

Overview of the

Central Command and Control System

for

<u>TuDEM</u>

The automatic fire extinguishing system for tunnel protection with mobile remote controlled monitors on overhead rail



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A brief description of the system

Innovating fire extinguishing system for tunnel fires, for fully automatic intervention or for remote operation from a remote Control Room.

The system is based on the proven technology of fire fighting remote controlled foam/water monitors, worldwide utilized and appreciated for the fire protection in heavy risk plants. The fire extinguishing system for tunnel protection with mobile remote controlled monitors on overhead trailer consists in a fixed structure (overhead rail), installed at the ceiling along the tunnel, and in a number of mobile units (trailers) equipped with foam/water monitors moving along the fixed structure.

The mobile unit

Each mobile unit (trailer) is equipped with:

- the electric remote controlled fire fighting monitor with flow rate 1.000 lt./min.,
- the motors for the linear movement of the trailer along the overhead rail,
- the battery for power supply of the unit during the movement along the overhead rail (buffer batteries which are automatically charged when the unit is connected "in stand-by" to a docking and control station),
- 2 IP / TV cameras for visible and infrared light,
- the electric panel with command and control devices,



- 1 flammable gas detector and 1 toxic gas detector for monitoring dangerous situations (optional).



The fixed structure

- The fixed structure is equipped with:
- main water (or foam premix) supply pipe (working pressure ~10 bar),
- main electric power supply line,
- serial bus for data transmission,
- heat sensing cable and infrared flame detectors for fire detection.

The docking stations and the Control Room

At regular intervals along the tunnel are installed the **docking stations**. These stations are used to supply the mobile units with water, foam and electric power. For this reason, they are equipped with a power supply and a special coupling, which performs the docking function for the mobile unit.



CACCIALANZA & C. Fire fighting security systems



The <u>Control Room</u> is the central point, where any kind of information, such as alarm messages, status messages or the pictures from the IP cameras are administrated. The intelligent controllers and the database systems are designed in a redundant way, like the entire communication. So the functionality of the system is always guaranteed, even in case of a computer failure.

Both intelligent controllers (**Controller 1** and **Controller 2**) are equipped with the Linux operation system which guarantees security and reliability.



The system is designed for a multiuser environment. Through the redundant construction of the local network and a wireless LAN (WLA) it is possible to maintain the visualisations of the system in separate rooms.

The visualisation programs

The visualisation of the system is performed by 4 different programs. These programs are running under the windows operation system

- 1. TLS_VIS_Overview: overview over the entire system
- 2. *TLS_VIS_Technic*: technical overview (power / electricity)
- 3. *TLS_VIS_Communication*: technical overview (communication)
- 4. TLS_VIS_Detail: administration of the database



The program TLS_VIS_Overview

TLS_VIS_Overview shows at a glance the state of the entire system.

