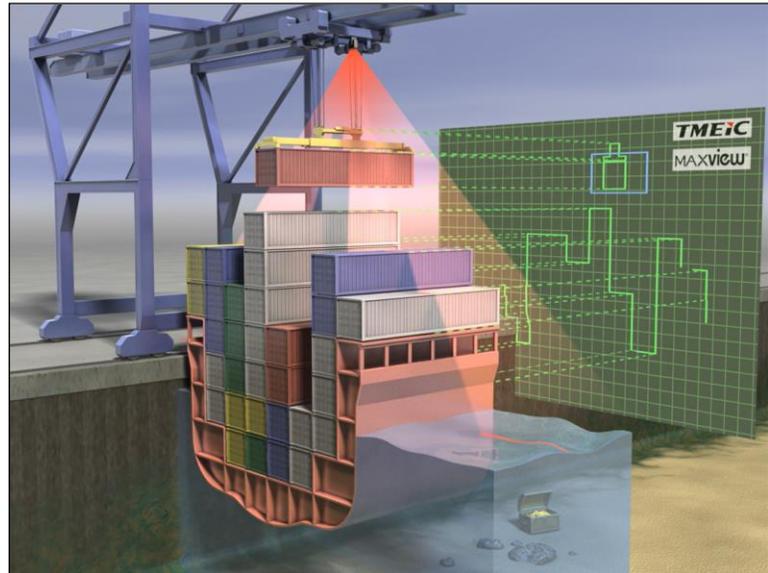


The Maxview Smart Landing[®] System

Laser-based ship profile and operator landing assist system

*Reduce damage and operating noise, and increase your ship-to-shore crane productivity with the **Maxview Smart Landing**[®] system.*



Benefits

Common industry experience is that up to 50% of crane maintenance costs and downtime are due to spreader repair. The **Maxview Smart Landing**[®] system slashes this root cause, by efficiently regulating crane speed during landings.

- **Reduced wear and tear on the spreader, head block and wire ropes** – The hoist speed is limited to a pre-set value as the spreader approaches the pick-up or drop-off point to assure smooth, soft landings.
- **Reduced operating noise level** by softer handling of containers and hatch covers.
- **Reduced container damage claims**
- **Increased Productivity**, particularly during container pick-up and drop-off in deep vessel cells. Once in the cell, the operator can lower the spreader at “full stick”, while the system reduces the speed as required for an optimal, soft, landing.
- **Hatch cover detection** can be used for operational tracking, and to enforce limitations during handling.
- **“Flipper Up” confirmation at deck level** further reduces spreader damage.

Features

- **Proven Design** > The system is in service on ship-to-shore cranes today. The design is based on TMEiC’s extensive experience in crane automation applications in the container handling and other heavy material handling industries.
- **Easy to install and maintain** > Simple set-up, with “hands off” operation and minimal preventative maintenance.
- **Available for Retrofits** > The system can be quickly and easily retrofitted onto existing cranes.
- **Simple Interface** to the existing crane control system via network connection, or a hard-wired discrete interface, as appropriate for the existing crane control system architecture.
- **Open System Design**, utilizing the latest open-system technologies and a minimum of proprietary components to provide a full-featured, yet simple, system that can be easily extended to meet your needs, now and in the future.
- **Flexible Design**, allowing for a high degree of customization based on the specific needs of the operation and existing crane control equipment.

The Maxview Smart Landing® System

How it works

The **Maxview**® system uses a laser scanner and **Maxview**® software modules to measure and continuously update the profile of containers and other obstructions under the crane.

- The **Maxview**® laser scanner has range of over 80 meters, which provides measurement to the bottom of the deepest vessels.
- The profile is updated continuously, and without the need for a “learn” cycle” before the first operation at a new bay location.
- The **Maxview**® system also tracks the spreader + load position, and continuously compares the distance between the spreader + load and any objects below stored in the profile.
- The **Maxspeed**® crane control system uses the **Maxview Smart Landing**® system measurements to create a slowdown region below the spreader, and limits the hoist speed as required to prevent high-speed landings during operation.
- This slowdown limits the hoist speed when, and only when, a high-speed incident is imminent. Therefore crane productivity is not reduced when the **Maxview Smart Landing**® system is active.
- The **Maxview Smart Landing**® system soft landing (automatic hoist slowdown) function is optionally selectable for:
 - container pick-ups and landings on the ship,
 - container pick-ups and landings between the crane legs,
 - operations in the crane backreach area.
- The **Maxview Smart Landing**® system trolley motion collision avoidance function prevents trolley direction collision during the return to dock portion of the cycle when hoisting the spreader out of vessel row/cell and the spreader is below deck and/or below the clearance height of the adjacent container row.
- The **Maxview Smart Landing**® Crane Management System (CMS) screen is provided for the crane operator to increase his or her visual awareness of the profile of containers and objects below the crane. This CMS screen also indicates the system status.



Figure 1 - Spreader in cell (view from cabin)

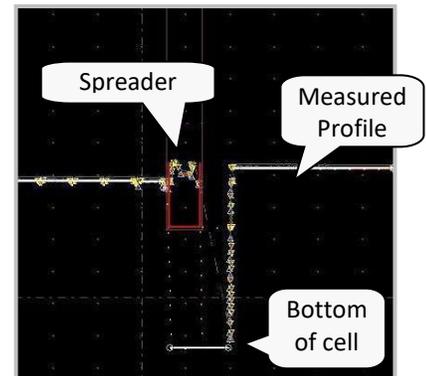


Figure 2 – Maxview® measurement of scene in Figure 1 (profile view)

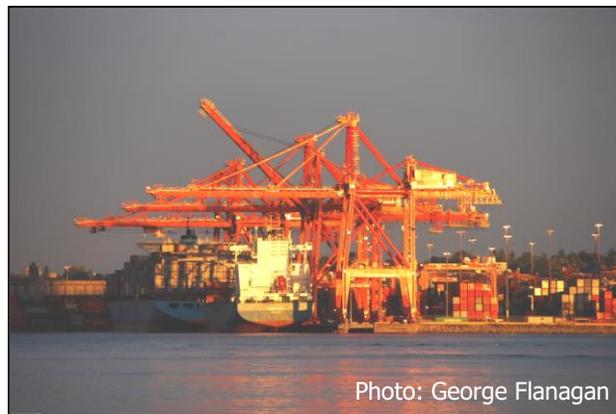


Photo: George Flanagan

Figure 3 - The **Maxview Smart Landing**® system in service at Port Metro Vancouver, Canada.

TMEiC
We drive industry

TMEIC Corporation Americas

Office: 1325 Electric Road, Roanoke, VA, USA

Mail: 2060 Cook Drive, Salem, VA 24153

Telephone: +1 540-283-2250

eMail: mh@tmeic.com