



**Presenter:**

**Tom Manzagol**



# **Centralized Fleet Automated Management System (CFAMS)**

Expanding the Range  
of Wireless Solutions  
for Mobile Equipment  
Management



# CFAMS - CTMA

- **Selected as CTMA Program funded by NCMS in 2006**
- **Industry Participants:**
  - I.D. Systems**
  - Ford Motor Company**
- **Government Partners:**
  - Sierra Army Depot – participating as an implementation site**
  - Anniston Army Depot – participating as an observer**
  - Red River Army Depot – participating as an observer**
  - DLA DRMO and DDSJ**

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**“We feel this system (CFAMS) has the potential to save DOD up to \$100,000,000 in maintenance costs”**

*- Greg Kilchenstein, OSD*



## Why *CFAMS*?

- **Paper-based management:** labor-intensive; no access control; no real-time visibility; human error
- **Wireless systems:** proven effective/reliable for access control, real-time data & asset visibility, data accuracy, safety/maintenance/productivity improvements, and rapid return on investment



# Primary Benefits of CFAMS

- **Reduction of lost work-time accidents and asset damage**
- **Increase operational readiness of industrial vehicle fleet**
  - **Drives expanded productivity at the depot**
  - **Reduces maintenance expenditure**
  - **Reduces capital expenditure on equipment procurement**
  - **Reduces fuel cost and carbon emissions**
- **Enables Lean/Six Sigma programs for process improvement**
  - **Real-time access to detailed operational productivity data**
  - **Facilitates “doing more with less”**

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# Equipment Management Issue #1

- **SAFETY & SECURITY**  
(negative consequences when untrained and/or unauthorized personnel use equipment)

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## Equipment Management Issue #2

- **CBM** (lack of timely data, inefficient planning, and poor control of equipment lead to high maintenance costs & down time)



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# Equipment Management Issue #3

- **LEAN LOGISTICS**  
(excess equipment & underutilized people add up to major capital and operating costs that can be reduced significantly)

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# Equipment Management Issue #4

- **VISIBILITY/LOCATING**

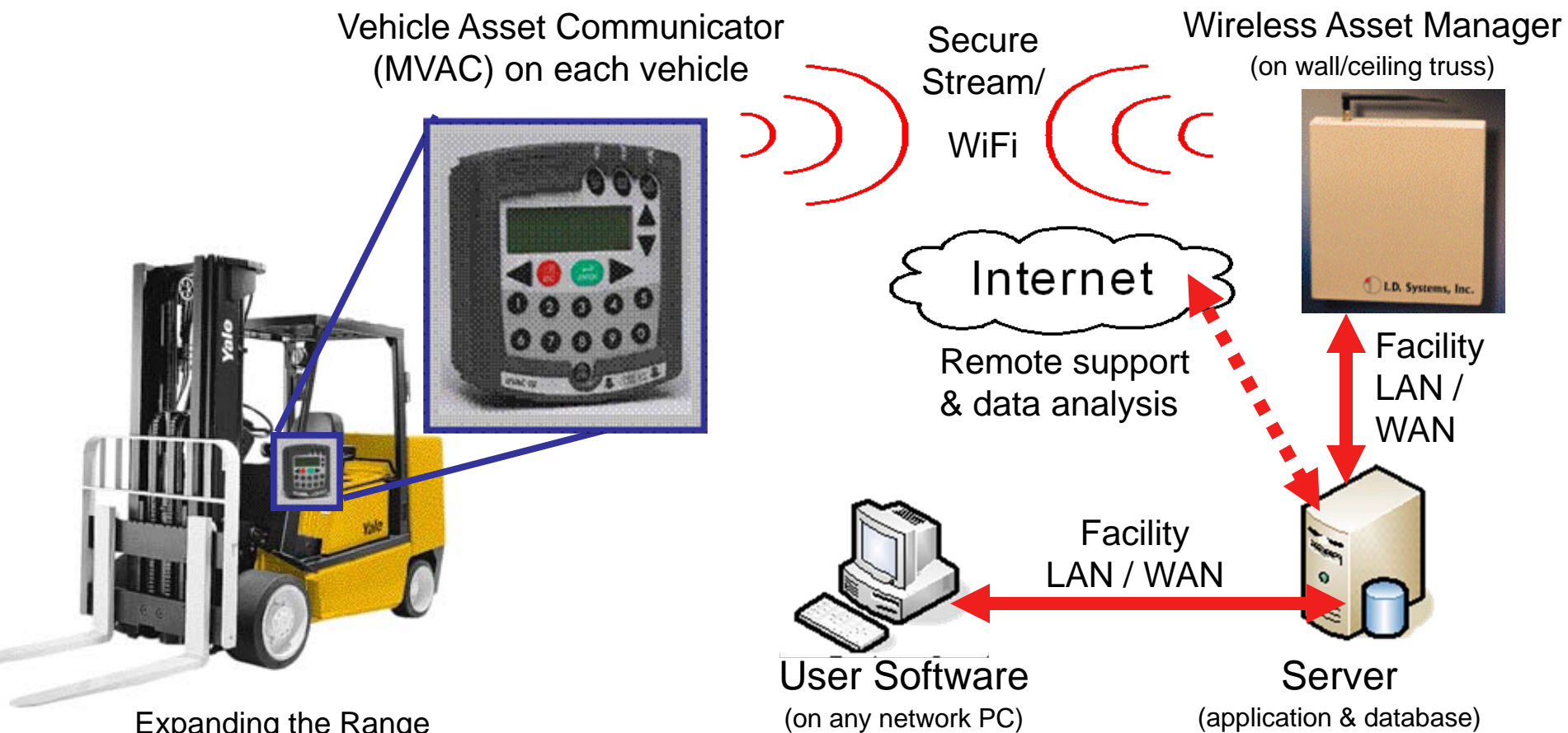
(Access to timely location data avoids wasted time locating mission-critical equipment)

