Prolog

My name is Sandor Vamos. I was born in Hungary, have lived in Germany for approximately 20 years, and now hold German citizenship. I speak Hungarian, German, and English. I am over 50 years old and have about 25 years of experience in programming and designing industrial systems. I mainly design with the market leader in Europe, **Simatic systems**, but I have also worked on many other systems (*AB Rockwell, Bosch, Wago, Codesys, Mitsubishi, …*).

At first, I worked on production lines at Bosch; later, I founded my own company and worked in power plant technology. The Budapest (Rákospalota) Waste Incineration Plant (4 boilers, turbine, district heating) has been operating with my software for more than 20 years.

In 2006, my family and I moved to Germany, where I initially worked on programming trains; for example, I wrote the door control software module for the ICE4 (intercity train). For several years, I have been working on shore power supply for container vessels and cruise ships. In this area, my current references include the Hamburg CTB, the Toll Ports of Melbourne and Burnie, and the Thialf and Sleipnir ships in Rotterdam.

In addition to Simatic systems, I also work extensively with Arduino and ESP32 microcontrollers. I use these primarily for IoT projects, often as an economical complement to Simatic systems. Simatic is an expensive system, and in many cases it is not cost-effective to use; in those cases, its *“little brother”*, Arduino, comes in handy. In addition to control, I implement visualization (SCADA/HMI), typically with WinCC for Simatic systems. For data collection and exceptional communication, I develop IPC solutions in LabVIEW, which, of course, connect to Simatic and Arduino.

I use a wide range of industrial communication systems to service and communicate with the systems: ProfiNet, ProfiBus, (Industrial) Ethernet protocols, Modbus, IEC61850, … - check out my site.

The idea for the online book stems from the fact that I have many notes on *“real”* programming, i.e., the programming I use in practice. These are tricks and procedures that official books rarely present, or present with a significantly different emphasis. I felt that, amid the flood of technical books, a description focused on the practical application of PLCs might have its place.

The book **Automation!** is an ever-expanding online documentation project based primarily on my experiences. I highlight the knowledge I consider essential for programming. I also adjust the language so it reads as if I were explaining to a friend which things are unimportant and which are essential. The online documentation will also be available for download as a book, but I will provide it with a version number, precisely because of the continuous expansion. For now, the version starts with 0, since I have only just started writing this.

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A few important notes regarding the document (Automation!):

- The document (Automation!) is freely available, but I hold the rights to publish it. Redistribution – even partially – requires my approval.
- The document's content reflects my personal judgment. Clearly, I cannot provide a comprehensive and detailed Simatic documentation, partly due to length constraints.
- The example programmes are written in SCL because it is the language I use for programming.
- Although I have taken great care, there might still be errors in this document. If you find any, please let me know at: info at lamaplc.com.