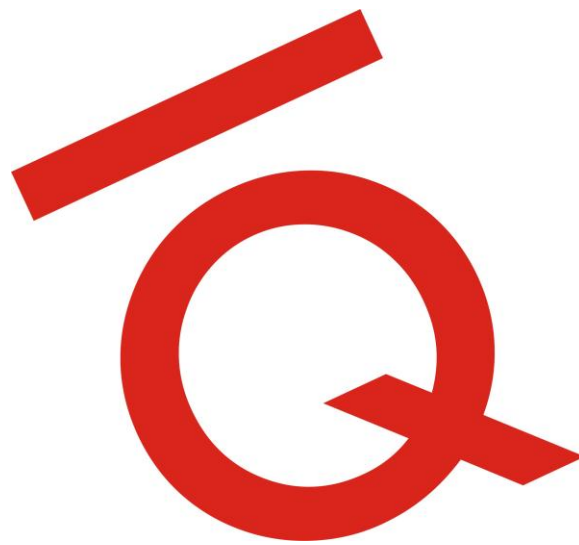


Te^Qnology Brief



Se^Qent's Video^Server

Providing Visualization Solutions for Lean Management



Introduction

A key element of a successful business is communication with its employees. SeQent's newest product was designed with this specific goal in mind. Capable of displaying a wide range of information, the VideoServer allows you to deliver real-time content to staff on the plant floor, front or back office or outdoors on LCD displays.

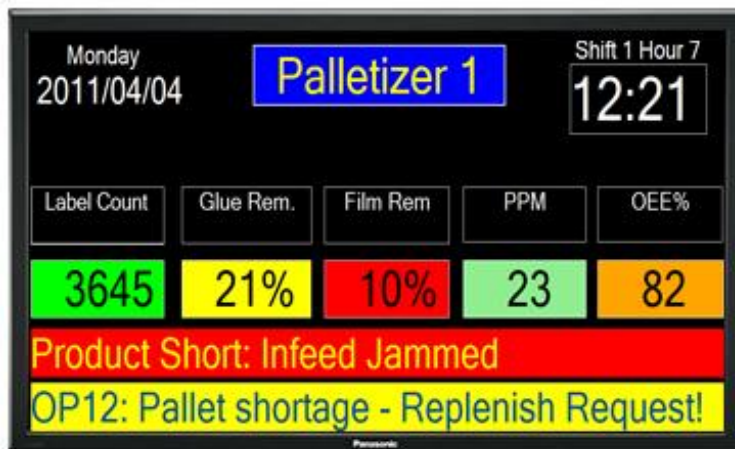
About SeQent's VideoServer

SeQent's VideoServer has a variety of uses that span from campus notification systems, to fault messages and quality control, from reporting material calls to controlling logistics of shipping and receiving. It may be implemented to display such things as material call, quality checks, system faults, OEE, health and safety messages, and even displaying a web page such as a weather, HMI, or intranet websites. VideoServer supports continuous improvement

initiatives with a specific emphasis on lean manufacturing right down to employee motivation.

VideoServer Benefits

- Facilitates the creation of a hybrid network of Andon displays using both LED and LCD technology
- Templates (display content) may be switched based on time or event
- Management of configuration/templates is easily accomplished from any Windows desktop using the VideoServer Configuration Editor
- More object types are available than a traditional Andon LED marquee
- Advanced template composition allows for the display of web pages & Andon data on the same display screen simultaneously
- Use of LCD displays allows for a much lower power consumption level than traditional LED displays





VideoServer Use Cases

As per Figure 1 below, the following information details some potential uses and various manufacturing areas that may benefit from SeQent's VideoServer technology.

1. Management Display

LCD Andon Displays can be installed in senior management offices so that management can monitor and stay on top of any urgent issues related to production operations. Critical issues which impact production significantly, such as when a line is down, high defect rates, low OEE and large target/actual differences can be highlighted in a summary form. The summary content of these boards provides management a high level real-time window into the status of their production facility.