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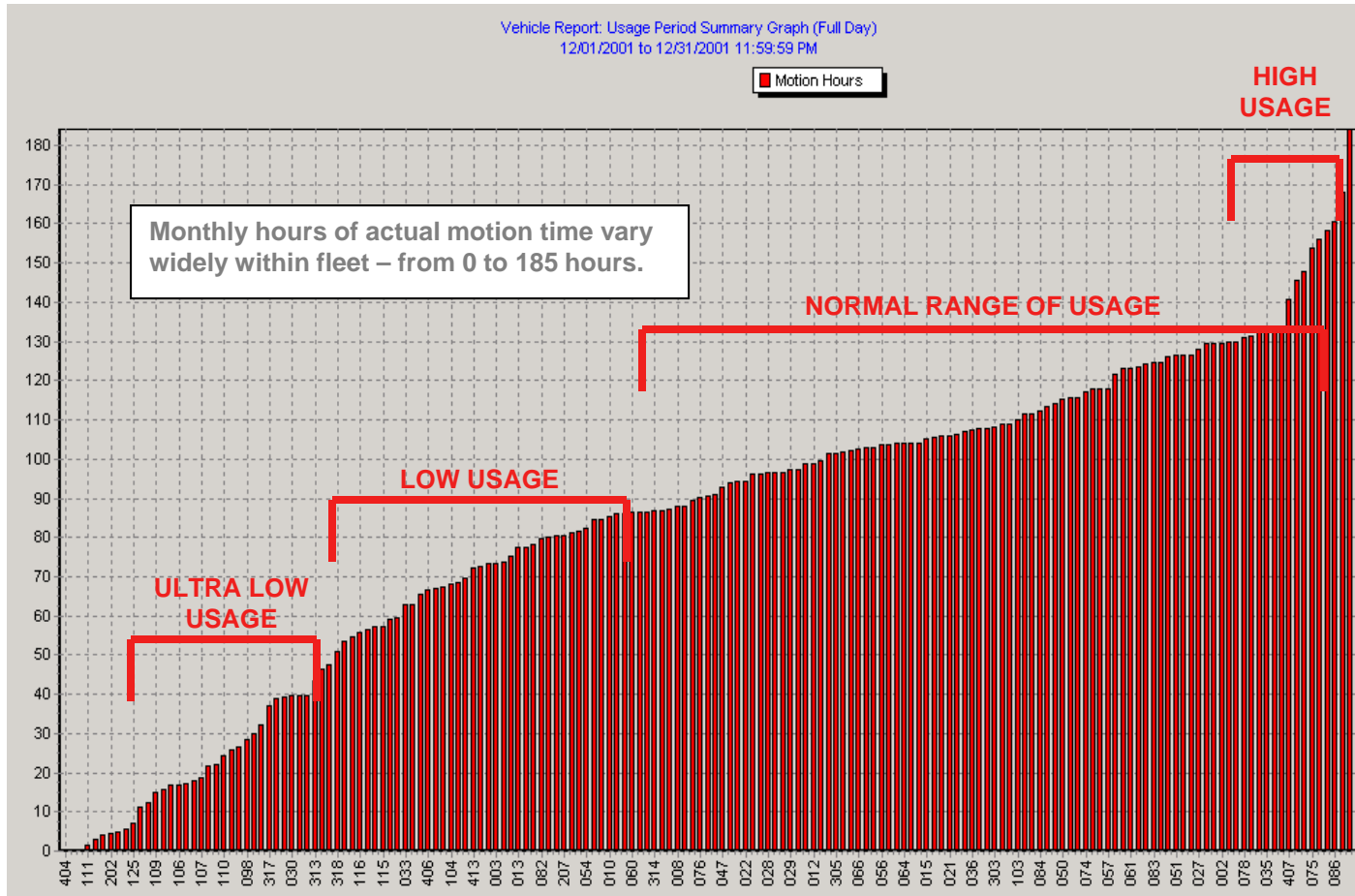
# CFAMS System Architecture



