wInsight Web Services & Portal Integration

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(850) 269-3260

C/S Solutions, Inc.
C/S Solutions Overview

• Founded May 1993
• Founders in Business Area for Over Twenty Five Years
• Primarily a “Shrink Wrap” Software Firm
• Core Products Shipping Since 1994
  • Stable
  • Mature
  • Strong Reputation for Quality
• C/SSI Tools used on the Vast Majority of Government Programs
• Entire Staff has Extensive Project Management Background
Market

- Business Intelligence Tools for Project Management (PM)
  - Business Areas Currently Include Cost, Schedule & Risk Management
  - Market is Growing due to OMB Circular A-11 and the Sarbanes-Oxley Act
  - Close Partnerships with Leading Vendors of Underlying Cost and Schedule Systems
    - AMS Real-Time
    - ARES Corp
    - Artemis
    - Business Engine
    - Microsoft
    - Oracle
    - Primavera
    - SAP
    - Welcom
Competition

• Underlying Cost & Schedules Tools have some “Limited Functionality” in our Area

• Where we Differentiate
  • Ease of Use
  • Power of Tools
  • Quality of Tools
  • Integration with MS Windows
  • Web Delivery/Web Services
  • Portal Integration
  • Flexible Electronic Data Transfer/Consolidation
  • Designed from “Ground-Up” to Enhance Communication between Supplier and Customer
  • Large Government Customer Base (i.e., ACAT1, DCMA, DAU, etc.)
  • Large Industry Customer Base
Statistics of wInsight Users

- **Numbers**
  - Hundreds of Sites
  - Over 40,000 users worldwide

- **Types of Users**
  - Government (30%)
  - Aerospace Industry (55%)
  - Other (15%)
    - IT
    - Telecommunications
    - Construction
    - Mining
    - Oil

- **Where**
  - United States (97.5%)
  - United Kingdom (.5%)
  - Australia (1.0%)
  - Other (1.0%)
    - Canada
    - Japan
    - Hong Kong
    - Spain
    - Italy
    - South America

Boeing
Lockheed
Pratt
More...
Sample wInsight Customers

• Aerospace Firms
  – Boeing
  – Lockheed Martin
  – Raytheon
  – BAE
  – Northrop Grumman
  – General Dynamics
  – Pratt & Whitney
  – United Defense
  – L3
  – CSC
  – SAIC
  – Others

• Government
  – US Air Force
  – US Army
  – US Navy
  – NASA
  – IRS
  – FBI
  – FAA
  – NRO
  – DOE
  – NSA
  – Australian MOD
  – Others
System Overview

Presentations

Risk+ for

MS Access
MS SQL Server
Oracle

MS Project

C/S Glue for

Connect Products for

Vendor XML Support

XML

X12 XML

Briefing Wizard

C/S Glue for

MS Project
P3/P3e
Open Plan

C/S Glue Viewer

Performance Management

wInsight & Administrator

MS Access
MS SQL Server
Oracle

wInsight Web/Web Services
Cost/Schedule Viewer

Vendor XML Support

SAP/Cobra/AMS/Legacy

Connect Products for

MS Project
P3 Cost Manager
Business Engine
MS Excel
P3
Open Plan
Artemis

Transfer Cost Data
Transfer Cost & Schedule Data
Transfer Schedule Data

C/S Solutions, Inc.
Screen Snapshots of Desktop Applications
Earned Value Metrics

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AI Narrative - MOH-2 WBS JAN 93 Dollars

As of the end date, the current period shows the performance for the cost performance index (CPI) with a value of 1. In this case, the performance index is 0.86. The CPI-LER is 1.05, calculated by taking remaining, 2.579%, by the estimate to complete this effort, 12,022.6. The CPI-LER index on the work remaining in order to achieve the LER.

STATUS OF ELEMENT

This element represents 100.0 percent of the total contract.

- This effort has a favorable cost variance of 7.5%.
- Work in progress is behind schedule.
- The LER indicates that this effort will under-run.
- There are indications that you’ve got problems developing.
- Earned value data indicates this effort is about 34.0% complete.

