

Ceres Paragon Terminals

Improving productivity and customer
service in ports and container
terminals

Ceres Paragon...

- claims to be operate the **fastest** container terminal in the world. It will be the first marine terminal to **integrate** the systems provided by **Navis** with **image acquisition portals**, weigh-in-motion **scales**, closed-circuit television for security and gate control, **remain-in-truck data entry** by truck drivers, **container/yard equipment positioning** through satellite Global Positioning Systems (GPS), and **advanced crane control systems**.

Agenda

- Ceres Paragon Overview
- Technology Overview
- Productivity Improvement
- Customer Service Improvement

Specifics

- 1.000.000 Teus
- Terminal area 55 Ha
- Indented berth 400 x 57 mtr, working adjoining cells
- Marginal berth 615m
- Depth alongside 15.0
- Depot, M&R, Fumigation at the terminal
- Cargo operations 24x7
- 9 ZPMS Cranes 22 rows outreach
- 39 Nelcon 1-over-3 Straddle Carriers
- 2x 700m rail (max 5)
- 433 Reefer plugs
- Automated Gate handling
- 30 truck transfer slots









Fastest...

- New operation, mix experienced & new workers
- Low volumes many bay shifts
- Target 20m/h, avg 24, peaks 31-35 (Sunday)
- With higher volumes, 5-6 cranes = 120-130 berth productivity and higher

Agenda

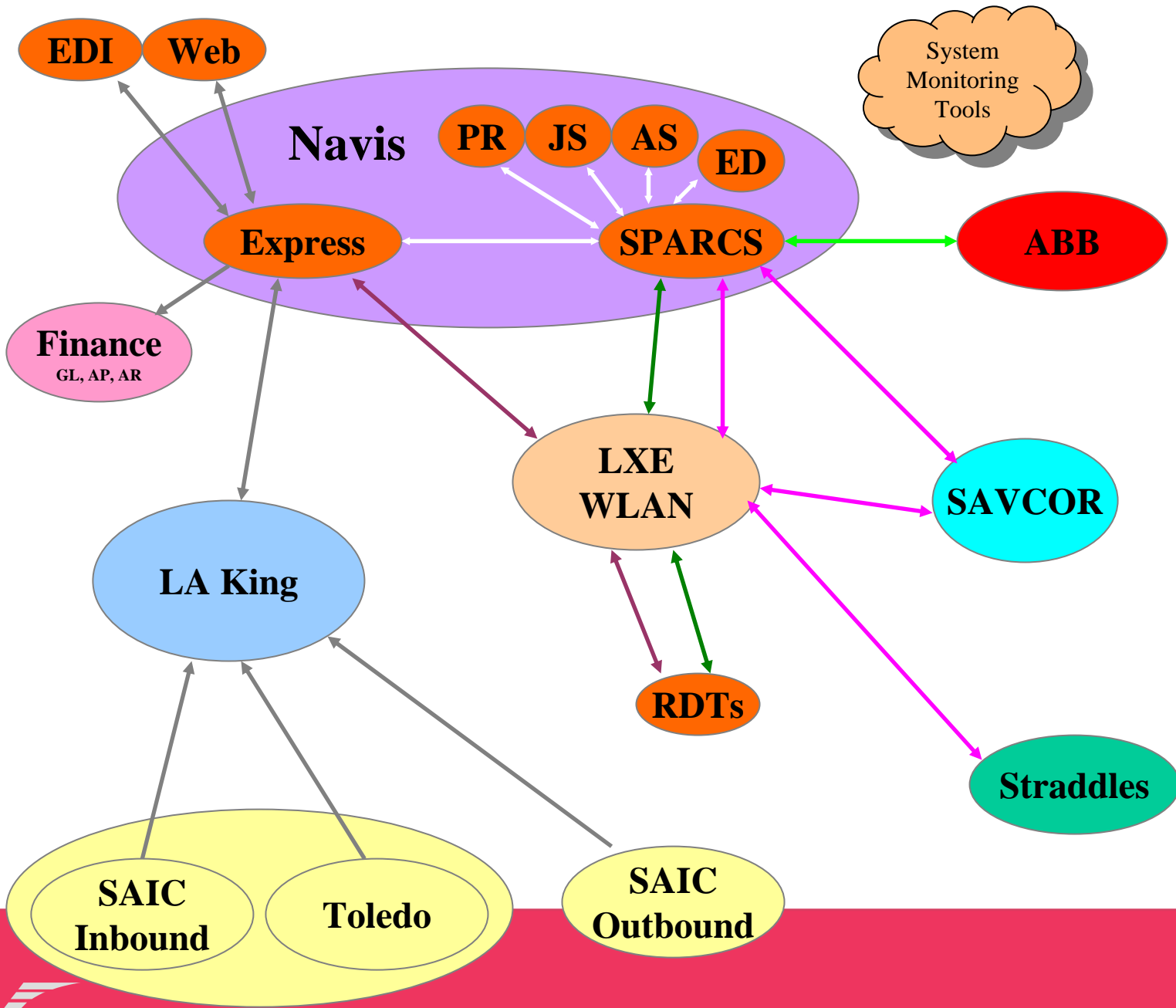
- Ceres Paragon Overview
- Technology Overview
- Productivity Improvement
- Customer Service Improvement