TuDEM : Tunnel-Lösch-System [v2.0.0.22697)/de-DE/de-DE] + (C) Caccialanza & C., SPA					
System • Gesant-Ubersicht Strom-Plan Kommunikations-Plan	Detail-Plan Konsole R DB-Master DB-Backup Maste	er-Controller Backup-Controller Emergency Sto	Service -			
Portale NORD, Stazione 15 172:16:101:111 172:16:101:112 172:16:101:113 172:16:101:1	14 172:16:101:115 172:16:102:111 172:16:102:112 172:16:1	0 17216102114 172161127 17216103111 17216	03112 17216103113 17216103114 17216103115			
Stazione 16 => 30 17216100.111 17216104.112 17216104.113 17216104	14 172 18108115 172 16105111 172 16105112 172 1610	5113 17216105114 17216105116 17216105111 17216	106 112 172 16 106 113 172 16 106 114 172 16 106 115			
Stazione 31 -> 45 172.16107.111 172.16107.112 172.16107.113 172.16107 100 100 100 100 100 100 100 100 100 100	114 17216107115 17216108111 17216108112 172161	28 113 172 16 108 114 172 16 109 115 172 16 109 111 172 10 100	109112 17216109113 17216109114 17216109115			
Stazione 46 -> Portale SU0 172 16 110 111 172 16 110 112 172 16 110 113 172 16 110	114 172.16.110.115 172.16.1.177					
		Dook #1 072 19 101 111/CD.11 Statistics Balaic Docking Statistics Balaic Vice	Montag, 29. Dezember 2008 15:05:1/			
29.12.15:03:46 : debug:t_detector_state.dets_stamp changed (2008-10-27.15:34:55), o	letector:#82, state=2, current=0, voltage=0					
[2312 15:03:46 : debugt_detector_state.osts_statmp changed (2008-10-27 15:34:53), 2912 15:03:46 : debugt_conditions.cd_value_stamp changed (2008-10-27 15:36:34), 2912 15:03:46 : debugt_detectorstamp in changed 2008-09-18 11:11:33 2912 15:03:46 : debugt_wagons_spswords.wgw_stamp changed (2008-10-22 15:33:6)	lefector-#36, state=2, current=0, vortage=0 #103 10)	Eingänge Aus	8 9 10 11 12 13 14 15 16 Aus Aus Aus Aus Aus Aus Aus Aus Aus Aus Aus Aus Aus Aus Aus Aus Aus			
29.12 15:04:01 : debug:15:04 : reset backup database 29.12 15:04:03 : debug:15:04:Form1#connect_to_DB#Unable to connect to any of the	specified MySQL hosts., MySqLData	11 : IR-Melder 1 CP #1 Wert fehk	15 : Thermo-Melder 5 auf CP #1 Wert fehit			
29.12 15:04:21: debug:15:04: reset backup database 29.12 15:04:22: debug:15:04:Form1#connect_to_DB#Unable to connect to any of the 29.10 15:04:41: debug:15:04:Form1#connect_to_DB#Unable to connect to any of the	specified MySQL hosts., MySql Data	12: Thermo-Melder 2 auf CP #1 Wert fehit	16 : IR-Melder 6 CP #1 Weit fehit			
29.12 15:04:41: debug 15:04:Forn1#connect_to_DB#Unable to connect to any of the 29.12 15:05:01: debug 15:04:Forn1#connect_to_DB#Unable to connect to any of the	specified MySQL hosts., MySqLData	13 : Thermo-Melder 3 auf CP #1 Wert fehit	17 : Temperatur-Melder 7 auf CP #1 Weit fehit			
[29.12.15.05:01 debug: 15:05 Form1#connect_to_DB#Unable to connect to any of the	specified MySQL hosts., MySqLData	14 : Thermo-Melder 4 auf CP #1 Wert fehit	18 : Temperatur-Melder 8 auf CP #1 => [Aus], [20 mA], [0 mV]			
Carello-1 (laboratorio)	Carello-2 (laboratorio)	Carello-3 (fuori)	Carello-4 (officina)			
EP- Links Steuerung Düse EP-Oben Steuerung Düse	EP. Steuerung Düse	EP- Links / techts EP- Steuerung Düse Hach/Tief	EP. Diten			
Düse voller Düse voller Düse breit EP-Unten	VOLL Düse Düse Düse EP-Unten	VDLL Düse voller	Düse Düse voler			
Verriegelung ein aus 2008-10-22 15:33:00 Monitor Grunstellung #1	Verriegelung ein aus 2008-10-22 15:33:00 Monitor Grunstellung #1	Verriegelung ein aus 2008-10-22 15:33:00 Monitor Grunstellung #1	Verriegelung ein aus 2008-10-22 15:33:00 Monitor Grunstellung #1			
Versil auf zu Monitor Grundstellung #2	Ventil au Monitor Grundstellung #2	Ventil auf 2u	Ventil auf 24			
Kühlung ein aus Monitor anhalten	Kühlung ein aus Monitor anhalten	Kühlung ein aus Monitor anhalten	Kühlung ein aus Monitor anhalten			
8 (links) CP-8 Connection Point 8 (in Betrieb, 17 🗸 fahre zu Stop	10 [links] CP-10 Connection Point 10 (in Betrieb 🗸 fahre zu Stop	12 (links) CP-12 Connection Point 12 (in Betrieb 🗸 fahre zu Stop	29 (links) CP-29 Connection Point 29 (in Betrieb 🗸 🚺 fahre zu Stop			
C1/Stör. C2/Stör. 230V/ok 230V/Stö 24V/ok 24V/Stör	C1/Stör. C2/Stör. 230V/ok 230V/Stö 24V/ok 24V/Stör	C1/Stör. C2/Stör. 230V/ok 230V/Stö 24V/ok 24V/Stör	C1/Stör. C2/Stör. 230V/ok 230V/Stö 24V/ok 24V/Stör			