Based on how things are going, this will be very difficult.

There is already an unfavorable cost variance of -108.4.
1000 - MOH-2
  2000 - PROJ MANAGEMENT
    2100 - PROJ MANAGEMENT
    2200 - SYS ENGINEERING
    2300 - FUNC INTEGRA
  3000 - PRIME EQUIP
    3100 - SENSORS
    3200 - COMMUNICATIONS
    3300 - AUX EQUIP
    3400 - ADPE
    3500 - COMP PROGRAMS
    3600 - PCC
    3700 - DATA DISPLAY
  4000 - SPARES
  5000 - DATA
    5100 - ENG DATA
    5200 - MANAGEMENT DATA
  6000 - TEST & EVAL
    6100 - TEST FACILITIES
    6200 - SYSTEM TEST
    6300 - PCC TEST
  7000 - PLUG
  OV - OVERHEAD
  COM - COST OF MONEY
  G&A - GEN & ADMIN
  UB - UNDIST BUDGET
  MR - MGT RESERVE
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wInsight Web Services
Sample Web Service

Credit Card Processing

Standard Inputs
- Buyer/Seller
- Credit Card #
- Amount
- Date

Standard Outputs
- Authorization Code
- Amount
- Credit Card #
- Date

Web Service

Intra/Internet

Consumer

Gas Station
Retail Store
Grocery Store
Web Store
Fast Food Restaurants
C/S Solutions
Banks

Credit Info
Exchange Rates
wInsight Web

- wInsight Web Components (.dll files)
- wInsight Web Services (.dll files)
- wInsight Web Parts (.dwp files)
- wInsight Web (.asp files)
- wInsight Desktop
- wInsight Database

- Browser
- MS SharePoint Portal
- Smart Clients
- Portals

wInsight Web Components:
- Charts
- Reports
- Sort Window
- Schedule Gantt
- Task Detail
- Data
- Login
Web Centric Applications
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### Cumulative Variance

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**Name: PCC**

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- 40.0
- 45.0
- 50.0
- 55.0
- 60.0
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- 80.0
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- 90.0
- 95.0
- 100.0

**Schedule:**
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![Task Name Diagram](image-url)
Key Portal Benefits

• Single User Interface to Access Key Program Data from all Management Systems
• Manages Content Layout by Individual and/or Group
• Can Optionally Manage Security
• Can be Used for Integration of “Best of Breed” Systems
• Provides Collaboration Tools
  – Document Management
  – Calendars
  – Discussion Groups
  – Alerts
  – Etc.
Line of Business
Program Management Metrics

• **Earned Value**
  – CPI & SPI performance trend data
  – Statistical performance forecast & program EAC
  – Modern tools allow program managers to focus on cost & schedule variances by severity at any level of the WBS

• **Schedule Performance**
  – Critical path analysis and disciplined start/finish metrics provide a foundation for validating earned value performance

• **Requirements**
  – Tracking to closure by milestone all requirement TBD & TBRs

• **Risk Management**
  – Continuous assessment of risk consequence and likelihoods
  – Detailed review of Burn-down and “off-ramp” planning for “red” risk items
Line of Business
Program Management Metrics

• Financials & staffing status
  – NBAE, EBIT, Cash, Orders, Capital, Overhead and EP Staffing time-phased plan & actuals

• Customer Satisfaction
  – CPAR & Award Fee performance & tracking

• Technical Performance
  – Technical performance measurands identify & track key variables
  – Metrics focus on major sources of instability
Portal Demo
Risks

1. Concurrent Dev
2. ESD Pin Thread Level
3. P/L Digital Processor
4. Uplink Phased Array
5. Maturity of Terminal Interface
6. EMI Testing
7. Terminal Planning
8. Signal Proc S/W
PM DASHBOARD