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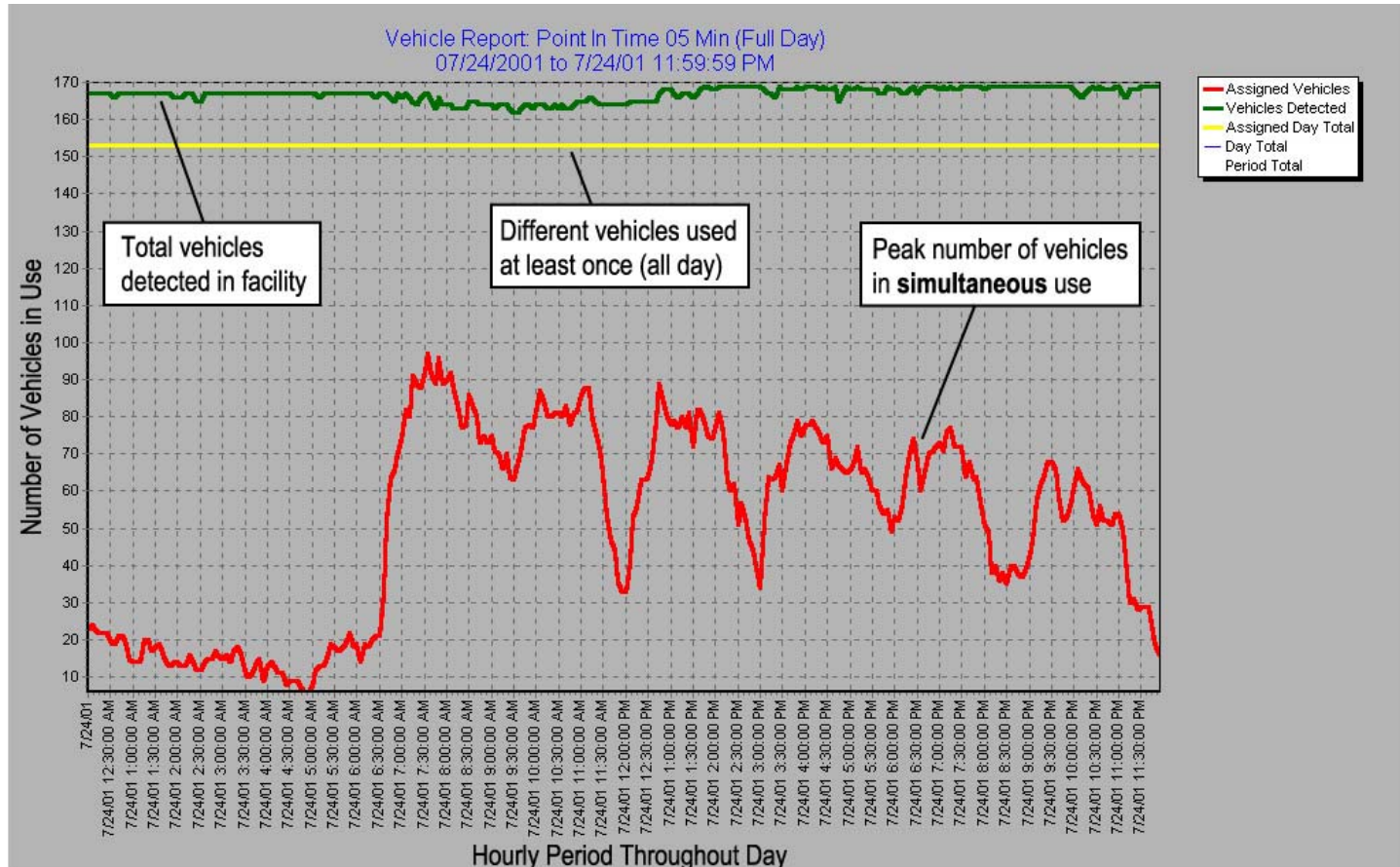
# CFAMS Run Time Analysis