"Manufacturers are discovering that implementing real-time visualization solutions drives both productivity and quality improvements as well as cost savings by monitoring manufacturing environments and pro-actively notifying key personnel as soon as, for example, a tolerance is breached or a fault occurs. Real-time visualization solutions deliver the right information to the right people at the right time which supports continuous improvement processes. SeQent is one of the leading providers of real-time visualization solutions."
Craig Resnick, Research Director, ARC Advisory Group

2. Campus Notification

LCD Andon displays can be installed in office hallways and all Andon boards in the production facility can be utilized for critical campus notification events. These displays can be very useful for monitoring such things as security alerts, material spill, utility failures such as power outages, fire alarm, nature/weather crisis such as tornado watches. Alerts from the Building Management System such as required power reductions and current power consumption keep everyone in the facility conscience of utility usage. News feeds can also be displayed for such things as employee motivation, corporate events or health and safety issues/statistics.

3. Employee Motivation

LCD Andon Displays can be used in areas such as cafeterias, team areas, and break rooms to provide statistics to employees regarding the operation of the production line with respect to efficiency (OEE & KPIs), production goals and uptime.

4. Maintenance Monitoring

Displays can be installed in maintenance offices such as plumbing, electrical and mechanical to enable maintenance technicians to view in real-time equipment faults requiring their assistance. Response time can be reduced as maintenance staff are proactively notified of events occurring on the production line prior to any manual request being received. (ie. manual message to pager, telephone or two-way radio request)



5. *Quality Control*

LCD Displays can be utilized in Quality Control areas such as at the end of the line test stations or the Quality Control office. The displays can provide relevant information for final line testing results and any quality issues that need to be addressed can be prominently displayed.

6. *Material Call*

LCD Displays can be mounted in a warehouse or material staging area. They can convey material call requests from plant floor stations directly to material delivery staff, or be used to display current material quantities at stations with automated material monitoring for proactive replenishment of materials which have been depleted.

7. *Logistics of shipping/receiving*

Displays can be mounted inside the facility to assist in routing fork-truck drivers to load the

correct products into the correct trailers. Weather-proof displays can be mounted outside the facility to guide incoming and outgoing vehicular traffic. VideoServer ensures that deliveries are made to the correct loading dock and drivers are notified of the correct dock for receiving incoming products or shipping outgoing products.

8. *General Andon*

Useful for Supervisor and Team Leader calls the VideoServer can display fault messages that are related to each area of the production line, or the entire line. This information aids plant line workers in completing assembly operations in-station. Both production and maintenance faults can be displayed as well as supervisor calls, assistance calls, quality check calls and tool change requests. Some motivational information may be displayed such as target and actual numbers and OEE/KPIs to enable plant floor staff to have a real-time gauge of their performance.

