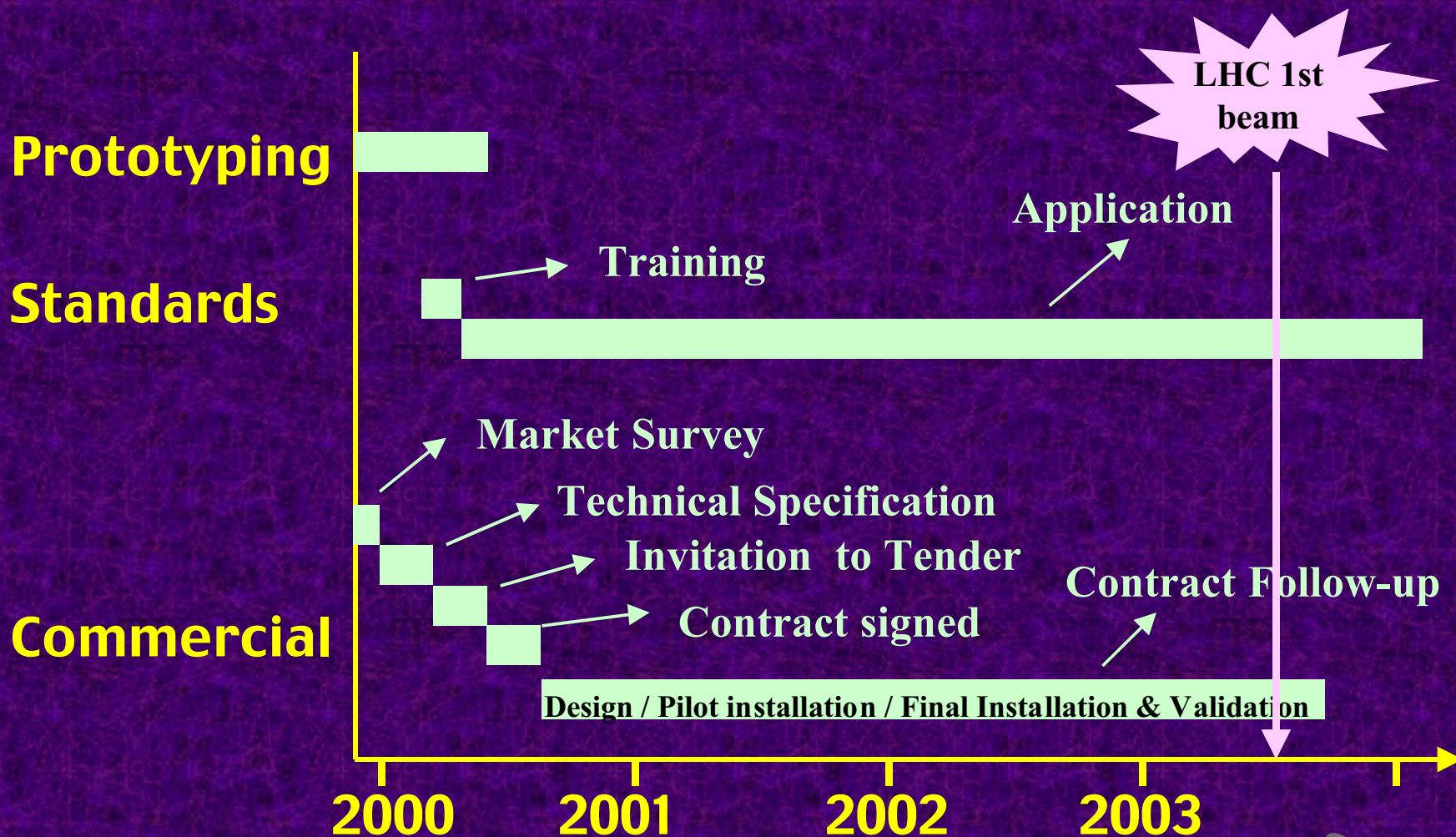


Standards

Functional Safety =
Confidence in your system



Strategy



Current System



January 2000, 3rd ST Workshop

R. Nunes, C. Soler, S. Grau



Future System



January 2000, 3rd ST Workshop

R. Nunes, C. Soler, S. Grau



Current System

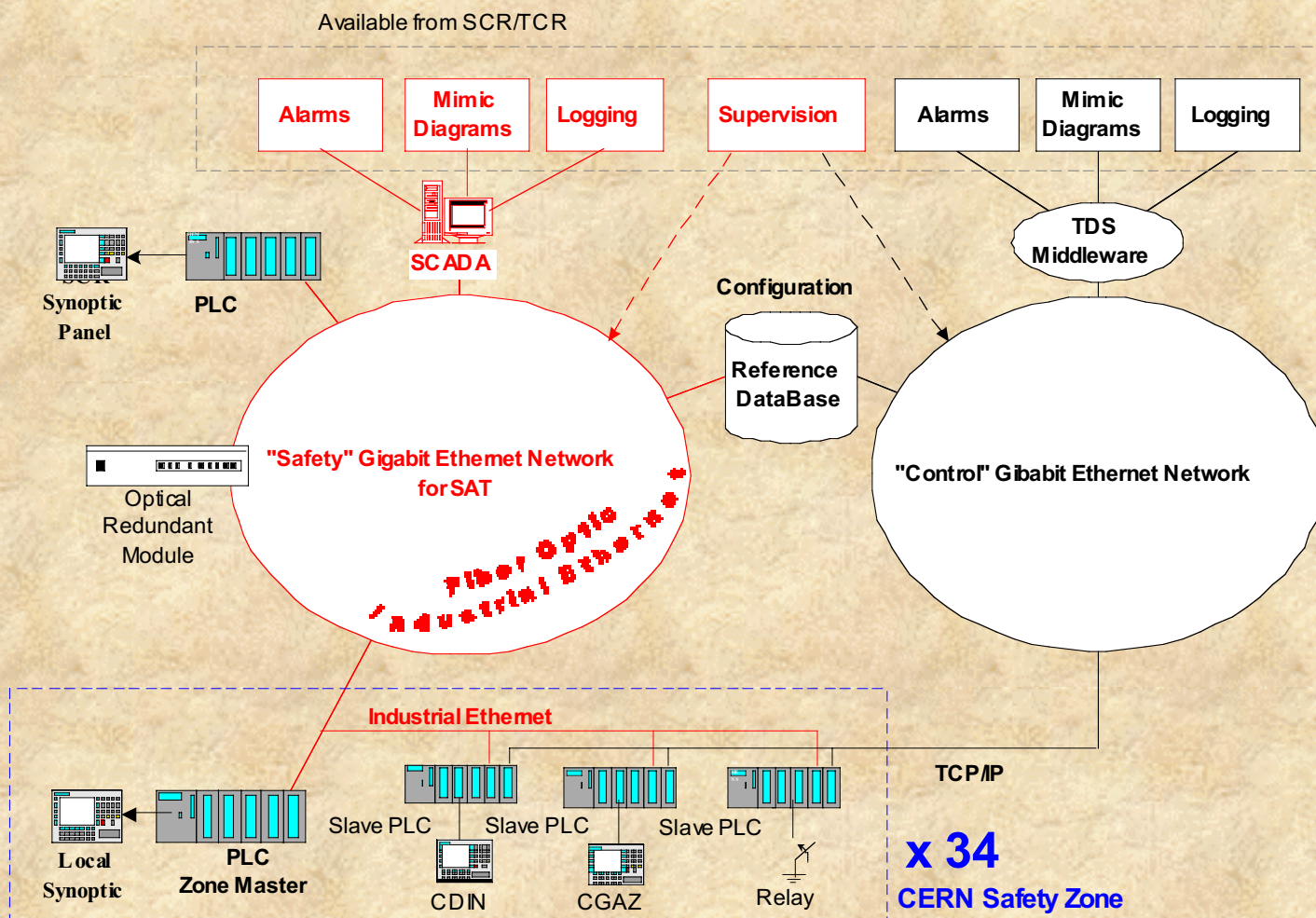


January 2000, 3rd ST Workshop

R. Nunes, C. Soler, S. Grau



Future System



Current System



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Current System

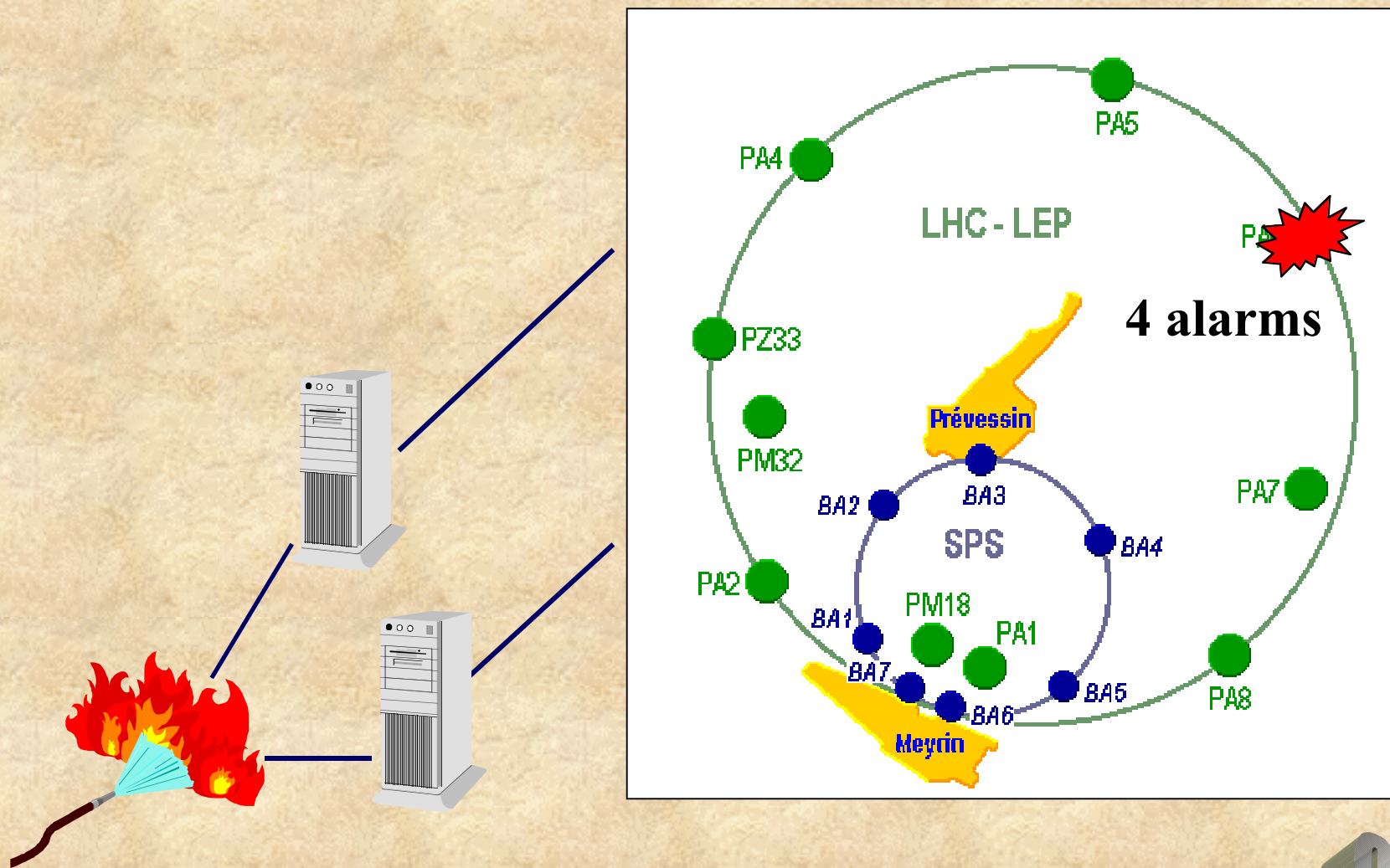


