SIEMENS

20-30% reduced front-end engineering and programming time

TIA Portal Application Awards – 2013
Tower Elevator Systems, Inc.

Company Name: Tower Elevator Systems, Inc.

Location of Application: Statue of Liberty, New York, NY

Website: *www.towerelevators.com*

Key Business Activities: Tower Elevator Systems, Inc. (TESI) is a licensed and insured manufacturer of industrial rack-and-pinion elevator systems with headquarters in Austin, TX. The company specializes in permanently installed custom machines with a focus on safety and technology.

Name of Application: Specialty (rescue) elevator upgrade at the Statue of Liberty, New York, NY.

Description of Application: TESI completed the installation of a specialty (rescue) elevator in the Statue of Liberty as part of the U.S. National Park Service initiative to upgrade and remodel the national landmark with new fire and safety features and improve personnel flow. The unit is intended for emergency access, not public use.

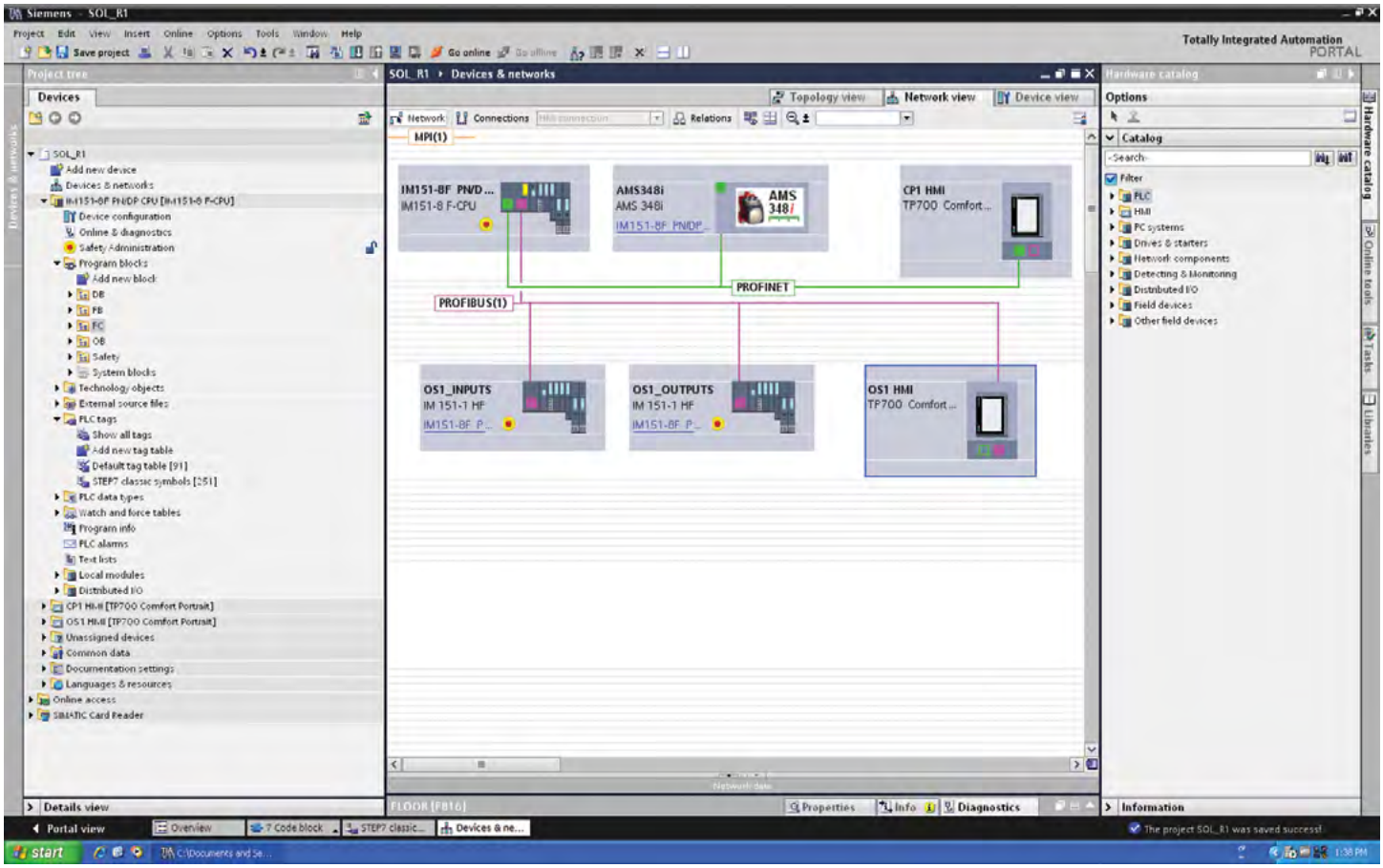
The retrofit was driven by the need to upgrade an obsolete system. The old elevator was using 30-year-old technology and had reached the end of its useful life. The new unit is a special purpose personnel machine that uses cutting-edge technology to enhance safety and reliability and enhance usability. The custom-designed rack-and-pinion machine had to be physically reconfigured to fit severely limited space. It is a "presentation" machine made of glass and stainless steel. The core of the elevator control system uses Siemens IM151-8 F-PLC safety PLCs, with a user-friendly touch screen-equipped Siemens Comfort HMI on the elevator panel. The project was accomplished with greater efficiency and at considerable time savings due, in large part, to the application of Siemens' TIA Portal engineering software.

