PSA
PROFESSIONAL SOFTWARE ASSOCIATES, INC.

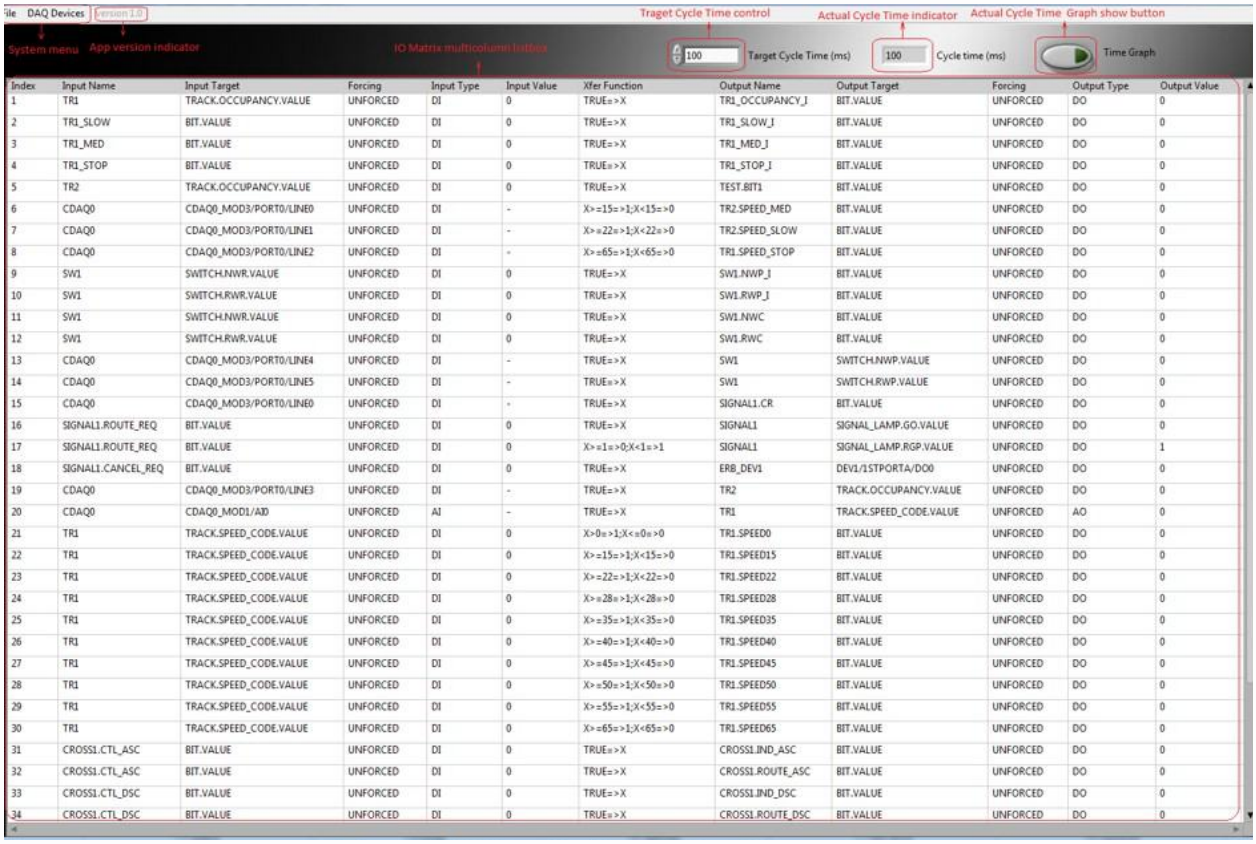
WEB UPGRADES FOR SIGNALING SIMULATION SYSTEM

Datasheet

PROVIDING SOLUTIONS FOR TOMORROW – SINCE 1993

Project objective

Provide a full-time assistance with web development for the server-based signaling simulation tool used for validation and training purposes. The projected scope was to address issues and enrich the functionality and reliability of the integrated signaling simulation system consisting of field data acquisition devices, a server-based application, and an intermediate (HAL) application to strengthen system communication.