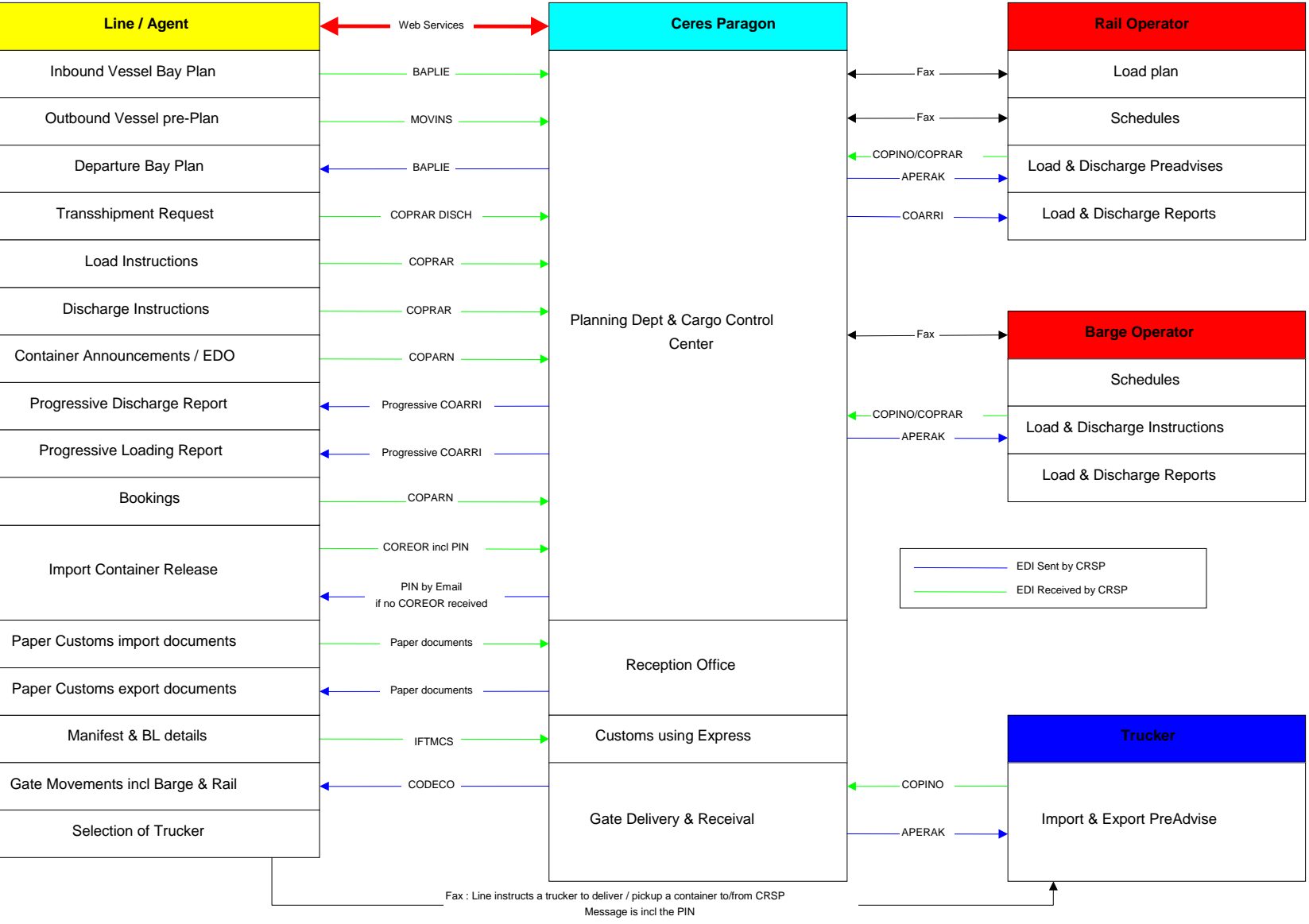
Technology Overview - IT

- Primary and Secondary Server Room
- IBM Cluster AIX & Oracle 9i for Express
- Windows Dell + HP servers for all other applications
- Cold fail-over server policy
- Glassfiber ring connecting all buildings
- 2.4Ghz WLAN for handhelds & strads
- 2MB FrameRelay Internet connection

Technology Overview – Operations-IT

- Navis Express, SPARCS, WebAccess
- SAVCOR DGPS
- LA King Gate Control
- SAIC OCR Acquisition Portals
- Toledo scale
- LXE WLAN Equipment
- ABB Crane Control





Agenda

- Ceres Paragon Overview
- Technology Overview
- Productivity Improvement
- Customer Service Improvement

Productivity Improvement

- Meet Customer agreements
- Cost reduction vs. Cost Increase/Investment
- Finding the right balance
- Balance moves over time
- Re-align IT to Operational Targets and Situation

Productivity Improvement

- Data Entry
- Work preparation
- Reporting
- Smart Operation Planning
- Smart Operation Execution
- Reduce cycle time
- Reduce wait time
- Reduce errors and problems
- Downtime reduction

Productivity Improvement

- Reduce Data Entry :
 - reduce time, reduce errors, reduce labor cost
 - EDI, Internet website (Navis WebAccess)
- Automating the work preparation
 - Reduce time, reduce errors, reduce labor cost
 - However... non-perfect data requires checking
 - Means : needing data quality/consistency check tools
 - Means : trust in the system....



