Valentin LOBRY

Automation engineer

12 years' experience

Freelance consultant since 2015

Technical competences

- **Modeling documents : requirement, functional and organic analysis, user manual, FMEA, GRAFCET.**
- **Programming languages : GRAFCET, LADDER, FBD, ST, IL, SQL.**
- **Softwares : TIA portal, Step 7, Unity pro, PL7 pro, SoMachine, Codesys, Wonderware System Platform & Intouch, PC Vue, WinCC Comfort & pro & SCADA.**

Education and training

2021	Electrical french certifications : B2V, BR, BE test, BC, H0V
2020	Siemens S7-1500 safety PLC programming training
2019	Training and certification "basic safety VCA" for Belgium
2013	Siemens S7-300 safety PLC programming training
2009	Equivalent to a MSc in Automation and electrical Engineering – Université de Valenciennes, France
2007	3-year university degree in Automation and electrical engineering – Université de Valenciennes, France
2005	Two-year course in Electrical Engineering equivalent to a HND – Université de Valenciennes, France
2003	Equivalent to A Levels with a scientific focus – Lycée St Jean, Douai, France

Languages

- **French :** mother tongue
- **English :** working knowledge

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Work experience

01/2015 to today	LOBRY AUTOMATISME SARL (59 - France) and freelance Automation and industrial informatic freelance engineer

In technical support : Study, development and commissioning of several automation and insdustrial informatic projects for a customer in Belgium

Duration : 10 months

- PLCs study and programming
- SCADA study and programming
- Factory Acceptance Tests (FAT)
- Site Acceptance Tests (SAT)

Technical environment :

Software : WinCC pro, Wonderware System Platform & Intouch, TIA portal V16
Operating system : Windows 10, Windows server + VMWare virtualization
PLCs : Siemens S7-300, S7-1500
Networks : Ethernet, Profinet, serial RS232
Harware : Zebra industrial printer

In technical support : study and development of a refueling station for hydrogen vehicules for McPhy company in Grenoble (38 – France)

Duration : 21 months

- Concatenation of customers and norms on the automation part
- Definition of the hardware and software architecture
- Organic analysis specification writting
- Programming of remote access equipment with basic views, variables recording and faults SMS sending
- Programming Siemens safety PLCs then Factory Acceptance Tests (FAT) and Site Acceptance Tests (SAT)

Technical environment :

Software : TIA portal V15.1 with Safety Advanced, Step 7
Operating system : Windows 10 + VMWare virtualization
PLCs : Siemens S7-300, S7-1500
Networks : OPC UA, Ethernet, Profinet, Modbus RS485, serial RS485
Hardware : Rheonik flowmeter, eWon

In technical support : Study, development and commissioning of several automation projects for a customer in Belgium

Duration : 6 months

- PLC study and programming
- SCADA study and programming
- Factory Acceptance Tests (FAT)
- Site Acceptance Tests (SAT)

Technical environment :

Software : WinCC SCADA, TIA portal V15, Step 7
Operating system : Windows 10, Windows 7 + VMWare virtualization
PLCs : Siemens S7-300, S7-400H, S7-1500
Networks : Ethernet, Modbus RS485 and Modbus TCP

In technical support : Development and commissioning of several automation projects for an engineering company in Grenoble (38 – France)

Duration : 1 month

- Programming a Siemens safety PLC to achieve the required SIL level in the customer specifications.
- Troubleshooting of a test bench in Bulgaria

Technical environment :

Software : Step 7 v5.5 with S7 Distributed Safety V5.4
PLC : Siemens S7-300F

Study and development of a hot room for Seelium company in Seyssins (38 – France)

Duration : 2 weeks

- Programming of the PLC
- Programming of the HMI
- Starting up
- Send fault messages on the PCVue SCADA

Technical environment :

Software : SoMachine, PCVue
Operating system : Windows 10, Windows 7 + VMWare virtualization
Hardware : Controller and screen Schneider Electric HMISCU8B5

Automation development of the auxiliary management of a gaz cogeneration group in North of France

Duration : 6 weeks

- Programming of the PLC
- Programming of the HMI
- Starting up
- Test of the Modbus RS485 and Modbus TCP communications

Technical environment :

Software : Unity pro, Vijeo Designer
Operating system : Windows 10, Windows 7 + VMWare virtualization
PLC : Schneider Electric Modicon M340
Network : Ethernet, Modbus RS485 and Modbus TCP
Hardware : HMI Schneider Electric HMIGTU, energy counters

