



## **CAMCO Technologies and Tideworks Technology Bring Terminal Gate Procedures to a Higher Level**

*Cargo terminal operators are confronted with the need to increase gate volume without increasing operating costs in order to secure and maximize profitability because of continuously growing container traffic at constrained terminals. At the end of 2003, Tideworks Technology® and CAMCO Technologies decided to partner with each other in order to provide terminal operators with an integrated hardware and software solution that enables them to increase gate processing speed and reduce overall operations costs.*

([PRWEB](#)) January 23, 2005 -- Tideworks Technology is the leading provider of full-service terminal management and planning software solutions for terminal operators, and CAMCO Technologies is the expert company providing innovative, market-leading Automatic Gate solutions for marine and railway terminals worldwide.

The combination of Tideworks' GateVison solution with the innovative SuperGate OCR solution of Camco proved to be a very powerful offer providing a flexible, modular gate system that helps terminal operators accelerate gate activity, minimize truck processing time, and maximize user productivity.

The first results of this close collaboration are now visible with the successful implementation of this integrated solution at Pier A and Pacific Container Terminal (PCT) in Long Beach. In 2005 additional implementation projects are scheduled in Oakland and Seattle.

### **GateVison and SuperGate: a powerful combination**

A combination of software and hardware components, GateVision effectively integrates into one user interface three key components of the gate transaction: voice communication between the trucker and the marine clerk; digital video information; and Mainsail, the Terminal Operating System (TOS). GateVision users are able to effortlessly collect truck, container, chassis and associated equipment data from the Camco SuperGate camera systems. This allows terminal operators to move marine clerks from the sometime hazardous and noisy gate lanes and place them in a safer and more comfortable office environment (often referred to as a "kitchen").

The digital cameras that are used are specifically designed and developed by Camco to capture high resolution images of containers, chassis and tractor licenses. Camco uses two different types of cameras:

- Line scan cameras for scanning at high speed and resolution the surface of the vehicle and container(s)
  - Area Scan camera for taking images of the front and rear of vehicles and container(s)
- The captured images are used to record the exact condition of containers when entering or leaving the terminal; and to process the OCR recognition of container/ chassis codes and license plate numbers.

Every camera unit comprises not only the digital camera sensor but also an embedded computer that executes all the CPU intensive tasks (taking the image, compressing it into JPEG format, and OCR processing) making the need to install Windows-based PCs close to the cameras obsolete and increasing the overall reliability. The OCR engines run on separate processors that communicate temporary results between each other. By using this parallel processing Camco can process the OCR of container/ chassis codes and license plates at an



unparalleled speed, enabling extremely rapid truck throughput( approx. 35 Mph), and even allowing a continuous traffic flow of trucks during peak times. Trucks can drive through the OCR portals almost bumper to bumper.

Besides the speed, the OCR recognition that Camco supports is also extremely accurate, because it has a very good control over several parameters:

- Quality of images. The sharper the images of the codes, the better the OCR will be. This is also one of the reasons why Camco decided to develop its own digital cameras: they need to be capable of capturing high resolution images of moving vehicles with variable speeds and in all different weather conditions (sun, rain, fog)
- Excellent speed measurement system to trigger the cameras at the exact moment
- Quantity of reading spots. It is only by combining as many reading spots as possible (the container code can normally be found at 6 different locations on a container) that OCR recognition rates above 90% can effectively be reached.

It is this combination of different parameters plus the straightforward and simple design that makes the SuperGate OCR solution of Camco so powerful and accurate.

Pier A and PCT: increased gate operation capacity

In a joint effort Tideworks and Camco were able to deploy consecutively 4 (Pier A) and 7 (PCT) SuperGate OCR portals and integrate the captured data and images with GateVision and Mainsail in a very short timeframe, and with minimal interruption to the day-to-day terminal operations.

The OCR system as developed and deployed by the Tideworks-Camco partnership is proving to be the fastest in the market, with the ability to process over 500 trucks per hour, per OCR portal. The OCR system is also extremely accurate, with accuracy in excess of 98 percent and 95 percent for container number and chassis number, respectively.

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