What challenges led you to look at a new solution?
TESI faced a variety of challenges in this iconic assignment. Safety, reliability, and time were of the essence. The installation was unique: a custom machine had to be fit into a limited space and installed with an acute awareness of the historical surroundings.

What Siemens automation products were chosen for this project and why?
At the core of the system are Siemens IM151-8 F-PLC safety PLCs, products standard to TESI's rack-and-pinion elevators because of their safety features and reliability. Siemens Comfort HMI panels provide a full touch screen user interface for monitoring critical systems, performing diagnostics, and troubleshooting problems. The project represented TESI's first application of TIA Portal engineering software, chosen for its efficiency and time-saving features and its capabilities for configuring and programming all components.

What features in the TIA Portal addressed your project challenges?
The integration benefits of TIA Portal helped immeasurably to address project challenges. Safety was a major issue in this project, and the ability to configure and program safety features from within TIA Portal saved time and effort. Other important features that met project challenges included the ability to drag-and-drop elements to and from any of the included libraries. Further, HMI screens are all accessible and available for editing. TIA Portal's cross reference guide covers almost any input/output. Navigation is quick and simple with almost any destination only a click or two away. Function blocks are easy to organize and hardware can be added or removed without leaving the original location. On the back end, TIA Portal's cross-referencing features enable faster diagnostics and troubleshooting.

How has your business improved?
TIA Portal makes component configuration and programming faster and more efficient. In this project, it reduced front-end engineering and programming time some 20 to 30% over previous efforts. TESI looks forward to standardizing on the TIA Portal engineering software in the future and integrating the product into its regular operations, calling it a next-step evolution in its partnership with Siemens. In addition, the company points to TIA Portal's ability to fully document all the code within the engineering software as a significant improvement to its business. Because all code is stored on the PLC, it is always available whenever needed.


Siemens - SOL_R1
Totally Integrated Automation
PORTAL
Project tree
Devices
SOL_R1 ▸ Devices & networks
Topology view
Network view
Device view
Hardware catalog
Options
Catalog
MPI(1)
IM151-8F PN/D ...
IM151-8 F-CPU
AMS348i
AMS 348i
IM151-8F PN/DP...
CP1 HMI
TP700 Comfort...
PROFINET
PROFIBUS(1)
OS1_INPUTS
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IM151-8F P...
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7 Code block
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start
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