

# **IT and Terminal Operating Systems**

**AAPA Terminal Management Training  
Program**

**October 18, 2007**

**Long Beach, California**

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# **IT And Terminal Operating Systems Agenda**

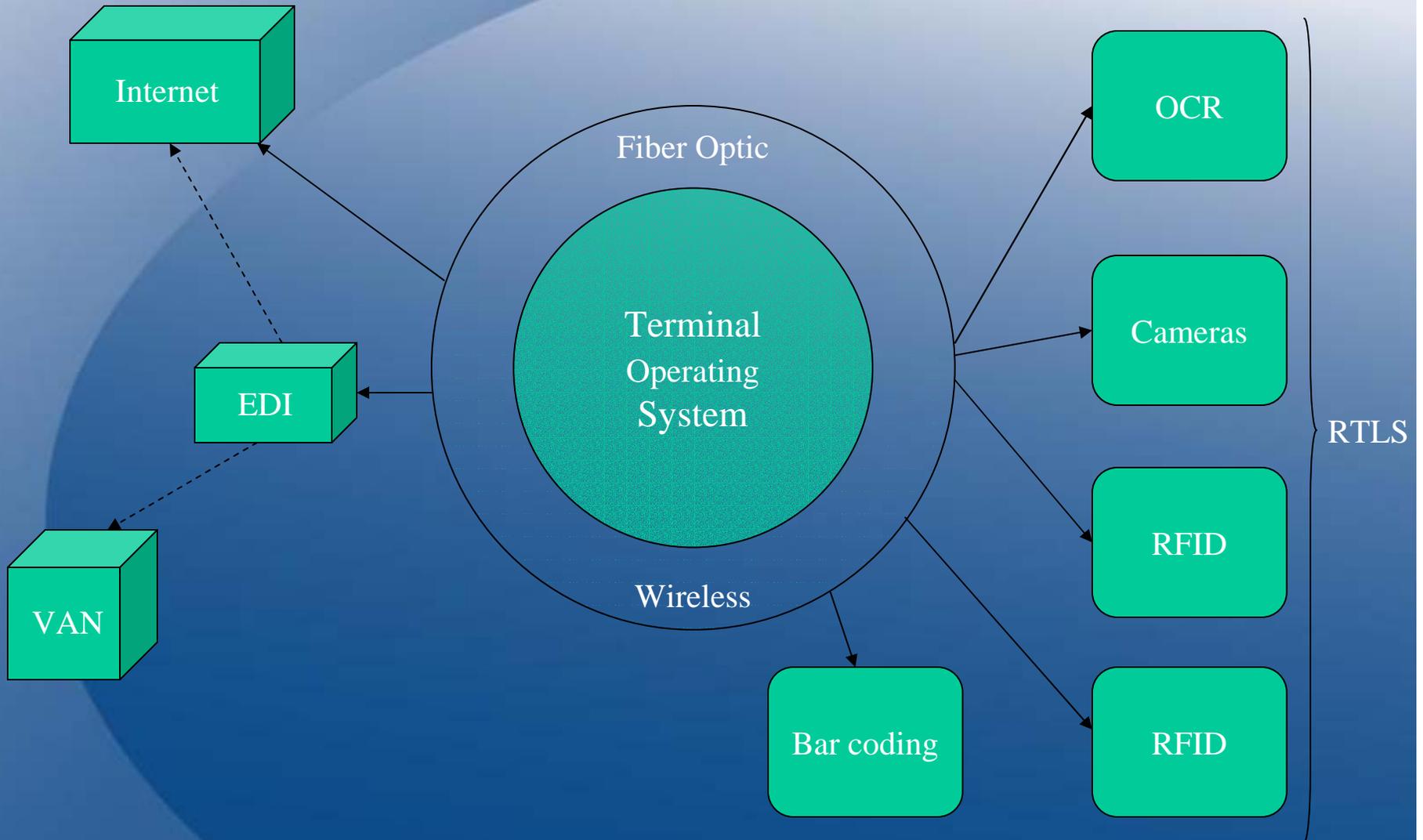
- **Introduction**
- **TOS Overview**
- **TOS Features**
- **TOS Benefits**
- **IT Related to TOS**
- **IT Disaster Recovery**

# Famous IT Quotes

- *I think there is a world market for maybe five computers.*

**Thomas Watson, chairman of IBM,  
1943.**

# IT and Terminal Operating Systems



# Terminal Operating System

Enterprise software that manages all aspects of a terminal operation.



