

## Stage weken voor de opleiding Master Informatica

Titel: Cimplicity: what potential is left?

### Gegevens bedrijf:

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Kort (min 120 uur) of lang (min 200 uur): **kort / lang**

Korte beschrijving van de opdracht:

### CONTENT OF ASSIGNMENT:

To control our plant, operators use the SCADA package 'Cimplicity' to interact with our PLC's and other controllers in the installation. This cimplicity environment has been developed in the last decades to try to present an operator with a state-of-the-art HMI (human-machine-interface). We think it is time to take a step back at this moment to oversee the continuous improvement we did and to check -at the end- whether we made the right choices in the past. Therefore, the following question should be answered:

- We use a concept 'basisschakelingen' to show operators missing conditions to start e.g. an actuator or a motor, is this concept we have OK, robust and scalable for upcoming expansions of our lines?
  - Maybe we should introduce some new possibilities, e.g. Web apps might help us in the future.
- We have a logging system of faults in our Cimplicity environment, but this is not 100% error free due to communication time with the PLC. How can we adapt our logging system to make it better?
- We have some Excel-based tools to configure the communication between cimplicity and PLC's. These tools are difficult to read and to debug. We would like to start over from scratch using a newer technology, with better maintainable software, adding some extra functionalities in the tools.
- It would be of great help to develop a little tool to check the interfaces between cimplicity and our PLC's. Due to the amount of data that is interfaced between them, we can be sure there will be errors, but we need some tools to help us to do this investigation.

### OBJECTIVES:

- Review of the concept 'basisschakelingen' in cimplicity environment
- Debugging the logging system we have installed
- Convert our existing cimplicity tools to up-to-date software
- Develop new tool for interface checks between PLC and cimplicity

### EXPECTED COMPETENCES (KEY WORDS):

- Software development
- PLC and SCADA systems
- python

## Technologieën die aan bod zullen komen:

- Cimplicity SCADA system
- PLC's
- Web app development
- Software development