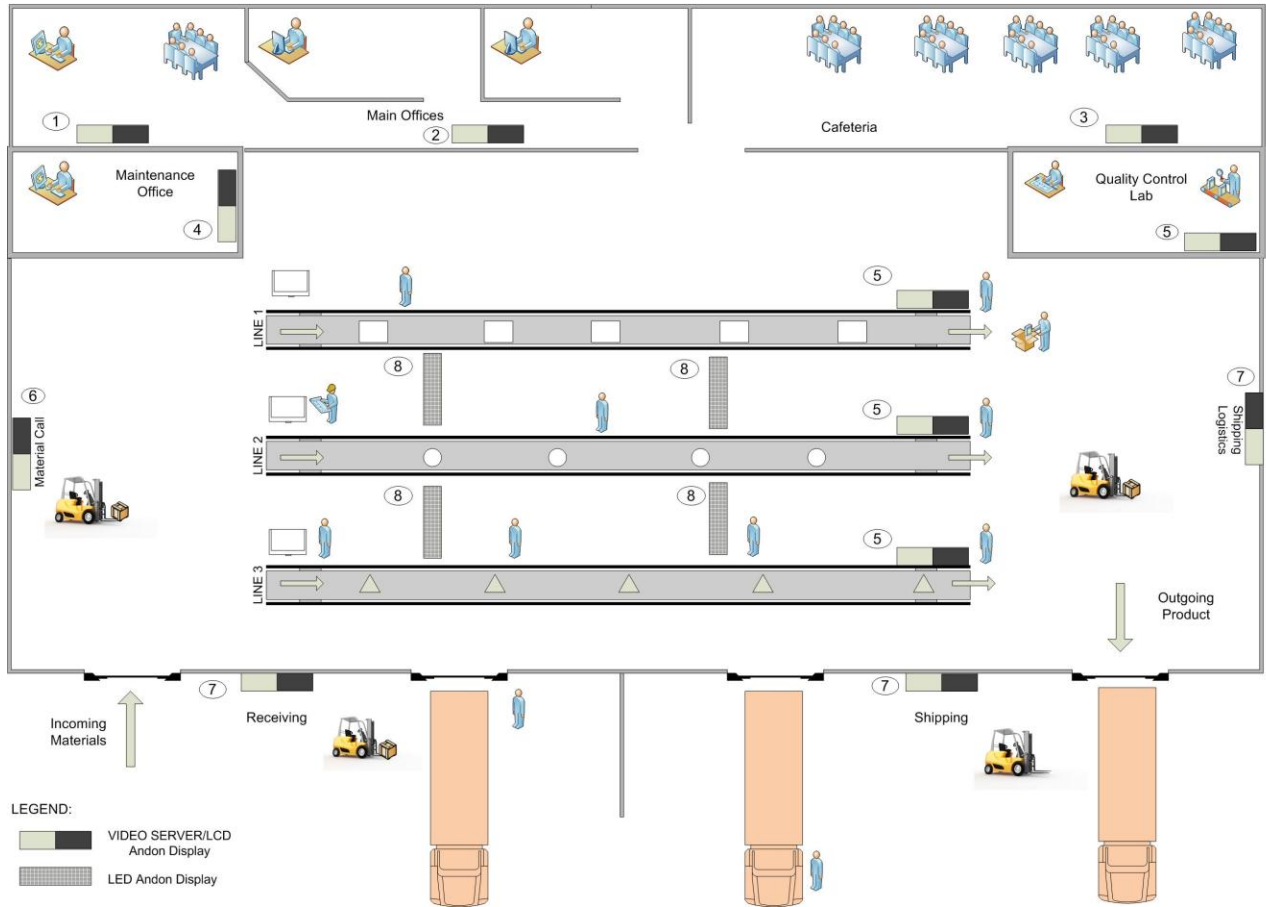


Figure 1 – Sample lean manufacturing environment



VideoServer with Marquee Manager

The VideoServer allows any standard Marquee Manager installation to incorporate any video driven device (LCD, Projector) into the network. This allows utilization of all the capabilities available in Marquee Manager with no changes to the gateways or servers. In addition to the more conventional Andon capabilities the VideoServer can support the display of full or partial Web/HTML pages. Marquee Manager templates can be utilized to support switching displayed URLs via time or event triggers.

SeQent's Marquee Manager™ product family pushes status messages to the entire plant floor, using visual or audible devices such as LED display/Andon boards, stack lights, and sounder alarms. An integral part of any lean initiative, Andon boards provide a visible cue to the activity on the plant floor but need to be driven by a robust, easy to use software solution. Marquee Manager is the only multi-vendor marquee solution, supporting the majority of boards, including legacy displays.