In the upper area you can see the states of the main database,

System - Grean Utennin Strom-Plan Kommunikations-Plan Detail-Plan Konsole R DB-Master DB-Backup Master Controller Backup-Controller Emergency Stop Service -

the backup database, the master controller and the backup controller. A green colour signalises the OKAY state, a red colour shows an ERROR condition.

In the upper half of the screen you can see the docking stations and the mobile units.



Near each docking station are shown the conditions of the detectors in appropriate colours.

The middle part of the screen is divided in two parts.

	Dock.#1 (72.16.101	.111/CP-1] Steue	rung Rela	is Docking	Steueru	ung Relais	Wagen	Detail							
201215048- debug: destor: state det; stare 0 draged (D08102715458), destor 482, state-2, curent-0, volage-0 2012150134: debug: destor: state det; stare 0 draged (D08102715458), destor 482, state-2, curent-0, volage-0 2012150134: debug: condition: cd: valae; stare 0 draged (D081027153834), #10 2012150134: debugi destor: state in charged 2008101111:33 2012151343: debugi destor: state in charged 200810111:33 2012151343: debugi destor: state in charged 200810121153534, #10	××× Eingänge Ausgäng	1 Aus Aus	2 Aus Aus	3 Aus Aus	4 Aus Aus	5 Aus Aus	6 Aus Aus	7 Aus Aus	8 Aus Aus	9 Aus Aus	10 Aus Aus	11 Aus Aus	12 Aus Aus	13 Aus Aus	14 Aus Aus	15 Aus Aus	16 Aus Aus
241 / 21 You 11 : debugi 15 41 : intext backup balacose 281 / 156403 : debugi 1544 : intervend: 1_D DBHUmable to connect to any of the specified MySQL hosts. , MySqL Data 281 / 15104.21 : debug 1504 : inext backup database	11: IR-Melder 1 CP #1 West fehit						15 : Thermo-Melder 5 auf CP #1 Wert fehit										
2412 for 422 - deougt 15 ummar accorned to Uperundle to connect to any of the specified MySQL hosts, MySqL bata 2812 f51644 - deougt 1504 Feet Buck of debase 2812 f50442 - deougt 1504 Feet Mittaconect to DB#Unable to connect to any of the specified MySQL hosts, MySqL bata	12: Themometical 2 data CP with weat cells 10: Themometical 3 data CP #1 Weat fields 13: Themometical 3 data CP #1 Weat fields 17: Temperatur-Medice 7 auf CP #1 Weat fields																
2212150501 : debug 1505 : reset backup database 2312150501 : debug 1505 From Hacomed, to, DB#Unable to connect to any of the specified MySQL hosts., MySqLData	14 : Then	10-Melder	4 auf CP ‡	11 Wert fel	hlt				18:	Temperatu	-Melder 8	l auf CP #1	=> [Aus	:], [20 mÅ]	, [Vm 0] ,		

In the left part some status information is shown. The right part is reserved to the detail view of the selected docking station or the selected mobile unit. Furthermore, in this area it is possible to control the selected docking station or the selected mobile unit.

The lower part of the screen is reserved to the mobile units. In 4 side by side arranged dialog boxes are shown in a glance the states of the 4 mobile units. By pressing the buttons or the sliders it is possible to control the single units.