Index	Input Name	Input Target	Forcing	Input Type	Input Value	Xfer Function	Output Name	Output Target	Forcing	Output Type	Output Value
1	TR1	TRACK.OCCUPANCY.VALUE	UNFORCED	DI	0	TRUE=>X	TR1_OCCUPANCY_I	BIT.VALUE	UNFORCED	DO	0
2	TR1_SLOW	BIT.VALUE	UNFORCED	DI	0	TRUE=>X	TR1_SLOW_I	BIT.VALUE	UNFORCED	DO	0
3	TR1_MED	BIT.VALUE	UNFORCED	DI	0	TRUE=>X	TR1_MED_I	BIT.VALUE	UNFORCED	DO	0
4	TR1_STOP	BIT.VALUE	UNFORCED	DI	0	TRUE=>X	TR1_STOP_I	BIT.VALUE	UNFORCED	DO	0
5	TR2	TRACK.OCCUPANCY.VALUE	UNFORCED	DI	0	TRUE=>X	TEST.BIT1	BIT.VALUE	UNFORCED	DO	0
6	CDAQ0	CDAQ0_MOD3/PORT0/LINE0	UNFORCED	DI	-	X>=15=>1;X<15=>0	TR2.SPEED_MED	BIT.VALUE	UNFORCED	DO	0
7	CDAQ0	CDAQ0_MOD3/PORT0/LINE1	UNFORCED	DI	-	X>=22=>1;X<22=>0	TR2.SPEED_SLOW	BIT.VALUE	UNFORCED	DO	0
8	CDAQ0	CDAQ0_MOD3/PORT0/LINE2	UNFORCED	DI	-	X>=65=>1;X<65=>0	TR1.SPEED_STOP	BIT.VALUE	UNFORCED	DO	0
9	SW1	SWITCH.NWR.VALUE	UNFORCED	DI	0	TRUE=>X	SW1.NWP_I	BIT.VALUE	UNFORCED	DO	0
10	SW1	SWITCH.RWR.VALUE	UNFORCED	DI	0	TRUE=>X	SW1.RWP_I	BIT.VALUE	UNFORCED	DO	0
11	SW1	SWITCH.NWR.VALUE	UNFORCED	DI	0	TRUE=>X	SW1.NWC	BIT.VALUE	UNFORCED	DO	0
12	SW1	SWITCH.RWR.VALUE	UNFORCED	DI	0	TRUE=>X	SW1.RWC	BIT.VALUE	UNFORCED	DO	0
13	CDAQ0	CDAQ0_MOD3/PORT0/LINE4	UNFORCED	DI	-	TRUE=>X	SW1	SWITCH.NWP.VALUE	UNFORCED	DO	0
14	CDAQ0	CDAQ0_MOD3/PORT0/LINE5	UNFORCED	DI	-	TRUE=>X	SW1	SWITCH.RWP.VALUE	UNFORCED	DO	0
15	CDAQ0	CDAQ0_MOD3/PORT0/LINE0	UNFORCED	DI	-	TRUE=>X	SIGNAL1.CR	BIT.VALUE	UNFORCED	DO	0
16	SIGNAL1.ROUTE_REQ	BIT.VALUE	UNFORCED	DI	0	TRUE=>X	SIGNAL1	SIGNAL_LAMP.GO.VALUE	UNFORCED	DO	0
17	SIGNAL1.ROUTE_REQ	BIT.VALUE	UNFORCED	DI	0	X>=1=>0;X<1=>1	SIGNAL1	SIGNAL_LAMP.RGP.VALUE	UNFORCED	DO	1
18	SIGNAL1.CANCEL_REQ	BIT.VALUE	UNFORCED	DI	0	TRUE=>X	ERB_DEV1	DEV1/1STPORTA/DC0	UNFORCED	DO	0
19	CDAQ0	CDAQ0_MOD3/PORT0/LINE3	UNFORCED	DI	-	TRUE=>X	TR2	TRACK.OCCUPANCY.VALUE	UNFORCED	DO	0
20	CDAQ0	CDAQ0_MOD1/AI0	UNFORCED	AI	-	TRUE=>X	TR1	TRACK.SPEED_CODE.VALUE	UNFORCED	AO	0
21	TR1	TRACK.SPEED_CODE.VALUE	UNFORCED	DI	0	X>0=>1;X<=0=>0	TR1.SPEED0	BIT.VALUE	UNFORCED	DO	0
22	TR1	TRACK.SPEED_CODE.VALUE	UNFORCED	DI	0	X>=15=>1;X<15=>0	TR1.SPEED15	BIT.VALUE	UNFORCED	DO	0
23	TR1	TRACK.SPEED_CODE.VALUE	UNFORCED	DI	0	X>=22=>1;X<22=>0	TR1.SPEED22	BIT.VALUE	UNFORCED	DO	0