January 2000, 3rd ST Workshop

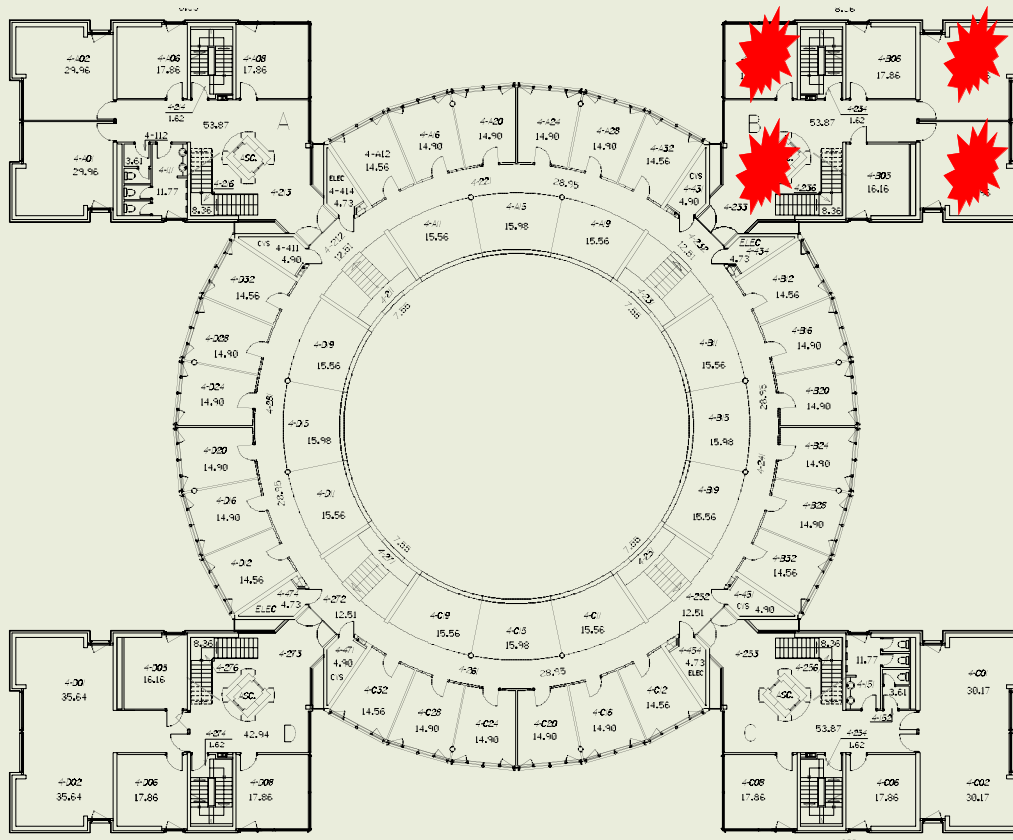
R. Nunes, C. Soler, S. Grau



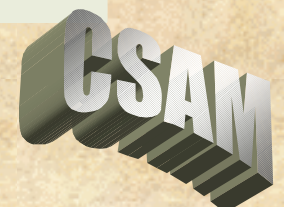
Future System



Future System



B40-5-002





Future System

CERN Safety Alarm System - Messages display

Fr. 13.05.1999
00:01:20

Selection Criteria: Chronicle

Time	Type	Identifier	Location	Description	Direction
23:11:15	Fire Detector	CDIN-00052	MEY-Z-22-B-0287-R-02	Smoke concentration too high	came
23:11:15	Fire Detector	CDIN-00052	MEY-Z-22-B-0287-R-02	Smoke concentration too high	came
23:11:15	Fire Detector	CDIN-00052	PREV-Z-10-B-0112-R-04	Smoke concentration too high	came
Fr. 12/05/1999					
 04:11:15	Fire Detector	CDIN-00052	MEY-Z-22-B-0287-R-02	Smoke concentration too high	came
05:11:16	Fire Detector	CDIN-00052	PREV-Z-10-B-0112-R-04	Smoke concentration too high	came
12:12:45	Lift blockage	AS-0058	MEY-B-0504-	Lift blocked	came
15:16:15	Flooding Det.	INOND-863-E-T	SPS-B-862-R-05	Flooding Detected	came

Selected Message: 

All Messages:



Prototype



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What has been done ?

- **User Requirements written**
 - **Market Survey out**
 - **Prototype operational**
 - **Analysis of technical solutions**
- **Applicable standards identified**



What's next ?

- **User Requirements validated**
 - **Interface Control Document**
 - **Safety Requirements**
 - **Safety Equipment Database**
- **Contract Execution Strategy**

 **Technical Specification**

Additional Information

- **Paper**
- **Visit the prototype at**
Preveessin B-865 R1 4
- **Visit the CSAM Homepage:**

<http://nicewww.cern.ch/st/mo/CSAM/CSAM.htm>