Carello-1 (la	aboratoric	0										
	Ste	uerung	,	EP.	= [Ξ	EP- Oben					
Links	Links											
	± 1.5		1	1	Hoch/Tief							
Steuerung Düse												
Düse	Düse	- 1 - 1			D	üse	-	-				
VOLL	voller			e e a	Ь	reit	-6	Ĵ,	EP-Unten			
Verriegelun	<mark>ig ein</mark>	aus	2008-10-22	15:33:0		Moni	tor Gru	inste	llung #1			
Kupplung	ein	aus			ſ	Monit	or Grui	ndste	ellung #2			
Ventil	auf	zu										
Kühlung	ein	aus			L	М	onitor	anha	alten			
8 (links) CP	-8 Conne	ction P	oint 8 (in Betri	eb, 17 🛓	-	fah	re zu		Stop			
C1/Stör.	C2/Stö	г.	230V/ok	230V7	Stö	2	4V/ok		24V/Stör			



The program TLS_VIS_Technic

TLS_VIS_Technic is used to control in a glance the entire electric current and voltage of the system.



This program allows the maintenance personnel in the Control Room to check at a glance, whether the electric power of the system is okay or, if not, in which sector there are problems. Also the electric current supply is constructed in a redundant way; this guarantees in case of failure of one station the power supply through an alternative way.



A blue line marks a line under current. KM1 to KM4 shows the actual state of the relays.



The program TLS_VIS_Communication

TLS_VIS_Communcation is used like *TLS_VIS_Technic* for the entire control of the serial communication.



This program allows the maintenance personnel in the Control Room to check at a glance, whether the electric power of the system is okay or, if not, in which sector there are problems. Also the electric current supply is constructed in a redundant way; this guarantees in case of failure of one station the power supply through an alternative way.



The program TLS_VIS_Detail

TLS_VIS_Detail can be used by the maintenance personnel to view and evaluate the database entries.

📴 TuDEM : Datenverwaltung [v2.	0.0.21855)/de-DE/de-DE] + (C) Caccialanza	& C., SPA					
Gesamt-Übersicht Strom-Plan	Kommunikations-Plan	etail-Plan <i>DB-M</i>	aster DB-Backup					
Wagen Andockstationen Detektor	en LOG-Daten Komma	ndos Bedingungen						
1 : Carello-1 (laboratorio), (Wagon #1	(laboratorio))	~	aktualisieren	07.01.2	009 12:32:59	SPS-D	etail-Anzeige	
wg number	1		was id	2645	2644	2643	2635	2631
wg enabled	1		was wa number	1	1	1	1	1
wg name	Carello-1 (laboratorio)		wgs stat1 md cp id	0	0	0	0	0
wg description	Wagon #1 (laboratorio)		wgs stat1 md state	1	1	1	1	1
wg ipadress	172.16.254.12		wgs stat1 md stamp	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2
wg_moxa_name	MoxaWG1		wgs_stat2_mw_cp_id	0	0	0	0	0
wg_moxa_id	1		wgs_stat2_mw_state	1	1	1	1	1
wg_control_socket_used	1		wgs_stat2_mw_stamp	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.21
wg_control_socket_port	15200		wgs_stat3_sps_cp_id	0	0	0	0	0
wg_control_socket_clients	5		wgs_stat3_sps_encoder1	0	0	0	0	0
wg_msg_debug_socket_used	1		wgs_stat3_sps_encoder2	1	1	1	1	1
wg_msg_debug_socket_port	15210		wgs_stat3_sps_stamp	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2
wg_msg_debug_socket_clients	5		wgs_target_cp_id	0	0	0	0	0
wg_1_b88_id	1100		wgs_target_cp_to_overdrive	0	0	0	0	0
wg_1_b88_serport_number	1		wgs_target_informationset	0	0	0	0	0
wg_2_b88_id	0		wgs_target_stamp	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2
wg_2_b88_serport_number	1		wgs_moxaip	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0
wg_stamp	01.01.2001 00:00:00		wgs_online	0	0	0	0	0
wg_emergency_stop_supervision	0		wgs_online_stamp	29.09.2008 15:30:51	29.09.2008 14:58:17	29.09.2008 13:17:18	23.09.2008 11:13:14	01.01.2
***	*******		wgs_version					
Word %mw1100 (monitor)	24.09.2008 15:09:29	0x8 (dez. 8)	wgs_serinfo	77777777	????????	????????	???????	??????
Word %mw1101 (nozzle / valve)		no data found	wgs_system_state	0	0	0	0	0
Word %mw1102 (block / cooling)		no data found 📃	wgs_system_state_stamp	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	18.09.2
Word %mw1103 (gancio)		no data found	wgs_state	0	0	0	0	0
Word %mw1104 (allarmi monitore)		no data found	wgs_state_stamp	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2
Word %mw1106 (valore encoder 1)		no data found	wgs_stamp	29.09.2008 15:30:51	29.09.2008 14:58:17	29.09.2008 13:17:18	23.09.2008 11:13:14	18.09.2
Word %mw1107 (valore encoder 1)		no data found	wgs_reachable_cp_id_min	0	0	0	0	0
Word %mw1108 (valore encoder 2)		no data found	wgs_reachable_cp_id_max	0	0	0	0	0
Word %mw1109 (valore encoder 2)		no data found	wgs_available_cp_id_min	0	0	0	0	0
Word %mw1110 (allarmi monitore)		no data found	wgs_available_cp_id_max	0	0	0	0	0
Word %mw1111 (inverter 1)		no data found	wgs_minmax_stamp	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2
Word %mw1112 (inverter 2)		no data found 💌	<					>