Earned Value

Scheduling & Planning
Financial Management
Process Maturity
Risk Management

Program: Program Portfolio □ Lowest Level

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<td>-17,805.8</td>
<td>0.159</td>
<td>504,775.2</td>
<td>556,156.9</td>
<td>-11,381.7</td>
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Waterfall Chart

Milestones
1. Requirements
2. Communication
3. Development
4. Install
5. Support
6. Improve Models
7. Measure Install
8. Measure

MOH-2 [1060]

Risk Waterfall: Concurrent Dev | last updated: 03/06/03
## Cost and Charts

### Table:

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<tr>
<th>WBS</th>
<th>DESCRIPTION</th>
<th>SV</th>
<th>CV</th>
<th>Var Req</th>
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<th>BCWP</th>
<th>ACWP</th>
<th>SV</th>
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<td>scSV 1,318,083.1</td>
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<td>Systems Engineer</td>
<td></td>
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<td>A</td>
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<td>186,478.4</td>
<td>176,885.8</td>
<td>173,039.5</td>
<td>-9,592.6</td>
<td>-5.14</td>
</tr>
</tbody>
</table>

### Chart:

- **Lockheed Martin Aeronautics Company N0019-02-C-3002 CPAF RDTE**
- **Element: 0000**
- **Bull's-eye Chart - As of: 09 Jun 02**
- **Name: JSF Air System**

- Behind schedule, under cost
- Ahead of schedule, under cost

- Percent of Hours

- 2002
- 24 Mar
WebEVR Main Page Layout

- Control frame
- Menu
- Group

Input pane

Sort pane

Banner
Favorites

Charts
Reports
Schedule
Request
News

Key:
- Written by CS-Solutions
- Written by Raytheon

Integrated additional features with the COTS product.

Written by Raytheon

C/S Solutions, Inc.
PowerPoint Disappoints

• PowerPoint Management Systems are a vicious cycle
  – Baseline systems atrophy when the data gets fixed in the chart
  – Updating charts becomes the de facto process rather than maintaining the baseline system
• PowerPoint prone to error and lacks objectivity
  – Hard to enforce presentation standards and consistently trend data for “look ahead” indicators
  – Currency of information always questionable
  – People make mistakes
• Modern Portal Technologies and XML promise practical alternative to once formidable problems
Columbia Accident Investigation Report

“As information gets passed up an organization hierarchy, from people who do analysis to mid-level managers to high-level leadership, key explanations and supporting information is filtered out. In this context it is easy to understand how a senior manager might read this PowerPoint slide and not realize that it addresses a life threatening situation.”
Portal Success Prerequisites

• Consistent presentation of program performance
  – Facilitate executive portfolio apples-to-apples view

• Wide spectrum program adaptability and scalability
  – Significant cost and architecture considerations

• Organic – grown from existing best practice tool infrastructure
  – “no artificial data sweeteners”

• Drive program management best practices
  – “Make it easier to do right”
  – Cleanse and strengthen baseline systems
  – Improved timeliness and resulting management value
  – Increased Data Validity and “Look Ahead” indicators

• Discretionary Perspective and Program Data Security

• Near zero additional adoption cost

• Customer & Sub-contractor friendly
Dashboard Audiences

• Program Management Consumers
  – Customers
  – DCMA
  – Corporate & Line of Business Executive Management

• Program Management Performers
  – Program Managers
  – Cost Account Managers
  – Subcontractors
  – Product, Test & Other Support Centers

• Program Management Caretakers
  – Financial & EVM Analysts
  – Master Planner & Schedulers
  – Systems Engineering & System Performance & Risk Trackers
Dashboard Content Types

- **Dynamically Generated**
  - wlnsight Charts
  - Schedule data and Gantts
  - Other "web-enabled" program management systems

- **Statically Imported**
  - Excel Charts
  - PowerPoint and other images
  - Documents

- **Historically Derived**
  - Portal generated metrics
  - Historically trended and plotted thru Portal Dataset queries
  - "Mining and Cross-Referencing" PM Data
Web Service Benefits