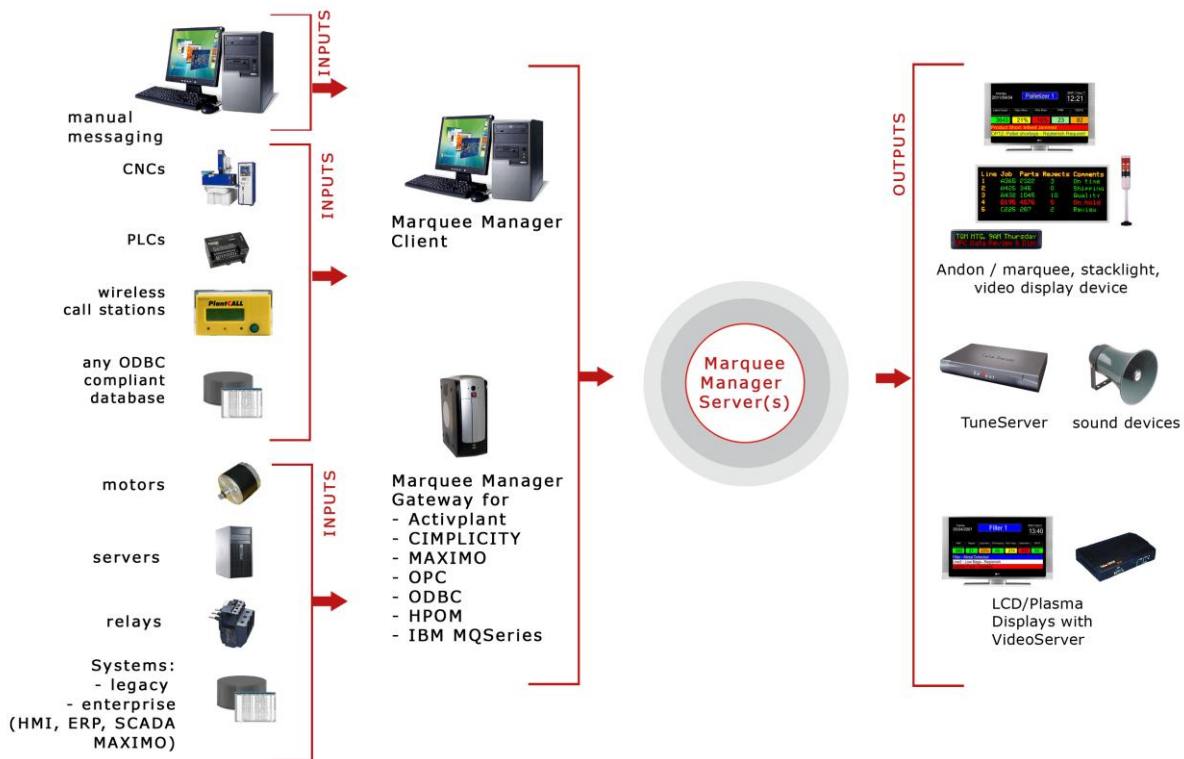


Figure 2 – VideoServer with Marquee Manager



Conclusion

The cost effective visualization solution that VideoServer offers allows all facility personnel from management right down to the plant floor operations to gain greater visibility into individual production lines, while simultaneously allowing manufacturers to **proactively** gain valuable information on root cause disturbances and production slowdowns in real time. This has a major impact on overall quality, which impacts warranty costs and can have a tremendous impact on the bottom line for both OEM's and suppliers.

SeQent's FirstPAGE Server

In addition to LCD and LED Andon Displays, SeQent's FirstPAGE™ product family delivers real-time, automated status messages to a specified hierarchy of individuals via personal communication devices, including mobile phones, pagers, BlackBerrys® and other PDAs.

Imagine one single application in your organization that allows everyone who has any kind of a messaging device to be informed in near real-time of any critical production issues wherever they are.

About SeQent

SeQent is the leading provider of Real-Time Decision Solutions that help corporations achieve better utilization from their continuous lean manufacturing efforts.

SeQent's cost-effective automated solutions send real-time text/voice messages to key personnel through the internet or wireless devices and LED display/Andon boards. A longtime industry leader in the messaging sector, SeQent provides state-of-the-art solutions to more than 450 facilities worldwide, including customers in the automotive, consumer goods, bottling and healthcare sectors.

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