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# Terminal Operating System

## Track -

- **Vessels**
- **Cargo**
- **Yard equipment**
- **Rail**
- **Trucks**



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# Terminal Operating System

## Manage -

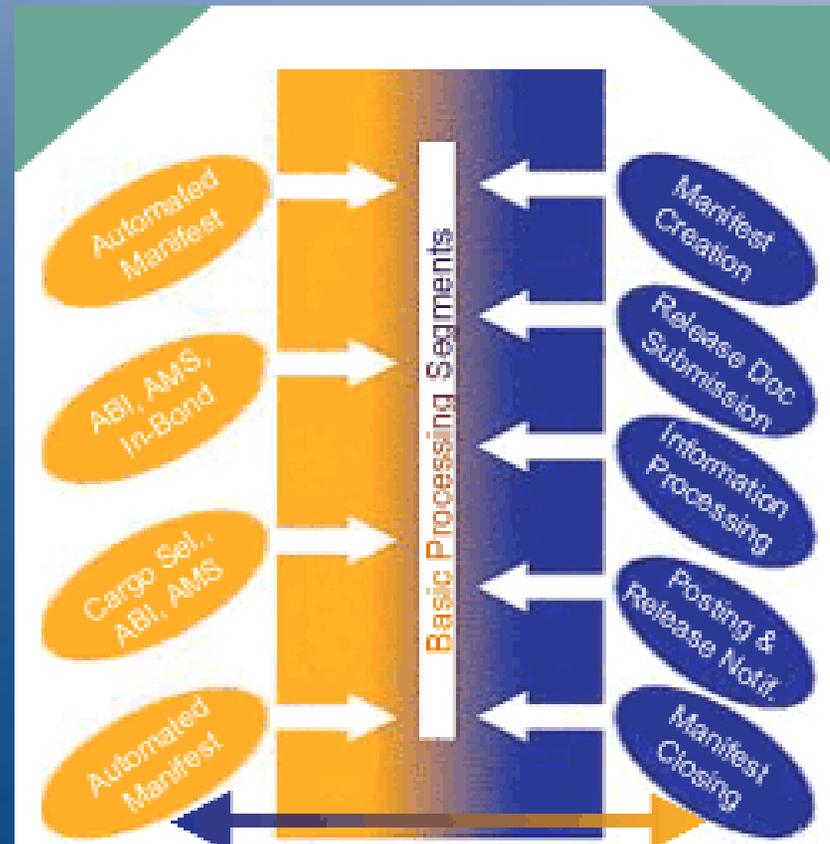
- **Gates**
- **Berths**
- **Wheeled and grounded assets**
- **Container handling equipment**
- **Labor**
- **Vessel stowage**
- **Rail**



# Terminal Operating System

## Interface –

- US Customs AMS
- Shippers
- Carriers
- Railroads
- Port authorities



# Famous IT Quotes

- *Computers in the future may weigh no more than 1.5 tons.*

**Popular Mechanics, forecasting the relentless march of science, 1949.**

# Terminal Operating System

## Measure Key Performance Indicators

- **Space utilization**
- **Labor**
- **Gate time**
- **Berth allocation**
- **Dollars**