In technical support : study and development of a refueling station for hydrogen vehicules for McPhy company in Grenoble (38 – France)

Duration : 9 months

- Functional specification writting
- Sequences writting and validation
- Comissionning of the supplier developped sequences
- Starting up

Technical environment :

Software : Step 7, WinCC Comfort on Tia Portal
Operating system : Windows 10, Windows 7
PLC : Siemens S7-300F
Network : Ethernet, Profinet, Profibus
Hardware : HMI Siemens TP Comfort

Automation development of a syringue sterilisation machine for a local industrial company for Seelium company in Seyssins (38 – France)

Duration : 1 month

- Definition of the material architecture
- Functional specification writting
- Programming of the following equipments : PLC, HMI, translation axis, electrical actuator
- Starting up

Technical environment :

Software : TIA Portal (Step 7 and WinCC Basic), SoMove
Operating system : Windows 7
PLC : Siemens S7-1500
Network : Ethernet, Profinet.
Hardware : Lexium 32 speed controller, SMC electrical actuator, HMI Siemens TP Basic

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In technical support : Mecatronic product sub-assembly lines. On mission for Schneider Electric, industrialization service, Electropole site at Eybens (38 – France)

Duration : 3 years

- Automation needs specifications
  - Definition of the hardware and software architecture
  - Production management needs
  - Tracability needs
- MES (Manufacturing Execution System) needs specifications
  - MES standard developped by Atos company
  - Standard deployment on three assembly lines with cycle time from 2 to 30 seconds
- Suppliers follow-up during all the realisation
- Qualification of the equipments
- Support on site : users training and ramp up

Technical environment :

Software : OPC Factory Server, Unity pro, Vijeo Designer, So Machine, MySQL, SQL Server
Operating system : Windows 7
PLC : Schneider Electric Modicon (M580, TSX Premium, M221)
Network : Ethernet, Modbus TCP, Open TCP, Ethernet/IP

08/2013 to 12/2014 **ICONE, Noyarey (38 - France)**
Automation and industrial informatic engineer

Automation development of the revamping of sterilization workshop of STMicroelectronics factory at Crolles (38 – France)

Duration : 3 months

- Automation programming :
  - Hardware configuration validation : ATEX + Safey cards
  - Safety program :
    - Preparation of the Human Machine Interface (HMI) exchanges
    - Programming of the sequences in accordance with the functional analysis
  - Standard program :
    - Provide the channel diagnostic
    - HMI exchanges
- Factory Acceptance Tests (FAT)
  - Tests of the complete hardware configuration
  - Modbus TCP communication with the Intouch HMI
  - Inputs simulation

Technical environment :

Software : Step 7 v5.5 with S7 Distributed Safety V5.4
Operating system : Windows 7
PLC : Siemens S7-300F
Network : Ethernet, Profibus.

Start of a Modbus communication for ClydeUnion Pumps (SPX) company in Jamnagar (India)

Duration : 2 weeks

- Test of the communication between PLC and HMI
  - Validation of the hardware : optic fiber converters
  - Validation of the variables list
  - Modbus TCP Trame analyse using Ethernet Hub
  - Tests of each variable with production teams
- Electrical tests
  - Tests of each exchange (inputs and outputs) between PLC and HMI

Technical environment :

Software : Step 7 v5.5, Wireshark
Operating system : Windows 7
PLC : Siemens S7-400H
Network : Ethernet, Modbus TCP

Programming of a robotic arm with two axis for AVSIS company in Fontaine (38 – France)

Duration : 1 month

- Functional specification writing
- Platform test to valid the technical feasibility with Transtechnik speed controller
- Automation programming
    - Sequences programming
    - Development of the CANOpen communication between the PLC and the two speed controllers
- Factory Acceptance Tests :
    - Electrical tests
    - Configuration of the two axis in the speed controllers
    - Mechanical adjustments : sensors and others
    - CANOpen communication
    - Tests of the sequences
- Site Acceptance Tests (SAT) :
    - Validation of each sequence with the final customer
    - Validation of every fault
    - Validation of the exchanges between the PLC and the customer monitoring device (computer)

Technical environment :

Sotfware : Codesys v2.3.9, Wago I/O Check, Drive Manager
Operating system : Windows 7
PLC : Wago 750-851
Network : Ethernet, CANOpen.
Hardware : Transtechnik CDE32 speed controller

Program a test bench for ABB contactors for ABB company in Vénissieux (69 – France)