• Consist Data Regardless of Interface Used to Display the Objects/Data
  – Zero Footprint Web Clients
  – Smart Web Clients
  – Web Based Data Collectors
  – Windows Desktop Tools
• Portal Server Software & Hardware Independent
• Implementation Partner Independent
• Integration with Other Legacy Systems Via Commercial Portals
• Reduced Training Cost, Users See wInsight Objects/Data in Common Web Site/Portal Integrated with other Information (TPM, Risk, Budget, Financial)
Our Strengths

- Key Relationships with PM Vendors
- Integration with Broad Base of PM Tools
- EDI Consolidation Features
- Relationships with Implementation Partners
- Maturity of Tools (COTS since 1994)
- Proven History on Major Programs
- Integration of Tools in DAU Courseware
- Architecture
  - Ability to Handle Very Large Data Sets
  - Zero Footprint Client
  - Tiered Security
  - XML Data Interchange
  - Web Services
  - Portal Integration
- Large Customer Base (Government & Industry)
Summary

- WInsight provides a powerful tool to support sharing and analysis of performance data
  - Desktop
  - Web-Centric
  - Commercial Portals
- Interfaces with existing program management tools
- Supports “Entry Level EV” from schedule-based systems up to ERP-based EV
- Can be quickly implemented with virtually any existing project management system
- Most widely used analytical tools for earned value, schedule and risk management.
- Supports web viewing/services
Backup Slides

Existing wInsight Web Samples
Lockheed Martin
Space Sample
Program Management

Performance Portal Initiative

Mike Alford

Executive Staff – Programs
Space Systems Company
Line of Business
Program Management Metrics

• **Earned Value**
  – CPI & SPI performance trend data
  – Statistical performance forecast & program EAC
  – Modern tools allow program managers to focus on cost & schedule variances by severity at any level of the WBS

• **Schedule Performance**
  – Critical path analysis and disciplined start/finish metrics provide a foundation for validating earned value performance

• **Requirements**
  – Tracking to closure by milestone all requirement TBD & TBRs

• **Risk Management**
  – Continuous assessment of risk consequence and likelihoods
  – Detailed review of Burn-down and “off-ramp” planning for “red” risk items
Line of Business
Program Management Metrics

• Financials & staffing status
  – NBAE, EBIT, Cash, Orders, Capital, Overhead and EP Staffing time-phased plan & actuals

• Customer Satisfaction
  – CPAR & Award Fee performance & tracking

• Technical Performance
  – Technical performance measurands identify & track key variables
  – Metrics focus on major sources of instability
PowerPoint Disappoints

• PowerPoint Management Systems are a vicious cycle
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  – Updating charts becomes the de facto process rather than maintaining the baseline system

• PowerPoint prone to error and lacks objectivity
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  – Currency of information always questionable
  – People make mistakes

• Modern Portal Technologies and XML promise practical alternative to once formidable problems
Formidable Challenges

- Wide spectrum of programs representing disconnected islands or “Fiefdoms” of performance data
- Lack of business process integration
  - Business applications are not connected
  - Processes are inefficient and plagued by human issues
- Sub-optimal collaboration with partners and suppliers
- Hard to change the way people work
  - Expensive to re-train end users
  - Risk averse culture resistant to IT and process change
- Legacy systems deeply rooted within many organizations
  - Significant resistance to application & systems improvements within executing programs
  - New Capture adoption strategy will not result in tangible process improvement
- Quickly Concluded that Tool standardization is a Red Herring
  - Holistic Processes and Data Liberation are only solution
Fiefdoms of Program Performance

In its role as prime/systems integrator, Lockheed Martin Space has the role of having to integrate multiple program cost and schedule management systems from its supply chain.