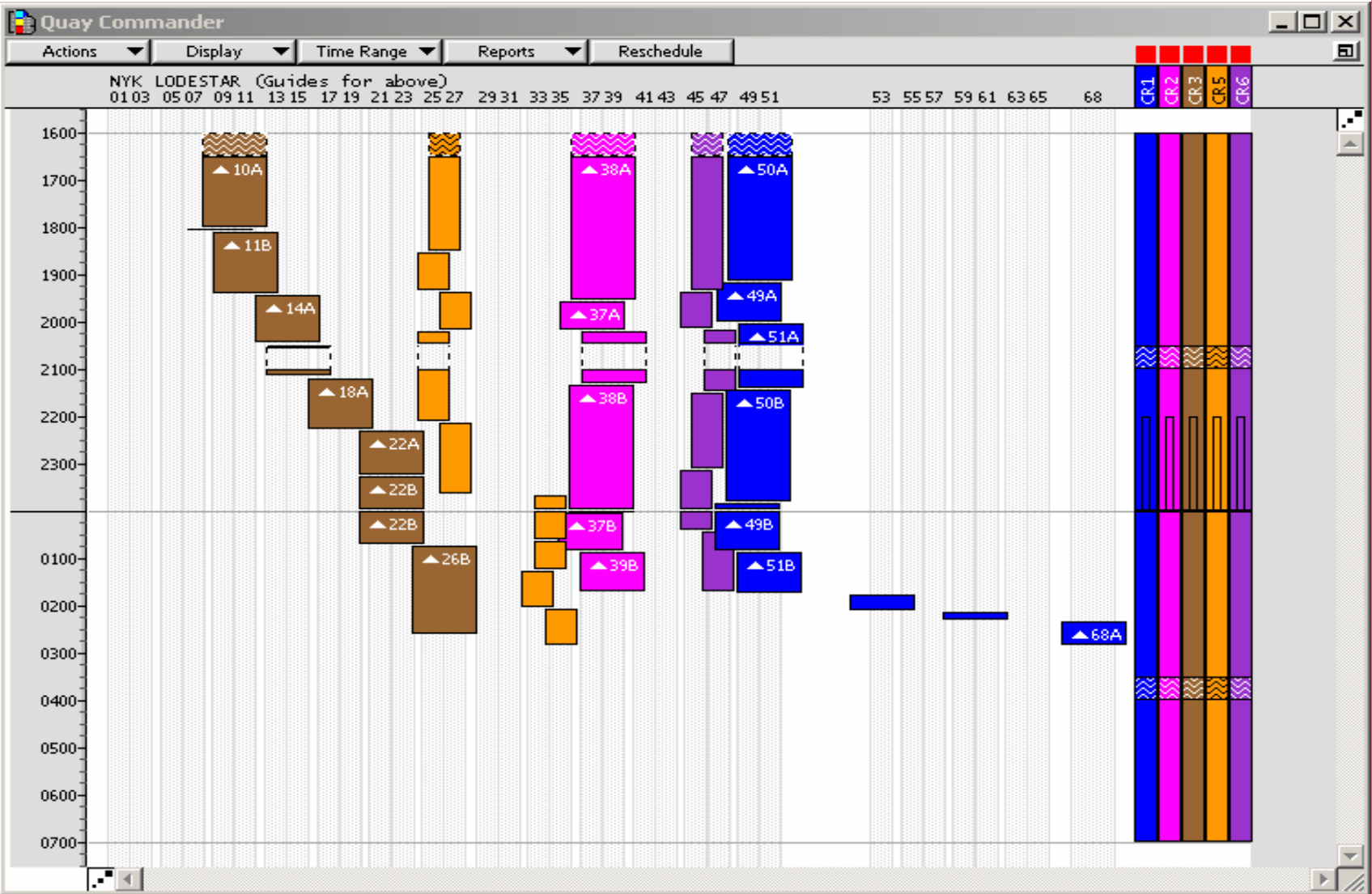
Productivity Improvement

- Customs uses Paragon terminal system
- Smart process dealing with Documents/T1
- Reduce Gate trucker dwell time
 - Reduce CPT labor, reduce Customs labor
 - OCR 91-94% but needs tuning per line
 - Trucker does remaining data entry in-truck
 - Less than avg 30min
 - Trucker can do more trips



Productivity Improvement

- Indented Berth allows working adjoining bays
- Split heavy crane over multiple cranes



Productivity Improvement

- IB allows to switch cranes; North crane with technical problem, boom up, and south crane takes over
- DGPS
 - Keep track of the containers
 - No manual position updates, fast SC operation
- Smart semi-automated cranes
- Print bay plans at Indented Berth

Productivity Improvement

- PrimeRoute
 - Reduce unladen kilometers; select best SC for each job
- AutoStow
 - Look at yard situation when building load sequences
- Job Stepping
 - Dynamically swap jobs between SCs if actual situation differs from planned situation a few minutes ago
- Expert Decking
 - You decide on the yard strategy, let system make the individual decisions

Productivity Improvement

- Walk first, then run
 - Work force inside & outside becomes more experienced & consistent
 - Utilize crane automation better
 - Check Expert Decking strategies & yard layout settings in practice
 - Ready for twin-lift (cranes & SC in yard)
 - Twistlock operation
 - Dual cycling
 - RFID seals at gate, rail & gantry cranes

Agenda

- Ceres Paragon Overview
- Technology Overview
- Productivity Improvement
- Customer Service Improvement

Customer Service Improvement

- EDI : make or break
 - Line and Terminal
- Reporting
 - Accessible 24x7
 - Accessible anywhere
 - Accurate and direct
 - Flexible selection
 - Import into Office
 - Reliable info – our DB
- Meet vessel production agreements
- Be more cost effective
- Reduce port time
- Be attractive to shippers
- Accurate predictions
- Accident reduction

Conclusions

- Greenfield, start with blank page
- New ideas and technology
- New technology is quickly current
- But the ideas and implementation remains
- Innovation at terminal benefits Customer
- Innovation at Customer benefits terminal

Questions?