




# Unity Application Generator

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Automation Business Unit

## PAMAG applies UAG to production machines and production data applications for Swiss thermal insulation manufacturer

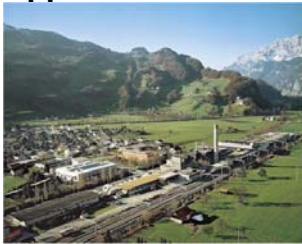
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### Summary

### **Benefits for both End User and System Integrator**

<b>Customer</b>	PAMAG – Switzerland
<b>Application</b>	Renovation of the plant's monitoring and control system
<b>Solution</b>	Unity Application Generator (UAG)
<b>Benefits</b>	Single engineering environment for PLC, SCADA and Fieldbus I/O Much better ability to leverage the design effort in future projects via proven libraries Reduced project risk for the System Integrator

### Application



*Flumroc's head office and production plant in Flums*

PAMAG is a Systems Integrator that specializes in the development and engineering of machinery and equipment, solar installations, controls, handling systems and process engineering. PAMAG is a subsidiary of Flumroc AG and designs and maintains all of Flumroc's factory automation systems. Flumroc has used Modicon PLCs almost exclusively since 1975.

Flumroc AG is Switzerland's leading manufacturer of stone wool-based thermal insulation products. The company is one of the largest employers in the Sargans region with a workforce of some 260 and revenues of CHF 55 MM.

Stone wool-based thermal insulation products have been manufactured in Flums since 1950. In the same year Flumroc AG concluded a license agreement with the Danish Rockwool Group. Since then, the production, fabrication and logistics facilities have been continuously upgraded to the latest state of the art technology, and in 2004, PAMAG entrusted Schneider Electric with the complete Fibre Product Production Machine.

### **Process**

Flumroc produces thermal insulation products made from "stonewool." First the fiber is made from the stone, and then it is made into a continuous loose band of fibers 5cm in width. Customized widths are also manufactured. The bands are then converted (pressed) into the final product to be made. The pressing process also gives the end product physical stability so it can be easily applied in the customer application.

### **Machine description**

The machine includes 16 Band/roller conveyor systems with 3.3kW motor with servo control and encoder. In addition, 6 Level height controls with spindle drive are also servomotor controlled.

### Benefits

### **Single engineering environment for PLC, SCADA and Fieldbus I/O**

The objective of this project was to refurbish the application. As the end-user customer already had an installed base of Modicon PLCs, Citect SCADA and Profibus I/O, PAMAG was attracted by an engineering tool that would reduce the design time and the costs of the project, while improving the software quality by simplifying the design process and the qualification task.



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## Leverage the design effort in future projects via proven libraries

Furthermore, PAMAG could see advantages in future projects, as the work in the first project could be largely re-usable. UAG V2.3, released in Q3 2006, now provides support for all of PAMAG'S needs: Modicon Unity PLCs, Profibus I/Os and beginning in 2007, Citect SCADA. UAG fulfilled their expectations and the requests of their customer - that the project follows the end-user company standards specified.

## Reduced project risk for the System Integrator

As a System Integrator, PAMAG seeks to reduce risk in their projects and meet their customer expectations within or below budget.

UAG enabled them to achieve their goals by:

- Reducing implementation cost via faster project realization.
- Reusing the application design in other projects.
- Reducing risk, re-work and additional steps in meeting specifications and passing FAT/SAT qualification (Factory Acceptance Test/Site Acceptance Test)
- Simplifying qualification testing due to the structured project design approach.
- Faithfully implementing the specified end customer standards.
- Mitigating the application complexity through the use of a well designed object library.

## Customer testimony:

The project manager of PAMAG was pleased with the experience he has had with UAG: "After a UAG training we immediately realized an application with UAG and Unity Pro without any problems. Now we only work with UAG in future applications."

## Solution



## Project Design and Automation Design

UAG v2.3 with Unity Pro

## Automation

Around 200 tags in the PLC (Modicon Quantum 434-12).

Fieldbus: Profibus-DP.

Around 400 tags in the CitectSCADA HMI/SCADA system.

## Machine data and production information database

MS SQL-Server 7 with Visual-Basic front end.

By using Unity Application Generator, the SI was able to provide an application to Flumroc that implements their company standards and supports their request to embed the more complex aspects of the application.

The ability to automatically configure Profibus I/Os also removed a complex task for PAMAG and provided additional benefits in terms of reduced design time for the project and further simplifying the validation process.

## Information

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