Significant delays in data summarization, system data duplication and transmittal processing procedures and analysis by business staff…
Fiefdoms of Program Performance

Problem multiplied many fold at the enterprise level
New Perspective on PM Systems
New Perspective on PM Systems
XML enables standard interfaces to Program Management Systems
Portal Success Prerequisites

• Consistent presentation of program performance
  – Facilitate executive portfolio apples-to-apples view
• Wide spectrum program adaptability and scalability
  – Significant cost and architecture considerations
• Organic – grown from existing best practice tool infrastructure
  – “no artificial data sweeteners”
• Drive program management best practices
  – “Make it easier to do right”
  – Cleanse and strengthen baseline systems
  – Improved timeliness and resulting management value
  – Increased Data Validity and “Look Ahead” indicators
• Discretionary Perspective and Program Data Security
• Near zero additional adoption cost
• Customer & Sub-contractor friendly
VISION: PM Process & Performance Data Liberation via XML & Web Services
### PM DASHBOARD

#### Earned Value

<table>
<thead>
<tr>
<th>Program</th>
<th>Thresholds</th>
<th>To Date</th>
<th>(\text{CUM})</th>
<th>(\text{Current Period})</th>
<th>At Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(SV)</td>
<td>(CV)</td>
<td>(VAC)</td>
<td>(SPI)</td>
<td>(CV)</td>
</tr>
<tr>
<td>Aerosmith</td>
<td>$-22,205.1$</td>
<td>0.749</td>
<td>$-17,800.8$</td>
<td>0.259</td>
<td>$504,775.2$</td>
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<tr>
<td>Gold Finger</td>
<td>$-22,205.1$</td>
<td>0.749</td>
<td>$-17,800.8$</td>
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<td>$504,775.2$</td>
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<tr>
<td>Jaws</td>
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<td>$-493.0$</td>
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#### Earned Value Percentages

| MOH-2 [1060] |

#### EVM Summary

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<th>BCWP</th>
<th>BCWP</th>
<th>ACWP</th>
<th>ACWP</th>
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#### EACvsIEAC

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<th>6 Period CPI</th>
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<th>TCPI to EAC</th>
<th>Eff to Comp</th>
<th>CUM SPI</th>
<th>CTBI</th>
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<td>0.956</td>
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#### Schedule Variance

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<td>-0.480</td>
<td>-0.450</td>
<td>-1.515</td>
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</table>

#### IVAC Chart

- **Cum CPI IVAC**: 0.460
- **3Mos Avg IVAC**: -1.226

#### IVAC Chart Percentages

- % Comp
- % Spent
- % UB
- % MR
## PM Dashboard

### Earned Value

<table>
<thead>
<tr>
<th>Program</th>
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<th>To Date</th>
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<td><strong>Jaws</strong></td>
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<tr>
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</tr>
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</table>

### Graph

- **Cost & Earned Fee**
- **Non-Cancel. Commts**
- **Term Reserve**

- **Cum thru Jan. 02**

- **Dollars ($K)**

- **Process Maturity**
- **Risk Management**

- **MOH-2 [1060]**

- **Funding**

- **Last Updated: 07/25/03**
## PM Dashboard

### Earned Value

<table>
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<th>Program</th>
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<tr>
<td>MOH-2</td>
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</table>

### Process Maturity

- PM Process Maturity Chart
- PM Process Maturity Ranking
- Self-Assessment Detail

### Composite World Class

- Best in Class
- Qualified Participant
- Marginal Performer
- Minimal Capability
- Not Assessed

1 - PM Involvement in Concept/Proposal; 2 - Program/Project Planning; 3 - Performance Management; 4 - Subcontract Management; 5 - Follow-on Business Development; 6 - Earned Value Management; 7 - Requirements Management; 8 - Schedule Management; 9 - Financial Management; 10 - Risk Management; 11 - Organization/Cross Functional Team; 12 - Customer Partnership; 13 - Program/Project Review Process; 14 - Configuration/Data Management; 15 - PM Process Management; 16 - PM Development and Succession;
3. Performance Management

