

OCR for Containers, Chassis, Gensets, and Tractors

Cuthbert offers container, chassis and tractor OCR as part of integration solution for carriers and terminal operators.

OCR – Optical Character Recognition – is the use of video cameras to capture images of container and chassis number, or tractor license plates, whose contents are analyzed by OCR software to develop number in data form that previously have been read by human clerks and typed into the organization’s database.

OCR depends on the standard marking of containers on each face (except the bottom) in accord with ISO standard 6346:1995. OCR offers good, but not perfect reliability of, reads on containers. Damaged and dirty numbers, and paints with bad reflection characteristics affect the read rates. In perfect conditions, OCR read rates vary from 95-99%. In typical situations, OCR for containers will deliver 80% reliability.

Chassis are typically marked with less precision than containers and their numbers are subject of damage. Accordingly typical real world read rates on chassis are in the range of 70%. OCR on tractor license plates has a wide range of reliability.

The installation of cameras to support OCR provides a welcome benefit to terminal operators, the capture of “damage inspection images.” These images may be used to inspect containers and chassis for damage from location away from the gate, by clerks in an office, and to inspect containers long after the container has passed the gate. Some terminal operators have discontinued regular container inspections altogether, waiting for a claim. When a claim comes in, it can review the images of the container or chassis when it passed the gate last. By changing the process from 100% coverage to on-demand, it has significantly reduced its cost of inspecting equipment on the terminal.

In 2005, there are three manufacturers of OCR systems suitable to container operations. One is US based, one in Israel, and one in Belgium. Resale of OCR hardware is not a core business, so we can be unbiased with respect to selection of RFID technology for tractors, chassis, and containers. As a general matter, you get what you pay for. Each of the offerings, we believe, is fairly priced with respect to its capability. It is our job to fully qualify our client’s requirement before making a recommendation.

Cuthbert makes recommendations to clients for OCR equipment after evaluation of the following criteria.

- Reliability of OCR reads
- Lighting required and power consumption
- Infrastructure required (building or structure; special pavement requirements)
- Relation of truck speed to OCR reliability
- Capital cost
- Quality of damage inspection images
- Ease with which OCR data can be used in new and existing systems

Cost Profile

The following numbers are provided for a designer to develop order of magnitude approximations for the cost of an installation. Costs vary based on the specific needs of the terminal, and quite dramatically, based on the level of custom integration required.

- Per Portal - US\$100,000 - US\$400,000

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