

Ticket Machine Contingency Control

When things don't go according to plan...

At a main train station during the rush hour, a passenger inserts a bank note into the ticket machine and selects the destination. A minute later, the ticket and changes still haven't come out. The passenger is in a hurry. A long queue is waiting. Someone goes to the ticket office to ask for help. Finally, a technician comes. He checks the machine and finds the CPU has halted because it is too hot. He turns off the machine and puts on 'out of order' sign.

If it sounds familiar, it is because it happens all too often. Such incidents really hurt as they result in:

- loss of company revenue
- loss of customer time
- loss of customer confidence
- serious and frequent customer complaints
- bad publicity for the company
- stressed company staff
- need for damage control
- expensive and lengthy fixes

Why ticket machines fail...

- Systematic faults (design/software/update issues)
- Random failures (Murphy's Law)
- Environmental (overheating)
- Power surges, glitches or low battery
- Aging of sensors and electronic components

(In 2011, two electrolytic capacitors in a LAN router failed, putting one third of Sydney's CityRail out of operation. The router was 8 years old.)



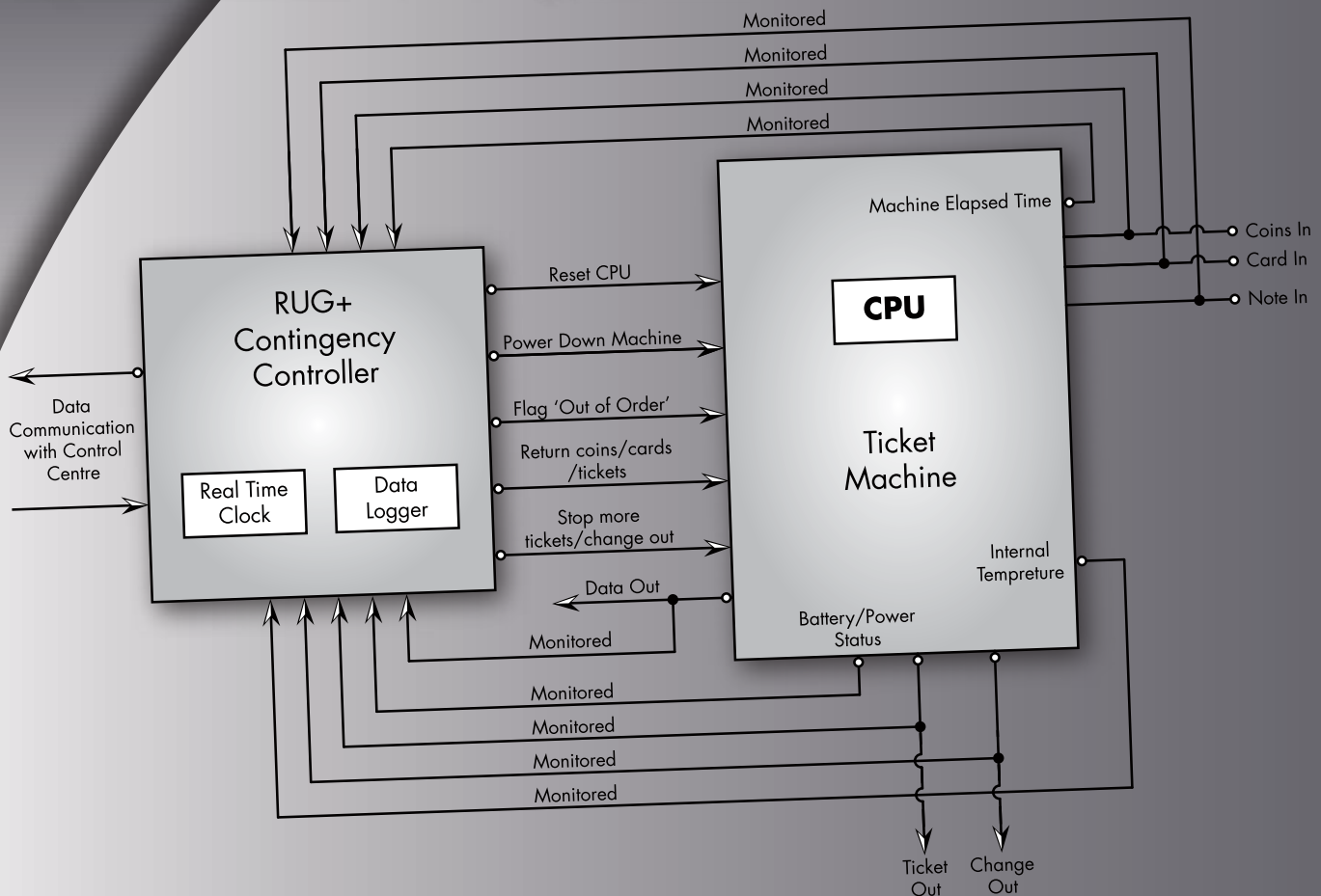
Contingency Control

The straight forward answer is to install two machine controllers and to regularly replace the controllers. However that is not only expensive, it doesn't overcome problems such as overheating as both controllers can be too hot at the same ambient temperature, or software update issues as again both controllers will be affected.

There is an easy and effective way of reinforcing ticket machine reliability – by RUG+

- reliably detecting inputs/outputs/datacom malfunctions
- intelligently handling alarms/time outs
- accurately recording all fault conditions
- promptly communicating with the control centre about any faults
- faithfully executing supervisory commands from the control centre

Ticket Machine Contingency Control



RUG+ is a RUG3 RTU specially adapted to the contingency control of ticketing machines. RUG+ has the unique features of:

- Multiple monitoring inputs and control outputs
- LCD command/data display and keypad
- 2MB date/time stamped data logger
- 145 logic control functions
- Battery voltage and internal temperature logging
- Industrial standard data communication (Modbus)
- Very small size and light weight
- -40 degree C to +85 degree C operating temperature
- 2mA @ 12VDC very low power consumption



why trust RUG+

You can trust RUG+ to be your contingency controller because it is designed and made in the USA by RUGID Computer, Inc. and technically supported by Neuplex' knowledgeable and experienced application engineering team.

We can assist you in integrating, installing, programming your projects and we can train your technicians on controller interfacing and troubleshooting.

We commit to addressing effectively any technical questions by same day or next morning and service turn round of 3 days or less.

For all the benefits to your company and the customers, RUG+ is competitively priced from US\$330.



Neuplex Automation's Background

Neuplex was founded in 1994 and has successfully developed numerous products markets and projects, including a 1,400 analogue channel data acquisition system to India, 72 wind monitors in Singapore's container terminal and solar pumps in remote China.

Neuplex prides itself being the most helpful technical supplier in the region with same day/next morning responses to any technical questions before and after sales and typical problem solving time of less than 10 minutes on the phone, free. Because of its excellent service, Neuplex is an approved supplier to the Australian Department of Defence and NATO.

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Rugid Computer's Background

For over 20 years Rugid have been manufacturing a complete line of quality low-cost programmable logic controllers (PLCs) and remote terminal units (RTUs) for remote monitoring, data acquisition, control and telemetry applications. RUGID products range from ultra low-power RTUs to highly expandable PLCs. The new WiSI wireless sensor interfaces has won the Design News 2011 Golden Mousetrap Award for Best New Product.

