

Student's Zone 2020 of the NICA Project



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Simulator for Fire Protection System (FPS)

Developing of the software that simulates the algorithms of Fire Protection System (FPS) based on LabVIEW.

The set of input signals forms the general state of the system, according to which the fire extinguishing algorithm starts and the alarm signals are turned on.

GUI should have these features:

1) RUN Panel:

- Input modules states (Sensors, Push Button, Door and etc.) –Normal/Malfunction/Fire/Block
- System State –Normal/Pre-Alarm/Alarm/Extinguishing/Malfunction
- Output Signals –Normal/Pre-Alarm/Alarm/Extinguishing/Malfunction

2) Service Panel:

- Manual setup of output relay signals –Normal/Pre-Alarm/Alarm/Extinguishing/Malfunction

3) Engineering Panel:

- Timings
- Sensors algorithm (1 or 2 paired sensors for Alarm System state)
- Output Relay settings (delaying, inversion etc.)

To do:

- Tag the fire alarm inputs (sensors, modules) and their states, system internal devices, system general states and output signals,
- Prepare general states formation from input conditions,
- Prepare fire extinguishing algorithm and output signals formation,
- Prepare the code,
- Prepare the documentation,
- Prepare the presentation,
- Prepare the article.

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