3.1. Baselining

MOH-2

- Not applicable / element not to be assessed

<table>
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<tr>
<th>Level</th>
<th>Criteria Description</th>
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</thead>
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<tr>
<td>Minimal Capability</td>
<td>Program/project plans are created and documented in a common repository which includes a WBS dictionary or its equivalent, schedule network and basis for estimate (BOE) sheets</td>
</tr>
<tr>
<td></td>
<td>Program/project manager owns the program/project plan</td>
</tr>
<tr>
<td></td>
<td>Program/project quality objectives and procedures are defined and documented in a quality plan</td>
</tr>
<tr>
<td>Marginal Performer</td>
<td>Senior Management approves the program/project plan</td>
</tr>
<tr>
<td></td>
<td>Customer commits to the program/project plan</td>
</tr>
<tr>
<td></td>
<td>Functions commit to the program/project plan, including establishing expected levels of support and resources (engineering, systems, facilities, etc) for the program/project to the responsible integrated product team leaders</td>
</tr>
<tr>
<td></td>
<td>Technical performance requirements, schedule and cost baselines are created and electronically accessible</td>
</tr>
<tr>
<td>Qualified Participant</td>
<td>Repeat the criteria defined in the JPL standard (ISO/IEC 21834-3)</td>
</tr>
</tbody>
</table>
Risks
1. Concurrent Dev
2. ESD Pin Thread Level
3. P/L Digital Processor
4. UplinkPhased Array
5. Maturity of Terminal Interface
6. EMI Testing
7. Terminal Planning
8. Signal Proc S/W
Dashboard Audiences

• **Program Management Consumers**
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  – DCMA
  – Corporate & Line of Business Executive Management

• **Program Management Performers**
  – Program Managers
  – Cost Account Managers
  – Subcontractors
  – Product, Test & Other Support Centers

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  – Financial & EVM Analysts
  – Master Planner & Schedulers
  – Systems Engineering & System Performance & Risk Trackers
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• **Dynamically Generated**
  – wInsight Charts
  – Schedule data and Gantt
  – Other “web-enabled” program management systems

• **Statically Imported**
  – Excel Charts
  – PowerPoint and other images
  – Documents

• **Historically Derived**
  – Portal generated metrics
  – Historically trended and plotted thru Portal Dataset queries
  – “Mining and Cross-Referencing” PM Data
PM Portal Functional View

1. Presentation View Defined
2. Functional Architecture Defined
3. Source Data Defined (Reusable)
4. Source Data Delivered via XML
5. Data Transformation
6. Information Delivered

PM Performance Portal

Baseline Source Systems

- Views
- Analytics
- Tool-to-tool integration
- Simulation
- Predictive Capability

Defined by ICD's

Legacy
COTS

Financial
EVM
MRP
Planning
Risk Mgmt
Rqrmts
TPMs
Quality
...
PM Performance Portal Functional Content Hierarchy

Program Manager’s Digital Environment

- **Project Management**
  - IMP/IMS
  - SOW
  - WBS
  - Requirements
  - Action Item Tracking
  - Contract Documentation
  - Risk Management

- **Metrics**
  - Technical Performance Measures

- **Predictive Measures**
  - Intelligent Agents
  - Simulation Modeling

- **Portal**
  - Visualization
  - Single Sign-on
  - Role and Group Based Permissions
  - Team IPT

- **Financials**
  - BOE
  - Earned Value
  - Contract Status
  - Resource Planning

- **Product Data Management**
  - BOM
  - Parts Management
  - Engineering Mgmt (Drawings…)
  - Configuration Management

- **Corporate IT Infrastructure Services**
  - Collaboration Services
    - Conferencing
      - Video
      - Virtual
    - Document Management
  - Messaging Services
    - Email/Calendaring
    - Directory Services
  - Network Services
    - Internal
    - External
  - Security Services
    - Access Controls
  - Help Desk
    - Call Handling
  - Source Data Systems
EVM: Backbone of Modern PM Portal