Information for the database is generated by the controllers (Controller 1 and Controller 2) when the system is in operation. The program *TLS_VIS_Detail* edits these data for the maintenance personnel is an appropriate way.

TLS_VIS_Detail: the trailers

Wagen	Andockstationen	Detektoren	LOG-Daten	Kommandos B	edin	gungen				
3 : Carello	o-3 (fuori), (Wagon #	#3 (fuori))			~	aktualisieren	08.01.2009	17:03:29	🔲 SPS-Detail-An:	zeige
					^					
wg_num	ber		3			wgs_id	2641	2637	2634	2633
wg_enat	oled		1			wgs_wg_number	3	3	3	3
wg_nam	e		Carello-3 (fuori)			wgs_stat1_md_cp_id	8	0	0	0
wg_desc	ription		Wagon #3 (fuor	i)		wgs_stat1_md_state	2	1	1	1
wg_ipad	ress		172.16.254.32			wgs_stat1_md_stamp	23.09.2008 11:22:54	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:
wg_mox	a_name		MoxaWG3			wgs_stat2_mw_cp_id	0	0	0	0
wg_mox	a_id		3			wgs_stat2_mw_state	1	1	1	1
wg_cont	rol_socket_used		1			wgs_stat2_mw_stamp	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:
wg_cont	rol_socket_port		15200			wgs_stat3_sps_cp_id	0	0	0	0
wg_cont	rol_socket_clients		5			wgs_stat3_sps_encoder1	0	0	0	0
wg_msg	_debug_socket_us	ed	1			wgs_stat3_sps_encoder2	1	1	1	1
wg_msg	_debug_socket_po	rt	15210			wgs_stat3_sps_stamp	23.09.2008 11:22:54	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:
wg_msg	_debug_socket_clie	ents	5			wgs_target_cp_id	0	0	0	0
wg_1_b8	38_id		1300			wgs_target_cp_to_overdrive	0	0	0	0
wg_1_b8	38_serport_number		1			wgs_target_informationset	0	0	0	0
wg_2_b8	38_id		0			wgs_target_stamp	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:00:00	01.01.2001 00:
wg_2_b8	38_serport_number		1			wgs_moxaip	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0
wg_stam	1p		01.01.2001 00:	00:00		wgs_online	0	0	0	0
wg_eme	rgency_stop_super	vision	0			wgs_online_stamp	01.01.2001 00:00:00	23.09.2008 11:13:14	01.01.2001 00:00:00	01.01.2001 00:
***			******		_	wgs_version				
Word %r	nw1300 (monitor)			no data f	01	wgs_serinfo	????????	7777777	222222	????????