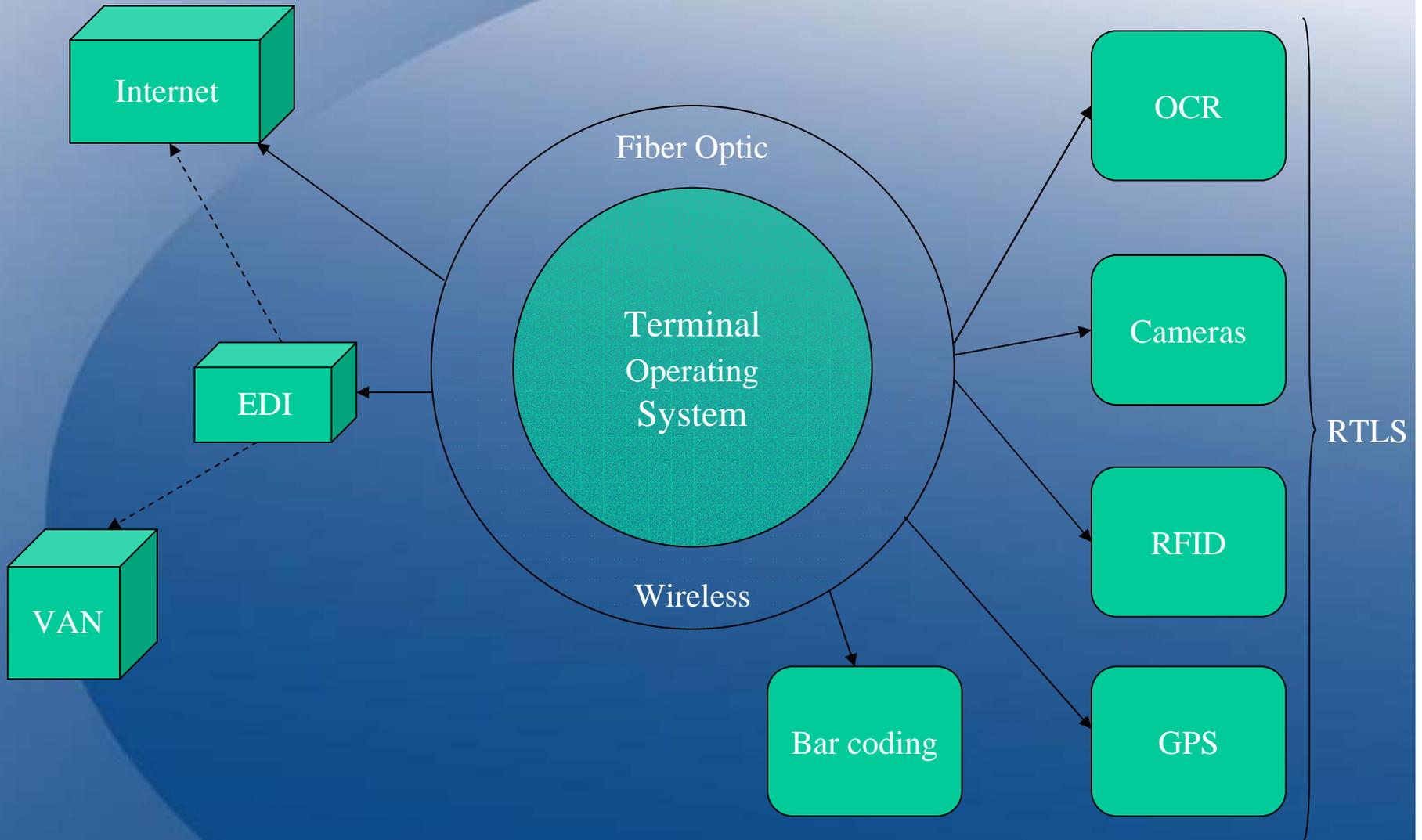
# Terminal Operating Systems



- SPARCS
- Main Sail
- Voyager
- Cosmos

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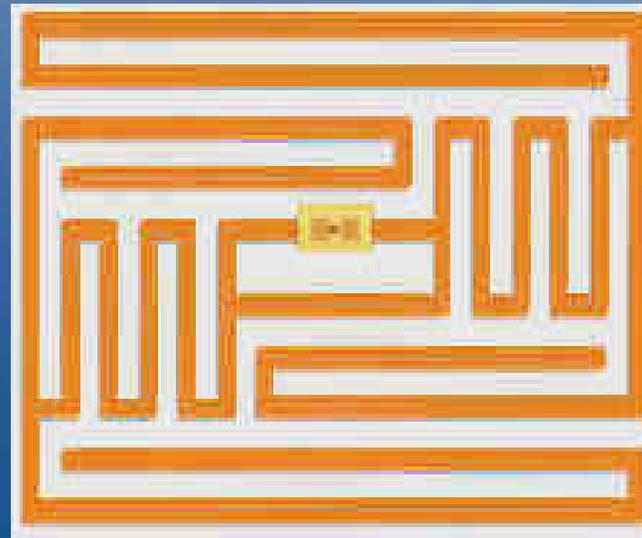
# IT and Terminal Operating Systems



# RFID

## Radio Frequency IDentification

- **Tags are attached to equipment**
- **Tag ID linked to equipment ID**
- **Transmit data to readers**
- **Active and passive tags**