Duration : 3 months

- PLC programming
    - Receiving the fabrication order variables from the monitoring software through OPC protocol
    - Program the sequences in accordance with the functional analysis
    - Provide the tests results variables to the monitoring system
- compact RIO programming
    - Develop a sound analyse application
    - Modbus TCP exchanges with the PLC
- Factory Acceptance Tests and Site Acceptance Tests with the customer :
    - Tests the electrical
    - Mechanical adjustments
    - Validation of the séquences : execution of each test with differents contactors
- Starting up in Plovdiv (Bulgaria)

Technical environment :

Software : ABB Control Builder Plus, Codesys
Operating system : Windows 7
PLC : ABB AC500Eco
Network : Ethernet, Modbus TCP, OPC.
Hardware : National Instruments Compact RIO

Tracability update of the cathode line of Carbone Savoie factory in Notre Dame de Briançon (73 – France)

Duration : 4 months

- Existing system studying
  - List the exchanges variables with the 4 Siemens line PLC
  - Study the exchanges with the AS400 tracability system : database and files
  - Study the existing HMI synoptic on Factorylink system
- HMI programming
  - Propose a model for validation
  - Mapping of the HMI synoptics
  - Development of the exchanges scripts with AS400 tracability
  - Development of .bat files
- Factory Acceptance Tests with the customer :
  - Validation of the exchanges with the AS400 : database and files
  - Validation of a recipe sending to the PLC
- Starting up

Technical environment :

Software : Intouch v10.5
Operating system : Windows XP, Windows server 2008
PLC : Siemens S7-300 and S7-400
Network : Ethernet, Profibus, Modbus TCP.

Add indicators to the cooling system of the cement mixers for Carbone Savoie in Notre Dame de Briançon (73 - France)

Duration : 1 month

- User needs specifications
  - List the required indicators
  - Define the calcul method of each indicator
  - Propose an integration in the existing HMI software : add of new synoptics
- Program the indicators in the PLC
  - Program the same indicators for each cement mixers (3 in all)
  - Provide indicators to the HMI system
- Program the HMI system
  - Configure the new variables
  - Develop synoptics : trend and records
  - Dévelop PCVue scripts
- Starting up

Technical environment :

Software : PC Vue v6.04, Unity pro XL
Operating system : Windows XP
PLC : Schneider Electric Modicon Quantum
Network : Ethernet, Modbus TCP.

Study and development of a hydrogen storage system for MCPHY Energy company in Grenoble (38 - France)

Duration : 4 months

- Electrical study in association with the electrical drawing centre
  - Choice of the components respecting the ATEX norm
  - Implantation of the components in the electrical cabinets
  - Calculation of the thermal dissipation for each cabinet (4 in all whose 3 ATEX)
- Safety study in association with a company specialized in machine safety
  - Choice of the electrical components respecting the SIL 2 safety level
  - Calculation of the safety level reached by each safety loop
- PLC and HMI programming
  - Program the safety part on Siemens PLC
  - Program the non safety part including 7 PID control loops
  - Create the HMI synoptics using internal existing library
  - Mapping of each synoptic with PLC variables
- Factory Acceptance Tests :
  - Global electrical tests
  - Electrical tests of the inputs/outputs of the PLC from terminal's cabinets

Technical environment :

Software : Systema, Step 7 v5.5, TIA portal v12 (for WinCC Comfort)
Operating system : Windows XP, Windows 7
PLC : Siemens ET200S-F
Network : Ethernet, Profibus.
Hardware : Siemens TP700 HMI panel

11/2012 to 04/2013 **ACTEMIUM, Dardilly (69 - France)**
Automation and industrial informatic engineer

Development of a production line for a chemical factory based in ChangShu (China), for Coatex company

Duration : 5 months

- Line and raw materials PLC programming
  - Standard function blocks instantiation
  - Import variables in the PLCs
  - Programm in assiciation with the functional analysis
- Creating of the HMI synoptics
  - Standard graphics objects instantiation (motors, valves, …) on Archestra
  - Creating of the HMI synoptics on Intouch
  - Add instantiated graphic objects in the synoptics
  - Deploying of the graphic objects on the consulting stations
- Factory Acceptance Tests (FAT) with the final customer
  - Test the functionning of phases and functions
  - Enter the results of test on Val-Ent-In software
  - Check the coherence between HMI synoptics and Piping and Instrumentation Diagrams (PID)

Technical environment :

Software : Unity pro, Wonderware Archestra Intouch, Val-Ent-In
Operating system : Windows XP, Windows 7 + VMWare virtualization
PLC : Schneider Electric Modicon TSX Quantum
Network : Ethernet, Modbus TCP.