24	TR1	TRACK.SPEED_CODE.VALUE	UNFORCED	DI	0	X>=28=>1;X<28=>0	TR1.SPEED28	BIT.VALUE	UNFORCED	DO	0
25	TR1	TRACK.SPEED_CODE.VALUE	UNFORCED	DI	0	X>=35=>1;X<35=>0	TR1.SPEED35	BIT.VALUE	UNFORCED	DO	0
26	TR1	TRACK.SPEED_CODE.VALUE	UNFORCED	DI	0	X>=40=>1;X<40=>0	TR1.SPEED40	BIT.VALUE	UNFORCED	DO	0
27	TR1	TRACK.SPEED_CODE.VALUE	UNFORCED	DI	0	X>=45=>1;X<45=>0	TR1.SPEED45	BIT.VALUE	UNFORCED	DO	0
28	TR1	TRACK.SPEED_CODE.VALUE	UNFORCED	DI	0	X>=50=>1;X<50=>0	TR1.SPEED50	BIT.VALUE	UNFORCED	DO	0
29	TR1	TRACK.SPEED_CODE.VALUE	UNFORCED	DI	0	X>=55=>1;X<55=>0	TR1.SPEED55	BIT.VALUE	UNFORCED	DO	0
30	TR1	TRACK.SPEED_CODE.VALUE	UNFORCED	DI	0	X>=65=>1;X<65=>0	TR1.SPEED65	BIT.VALUE	UNFORCED	DO	0
31	CROSS1.CTL_ASC	BIT.VALUE	UNFORCED	DI	0	TRUE=>X	CROSS1.IND_ASC	BIT.VALUE	UNFORCED	DO	0
32	CROSS1.CTL_ASC	BIT.VALUE	UNFORCED	DI	0	TRUE=>X	CROSS1.ROUTE_ASC	BIT.VALUE	UNFORCED	DO	0
33	CROSS1.CTL_DSC	BIT.VALUE	UNFORCED	DI	0	TRUE=>X	CROSS1.IND_DSC	BIT.VALUE	UNFORCED	DO	0
34	CROSS1.CTL_DSC	BIT.VALUE	UNFORCED	DI	0	TRUE=>X	CROSS1.ROUTE_DSC	BIT.VALUE	UNFORCED	DO	0

Result

The client gained a modernized server-based application with improved interaction between its elements. The tool is capable of seamless data collection, building, and testing all kinds of signaling scenarios to streamline signaling design and validation efforts. The enhancements provided have retained the ability for trouble-free usage of the simulator by non-technical stakeholders as well.

Scope of work

- Development of the functionality of loading the templates and creation of local objects based on the SVG-files templates
- Preparation of the switch element and other elements of the HMI including style and animation
- Investigation and resolution of JS prototype and clone issues
- Creation of the HMI connection elements, such as indication, track circuit, and switch for the intermediate (HAL) application
- Updating the .dll converter and testing the interaction between the HAL and .dll converter
- Documentation creation and updating, including User Guide

Activities

- Software Development
- UI design
- System Testing
- User Guide Update

About the project

Technologies

- HTML5
- CSS
- JavaScript
- Inscape
- SCanvas Editor

Project size

- 1 Software Engineer

Duration

Platform

- Web