# GPS

## Global Positioning Systems

- Provides reliable location information worldwide.
- Free to anyone with a receiver.
- Requires GPS reader.
- Also provides accurate time.



# Cameras

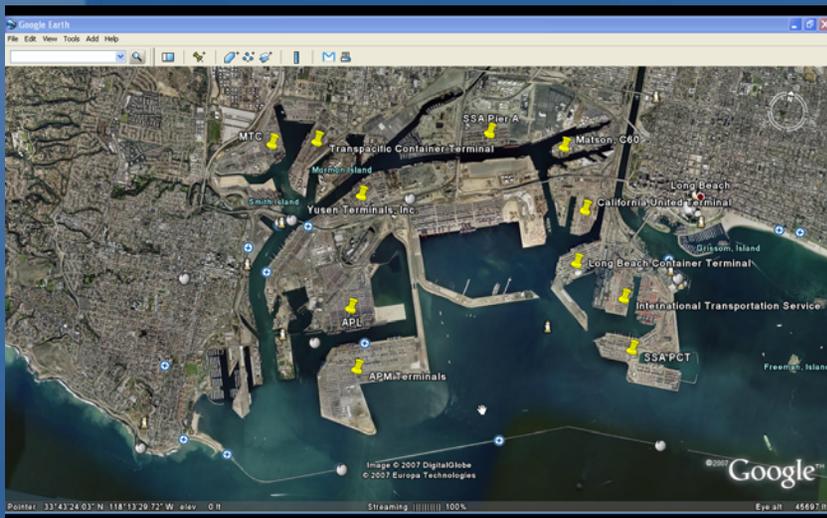
- **High quality digital cameras with pan, tilt and zoom controls.**
- **For yard management as well as security.**
- **Combined with OCR to identify equipment.**