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# CFAMS Fleet Utilization Analysis



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# CFAMS Real-time Analysis Tools

- Real-time viewer locates idle/abandoned vehicles
- Filtered views by vehicle, operator, workgroup, safety condition, operational status, other factors
- Historical movement replay for workflow analysis

The screenshot displays the CFAMS Real-time Analysis Tools interface. On the left, there is a 'Target Group' dropdown set to '(All Groups)' and radio buttons for 'By Vehicle' (selected) and 'By Operator'. Below this is a 'Vehicle List' with 15 entries, all checked: PRD-00075, PRD-00076, PRD-00077, PRT-00276, PRT-00277, PRT-00278, and PRT-00279. The main area shows a grid-based map with several green and blue markers. An 'Alert/Search Filters' window is overlaid on the map, containing various filter options: OSHA Overdue, OSHA Critical Response, Restricted Zone Violations, Low Battery detected, Impact detected, Out of Range, Soft Bypassed, Hard Bypassed, Power Down Mode, Out-of-Service, Assigned, and Idle. The 'Idle' filter is checked. At the bottom, a 'GV - Playback' window is visible, showing playback controls (play, pause, stop, seek), a progress bar at 70 of 276, and a 'Playback' button. The playback window also includes a 'Rate(sec.)' of 1, 'Unit' set to 'Detection', 'Increment' of 1, and a 'Vehicle' dropdown set to 'PRD-00075'. The time range is set from '08/02/2004 10:50:42 AM' to '08/03/2004 9:50:42 AM'.



# Return on Investment Case Study

## SIAD CFAMS Pilot Test

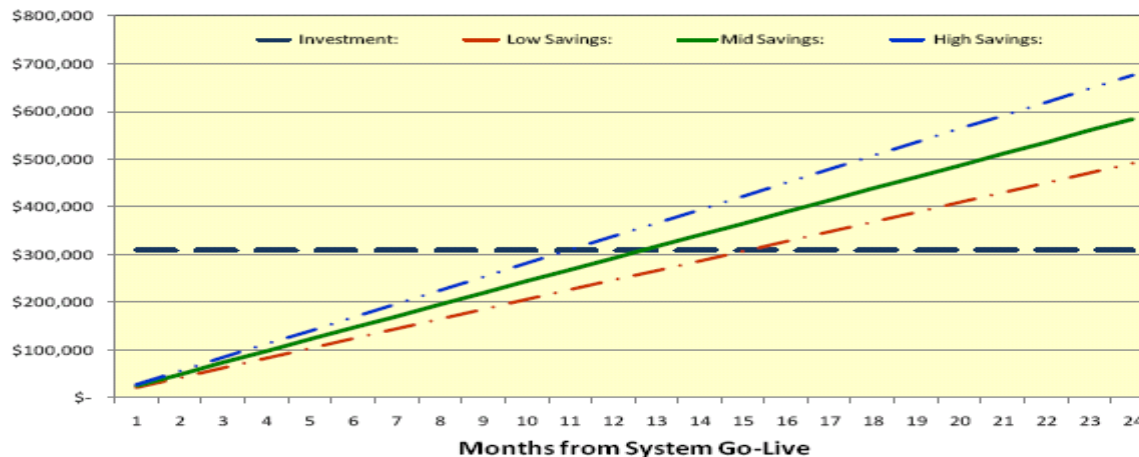
### Savings Opportunity Summary for Pilot (50 Vehicles)

Preventative Maintenance/Repair:			\$17,700 / Year
Fleet Reduction Opportunities:			
Vehicle Leases:	\$63,000	to	\$90,000 / Year
Additional Maintenance/Repair:	7,350	to	10,500 / Year
Fuel/Energy Savings:	14,350	to	20,500 / Year
Labor Cost Reduction:	131,040	to	187,200 / Year
Damage Reduction:			\$12,500 / Year
<b>Total Savings Opportunities Identified:</b>	<b>\$245,940</b>	<b>to</b>	<b>\$338,400 / Year</b>

Based on the \$309,545 cost of the program, and a rate of inflation of 3% annually, the financial benefits of this project are:

IRR:	112% to 183%
5-Year NPV:	\$812,510 to \$1,234,054
Cash Flow Positive:	11 to 16 months

### Project Cash Flow for 50 Vehicle Pilot



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# Summary

- State-of-the-art wireless technology
- Comprehensive package of hardware & software
- Enables maximum efficiency (more throughput with less)
- Proven ROI with world-class gov't. and commercial customers



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