Functional analysis of a revamping for Rhodia in Saint-Fons (69 – France)

Duration : 1 month

- Writing of the functional analysis of the extrusion line number 21 for the purpose of a revamping
  - Divison of the line in subsets using PID diagrams
  - Listing of the PLCs inputs/outputs
  - Safety and Dependance matrix
  - Analyzing of the sequences to program
  - Design of the IHM synoptics
  - Specification meeting with the users

Technical environment :

Software : Microsoft Office 2010
Operating system : Windows 7

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10/2010 to 10/2012	AUTOMATIQUE ET INDUSTRIE, Moirans (38 - France) Automation and industrial informatic engineer

eExploitation SCADA on mission for the EDF hydraulic engineering centre in Grenoble (38 – France)

Duration : 2 years

- Development and deployment of the eExploitation SCADA hydroelectric plants and dams in France.
  - Analyse of ModBus TCP protocol frames
  - Used of inputs/outputs Advantys STB modules, with ModBus TCP/IP communication
  - Write a merging document of the differences between 2 SCADA and propose new HMIs to the users
  - Draw synopctis for the hydroelectric plants and dams monitoring
  - Write documentations to respect a national standard
  - Draw the SCADA (named IMR) of the Nentilla (11 – France) hydroelectric plan

Technical environment :

Software : Unity pro, PL7 v3, Coopernic, SVN, trac, ISIS HMI, eExploitation configurator
Operating system : Windows XP, Linux (CentOS 5)
PLC : Telemecanique (7-range and Premium)
Network : Ethernet, Modbus TCP.

12/2009 to 09/2010	ROYAL CANIN, Cambrai (59 - France)	Automation technician

Continuous improvement of the packaging workshop of a food processing factory

Duration : 6 months

- Failures analyse of the 7 packaging lines to improve the productivity (for example : dependences between equipments)
- Install Axis cameras to view the palletisers output
- Develop a tool the check the packaging before bagging
- Automation modification to automatically change the parameters of the lines for a new batch
- Add a new Magelis XBT panel in Unitelway communication with a TSX 7-range PLC

Technical environment :

Softwate : PL7-pro, PL7 v3, RSLogix 5000, Cx-Programmer, XBT-L1000, Intouch
Operating system : Windows (XP et NT), OS/2
PLC : Telemecanique (7-range and Premium), Omron (CQM1 range),Allen-Bradley (ControlLogix)
Network : serial communication, Unitelway.
Hardware : XBT Magelis panels, Sensopart FA45 vision sensor, IP Axis cameras.

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03/2009 to 08/2009 — **ALLEVARD REJNA Autosuspensions, Douai (59 - France)**
Automation and industrial informatic trainee engineer

Study and development of production line tracking system the production and the failures

- Users needs identification : production and maintenance services
- Study the possible solutions in collaboration with : the design office, the informatic service and the maintenance service
- Ask quotation to suppliers
- Develop a tool responding to the different needs depending on the imposed constraints (recovering of the datas at the end of the shift)
- Factory Acceptance Tests (FAT)
- Develop a Java language applet for the real-time monitoring

Technical environment :

Software : PL7-pro, PL7 v3, Eclipse, OPC server
Operating system : Windows XP, OS/2
PLC : Telemecanique (7-range and Premium)
Network : Ethernet

04/2007 to 06/2007 — **LEROUX chicory, Orchies (59 - France)** — **Automation trainee technician**

Study the installation of a pots breaking detection system

- Financial viability study
- Selection of the sensors adjusted to the machine
- Selection of the PLC adjusted to the needs
- Electrical drawings
- Give a complete file to the project manager with the PLC programming.

Technical environment :

Software : PL7-pro
Operating system : Windows XP
PLC : Schneider Electric TSX Micro

05/2005 to 06/2005 — **AGC Automotive, Aniche (59 - France)** — **Trainee technician**

Synchronisation of conveyors speeds of a production line area

- Study and setting of the KEB speed controllers
- Program the synchronisation on TSX PLC
- Writing of maintenance document with the speed controllers settings
- Maintenance additionnal work

Technical environment :

Sofwate : PL7-pro
Operating system : Windows XP
PLC : Schneider Electric TSX Premium