# RTLS

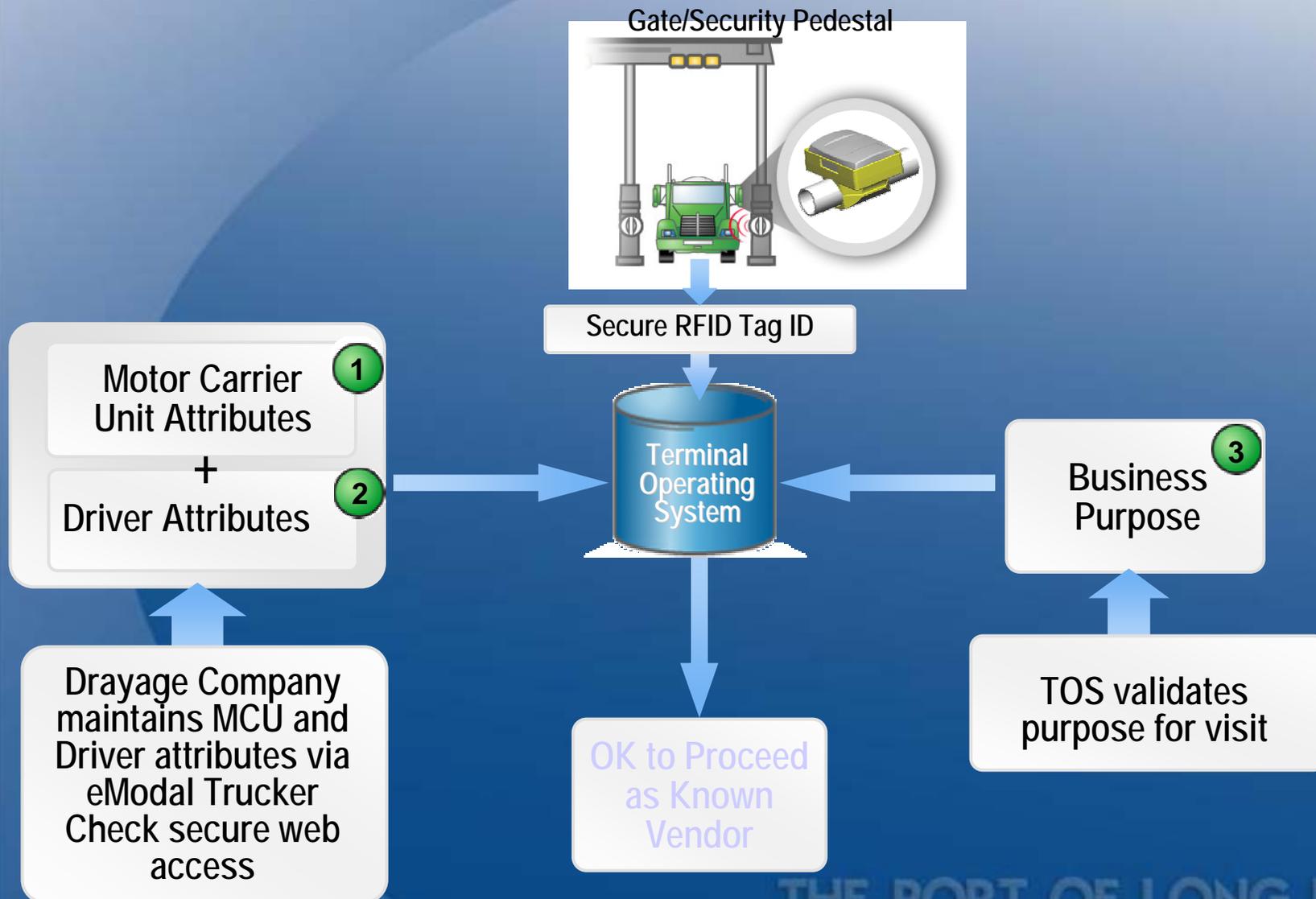
## Real Time Location Systems

- Combines various technologies to track equipment and cargo.
- Based on active RFID.
- Used extensively in the San Pedro Bay ports.



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# Street Truck Security





TraPac

YTI

Pier A

C-60

CUT

LBCT

ITS

APL

APM Terminals

PCT

LA/LB  
WhereNet  
Full Locate  
MTS  
Customers

# Bar Codes



- Automate data entry.
- Reduce errors and increase efficiency.
- Low cost solution.