In the left area the configuration data of the selected trailer are shown; in the right area there are the data and information continuously created by the intelligent controllers.



TLS_VIS_Detail: the docking stations

and the second se														
Wagen	Andockstationen	Detektoren L	.0G-Daten	Kommandos	Bedingungen									
#	Name	Beschreibung				IP-/ 🔼	a	ktualisieren	08.01.200	9 17:06:18				
1	CP-1	Connection Poi	int 1			172								
2	CP-2	Connection Poi	int 2			172	Online	seit	Ver	SerialInfo	System	se		
3	CP-3	Connection Poi	int 3			172	offline	01 01 2001 00:00:00	0	22222222	0	01		
4	CP-4	Connection Poi	int 4			172	offline	01 01 2001 00:00:00	0	22222222	n n	01		
5	CP-5	Connection Poi	int 5			172	offline	23.09.2008.12:15:30	0	22222222	0	01		
6	CP-6	Connection Poi	int 6			172	online	23.09.2008.12:15:09	0	22222222	0	01		
7	CP-7	Connection Poi	int 7			172	offline	23.09.2008.12:15:09	0	2222222	0	01		
8	CP-8	Connection Poi	int 8 (in Betr	ieb, 172.16.102	2.113)	172	online	23.09.2008 11:58:34	0	2222222	0	01		
9	CP-9	Connection Poi	int 9 (in Betr	rieb)		172	offline	23.09.2008 11:58:33	0	2222222	0	01		
10	CP-10	Connection Poi	int 10 (in Be	trieb, mit 88, 17	2.16.102.115)	172	online	23.09.2008 11:49:46	0	2222222	0	01		
11	CP-11	Connection Poi	int 11 (in Be	trieb)		172	offline	23.09.2008 11:49:46	0	2222222	0	01		
12	CP-12	Connection Poi	int 12 (in Be	trieb)		172	online	23.09.2008 11:44:03	0	2222222	0	01		
13	CP-13	Connection Poi	int 13 (in Be	trieb, mit 88)		k 172	offline	23.09.2008 11:44:03	0	2222222	0	01		
14	CP-14	Connection Poi	int			172	online	23.09.2008 11:21:53	0	22222222	0	01		
15	CP-15	Connection Poi	int			172	offline	23.09.2008 11:21:53	0	2222222	0	01		
10	OD 10	0 B-:				170	online	23.09.2008 11:20:06	0	2222222	0	01		
<u> </u>							offline	23.09.2008 11:20:06	0	2222222	0	01		
						~	offline	23.09.2008 11:18:58	0	77777777	0	01		
an id				0			online	23.09.2008 11:18:11	0	77777777	0	01		
op_ena	bled			1			offline	23.09.2008 11:18:10	0	2222222	0	01		
op_end				- CP-9			offline	01.01.2001 00:00:00	0	222222	0	23		
cp_nar	ne orietion			Connection Pe	int 0 /in Datrich	172 16 10	offline	01.01.2001 00:00:00	0	2222222	2	23		
cp_ues	drooo			172 16 1 20	nni o (in beineb,	172.10.10	online	23.09.2008 11:13:36	0	2222222	0	01		
cp_ipa				172.10.1.30			offline	23.09.2008 11:13:14	0	2222222	0	01		
cp_mo	va_name va id	0				online	18.09.2008 14:49:42	2.0	pnnnnnn	0	01			
cp_mo	ra_iu trol socket used			1			online	18.09.2008 14:49:41	0	222222	0	01		
- cp_cor	41			15000			online 18 09 2008 14:23:59 2.0 pppppppp 0							

In the left area all docking stations are listed. After selection of one station the configuration data are shown in the lower area and on the right side you can see all log data for this docking station.