# Famous IT Quotes

- *There is no reason anyone would want a computer in their home.*

**Ken Olson, president, chairman and founder of Digital Equipment Corp., 1977.**

# Fiber Optic Networks



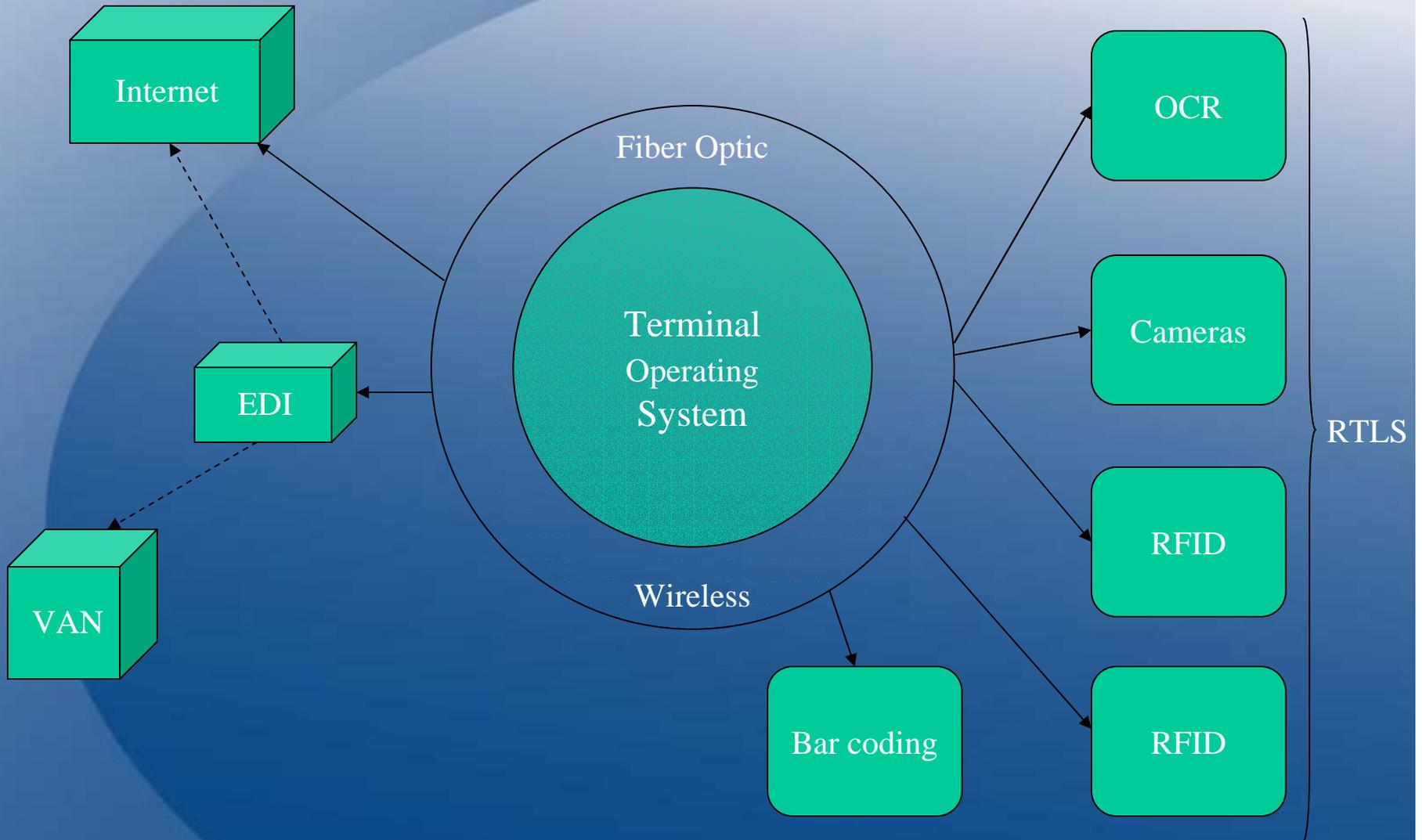
- **High speed transmission.**
- **High capacity.**
- **Smaller bundles than metal wire.**
- **Long distance transmission.**

# Wireless Network

- **Uses radio signals to broadcast network data between devices.**
- **Not as fast as wired networks.**
- **More flexibility and easier to deploy than wired networks.**



# IT and Terminal Operating Systems



# EDI

## Electronic Data Interchange

- **Set of standards for the exchange of business documents electronically.**
- **Computer to computer exchange between companies.**
- **Can use almost any form of communications to transmit the message.**

# Internet

- **Ubiquitous**
- **Can't live without it**
- **In some ways the Internet is the computer, everything attached to it is incidental.**

# IT Disaster Recovery Plan

- **Prepare for any disruption to your IT.**
- **Identify critical systems to prioritize system recovery.**
- **Identify teams and create task lists.**
- **Identify critical vendors.**
- **Secure backup site to operate from.**

# IT Humor

- **To the optimist, the glass is half full.**
- **To the pessimist, the glass is half empty.**
- **To the IT guy, the glass is twice as big as it needs to be.**

# Questions?

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