TLS_VIS_Detail: the detectors

Wagen	Andockstationen Detektoren LOG-Daten	Kommandos Bedingungen					
alle De	tektor-Typen anzeigen		~	aktu	alisieren 08.01	.2009 17:08:38	
#	Beschreibung	Тур	Board88 🔥	Status	Strom	Spannung	Zeit
86	IR-Melder 6 CP #8	IR-Melder (1,6)	8 / Board 88, I	0	0	0	29.09.2
87	Temperatur-Melder 7 auf CP #8	Termperatur-Melder (7,8)	8 / Board 88, 🛌	1	20	44	24.09.2
88	Temperatur-Melder 8 auf CP #8	Termperatur-Melder (7,8)	8 / Board 88, I	0	0	0	24.09.2
91	IR-Melder 1 CP #9	IR-Melder (1,6)	9 / Board 88, I				
92	Thermo-Melder 2 auf CP #9	Thermo-Melder (2,3,4,5)	9 / Board 88, I				
93	Thermo-Melder 3 auf CP #9	Thermo-Melder (2,3,4,5)	9 / Board 88, I				
94	Thermo-Melder 4 auf CP #9	Thermo-Melder (2,3,4,5)	9 / Board 88, I				
95	Thermo-Melder 5 auf CP #9	Thermo-Melder (2,3,4,5)	9 / Board 88, I				
96	IR-Melder 6 CP #9	IR-Melder (1,6)	9 / Board 88, I				
97	Temperatur-Melder 7 auf CP #9	Termperatur-Melder (7,8)	9 / Board 88, I				
98	Temperatur-Melder 8 auf CP #9	Termperatur-Melder (7,8)	9 / Board 88, I				
101	IR-Melder 1 CP #10	IR-Melder (1,6)	10 / Board 88,				
102	Thermo-Melder 2 auf CP #10	Thermo-Melder (2,3,4,5)	10 / Board 88, 🤜				
<			>				
	N		~				
det id	h	101					
det er	abled	1					
det de	scription	IR-Melder 1 CP #10					
det dt	/ id	1					
det lev	vel warning	50					
det lev	/el_alarm	75					
det_sta	amp	25.02.2008 14:51:39					

In the left area all available detectors are listed. After selection of one detector the configuration data are shown in the lower area and on the right side you can see all log data for this detector.



TLS_VIS_Detail: the LOG data

Wagen Andockstatio	nen Detektoren L	OG-Daten Kommandos Bed	lingungen			
LOG-Daten der letzter	n 3 Monate anzeigen	alle Typen anzeig	jen	aktualisi	ieren 200 📚	08.01.2009 17:09:51
Zeit	Station	Programm	Тур	Typ2	Тур3	Beschreibung
08.01.2009 17:03:19	SHENTW1	TLS_Vis_Detail	Status	[0]	[0]	Datenbank geöffnet, Server
07.01.2009 12:32:59	SHENTW1	TLS_Vis_Detail	Status	[0]	[0]	Datenbank geöffnet, Server
07.01.2009 12:32:25	SHENTW1	TLS_Vis_Technic	Status	[0]	[0]	Datenbank geöffnet , Server
07.01.2009 12:31:55	SHENTW1	TLS_Vis_Communicati	Status	[0]	[0]	Datenbank geöffnet , Server
07.01.2009 12:31:42	SHENTW1	TLS_Vis_Overview	Fehler	[0]	[0]	database-open-error Unable
07.01.2009 12:31:22	SHENTW1	TLS_Vis_Overview	Fehler	[0]	[0]	database-open-error Unable
07.01.2009 12:30:52	SHENTW1	TLS_Vis_Overview	Status	[0]	[0]	Datenbank geöffnet , Server
29.12.2008 15:22:42	SHENTW1	TLS_Vis_Overview	Fehler	[0]	[0]	database-open-error Unable
29.12.2008 15:22:22	SHENTW1	TLS_Vis_Overview	Fehler	[0]	[0]	database-open-error Unable
29.12.2008 15:22:02	SHENTW1	TLS_Vis_Overview	Fehler	[0]	[0]	database-open-error Unable
29.12.2008 15:21:42	SHENTW1	TLS_Vis_Overview	Fehler	[0]	[0]	database-open-error Unable
29.12.2008 15:21:22	SHENTW1	TLS_Vis_Overview	Fehler	[0]	[0]	database-open-error Unable
29 12 2008 15:21:02	SHENTW1	TLS Vis Overview	Fehler	m	, m	database-onen-error Unable

The LOG data are produced by the intelligent controllers during the normal operation of the system. This information can be used to check the state and the behaviour of the system.

TLS_VIS_Detail: the commands

Wagen Andockstationen Detektoren LOG	A-Daten Kommandos Bedingungen				
Kommandos der letzten 6 Monate anzeigen	zeige zugehörende LOG-Angaben aktualisieren 08.01.2009 17:14:28				
Kommando	Kommando erzeugtvon	Komr			
:CMD:Wagon;0;StopAll;	25.09.2008 11:31:25 / SHENTW1 / Emergency Stop All	okay: I			
:CMD:Wagon;1;Stop;	MD:Wagon;1;Stop; 25.09.2008 11:31:18 / SHENTW1 / Wagon #1, emergency stop				
:CMD:Wagon;1;Monitor;Stop;	25.09.2008 11:31:14 / SHENTW1 / Wagon #1, stop monitor	okay: I			
:CMD:Wagon;1;Default;2;	25.(%2008 11:31:13 / SHENTW1 / Waggon #1, default-position #2	okay: I			
:CMD:Wagon;1;Default;1;	25.09.2008 11:31:12 / SHENTW1 / Waggon #1, default-position #1	okay: I			
:CMD:Wagon;1;LeftRight;LeftEnd;	25.09.2008 11:31:10 / SHENTW1 / Wagon #1, move left/right to endposition left	okay: I			
:CMD:Wagon;1;Nozzle;Max;	25.09.2008 11:31:09 / SHENTW1 / Wagon #1, nozzle in full position	okay: I			
:CMD:Wagon;1:Nozzle;NearMax; 25.09.2008 11:31:08 / SHENTW1 / Wagon #1, nozzle near full-position					
:CMD:Wagon;1;Nozzle;Large;	25.09.2008 11:31:05 / SHENTW1 / Wagon #1, nozzle near large-position	okay: I			
:CMD:Wagon;1;LeftRight;RightEnd;	25.09.2008 11:31:03 / SHENTW1 / Wagon #1, move left/right to endposition right	okay: I			

Commands are used only internally; they were created by the system and were executed by the intelligent controller. The information on the screen shows the command and its execution state.

TLS_VIS_Detail: the conditions

Wagen Andockstation	en Detektoren LOG-E	aten Kommandos Bedingunge	en			
🗌 zeige zugehörende l						
Name	Beschreibung		Priorität	Wert	Datum	Ausdruck
CP8_ALARM	condition for alarm in do	cking-statidn, #8	10	1	27.10.2008 15:36:34	[DS/81/=/2].and.[DS/82/=/2].or.[DS/87/=/2].or.[DS/88/=/
CP8_ALARM_L	condition for alarm in let	t area of docking-station #8	10	1	27.10.2008 15:36:34	[DS/81/=/2].and.[DS/82/=/2]
CP8_ALARM_LL	condition for alarm in let	t-left area of docking-station #8	10	1	27.10.2008 15:36:34	[DS/81/=/2].and.[DS/83/=/2]
CP8_ALARM_R	condition for alarm in rig	ht area of docking-station #8	10	1	27.10.2008 15:36:34	[DS/85/=/2].and.[DS/86/=/2]
CP8_ALARM_RR	condition for alarm in rig	ht-right area of docking-station #8	10	1	27.10.2008 15:36:34	[DS/84/=/2].and.[DS/86/=/2]
CP8_PREALARM_R	condition for prealarm ir	left area of docking-station #8	9	1	27.10.2008 15:36:34	[DS/84/=/2].or.[DS/85/=/2].or.[DS/86/=/2]

Conditions are created by the system producer and are used only internally.