- WBS Discipline is key for "horizontal integration"
  - This is critical for creating "Eventing" between Portal webparts to synchronize data views cross-system
- Accounting roots makes EVM a fairly disciplined process which in most all cases has the most up to date and complete WBS within a Program’s IT systems
- Within Program Managements systems EVM is one of the most widely accepted and clearly defined PM metrics
- wlnsight is way ahead of the pack with their XML and web services architecture (great jumpstart to effort)
JSF Physical Application Architecture Model

Teammates

Suppliers

Co-located Participants

Customer

INTERNET

FTWEV
NT Compaq Proliant
winsight web server v6
Citrix NFuse Server
MS IIS Web Server w/DCOM

VPC FARM
NT Compaq
Citrix Server
winsight Suite v6
Artemis Views
MS Office v2000 w/MSP v98

JSF VPC
SUN Solaris
Artemis on Oracle
winsight v6 on Oracle
Syntax TotalNet
Artemis Job Servers

INTERNET

Co-located Participants

International

Co-located Participants

4 Teammates
13 Suppliers

Participants

Co-located Partners at LM
Aero FW

Lockheed Martin Corp

Participants

Participants

Participants

Participants

Participants

Participants

Participants

Participants

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Earned Value Management
Tool Architecture

Suppliers
Variety

Partner
Cobra

Contractor
SAP

Partner
PCMS

Partner
MPM

International
Cobra

Partner
CV

Integrated Management Framework (IMF)

Cost Schedule Database (CSDB)

Gateway

wInsight

Suppliers
Variety

Partner
MSP

Contractor
MSP

Partner
MSP

Partner
OPP

International
PV / MSP

Partner
PV / MSP
Two Ways to See EVMS Data:

1. Full desktop access from any PC, MAC, or UNIX web browser with the NFuse plug-in and the Citrix ICA Client
2. wInsight Web access only from any web browser

Initial NFuse Logon

Webserver
NT 4 Compaq Proliant 6400R
wInsight web server v6
Citrix NFuse Server v1.5
MS IIS v4 Web Server w/ DCOM

Citrix server farm and a file server
NT 4TSE Compaq Proliant 6400R
Citrix Metaframe Server v1.8
wInsight Suite v6
Artemis Views v4.15
MS Office v2000 w/MSP v98

Database server
SUN Solaris 8 E10000
Artemis v4.15 on Oracle v7.3.4
wlsight v6 on Oracle v8i
Syntax TotalNet v6
Artemis Job Servers v4.15
### Cost and Charts

#### Table:

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<th>DESCRIPTION</th>
<th>SV</th>
<th>CV</th>
<th>Var Req</th>
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<th>SPI</th>
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#### Chart:

- **Drill Down**
- **Bull's-eye Chart - As of: 09 Jun 02**
- **Lockheed Martin Aeronautics Company N0019-02-C-3002 CPAF RDTE**

**Element: 0000**

- BEHIND SCHEDULE, UNDER COST
- AHEAD OF SCHEDULE, UNDER COST

**Percent of Hours**

- 2002:
  - 6.0%
- 24 Mar:
# Control Account Plan

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## Task Details

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<td>Q4</td>
<td>Q1</td>
<td>Q2</td>
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</table>
WebLogic J2EE Sample
Project Objectives

- A “Performance Dashboard”
- Simplify adoption of EVMS on Commercial Engine programs while standardizing EV reporting on all programs
- Reduce problems/complaints with multiple systems and paper-based reporting
- Simple, consistent output format
- Quick and easy to interpret
  - Visually-oriented data
  - Traffic-light reporting
  - Variance thresholds and exception reporting
  - Trend charts on all EV metrics
- Want to look at the data in much the same way as customer CPR, C/SSR and many other reports
- Accommodates weekly EV reporting and performance assessment
Current Reporting Structure

- **wInsight**: EVMS Reports
  - Customer Reporting
  - Real-time data
  - Task plans/schedules
  - Resource Requirements
  - Operational reporting
  - Actuals, with drill-down capability
  - EVMS data

- **Business Warehouse**
  - Manpower
  - Cross-program Reports
  - Queries

All data in Business Warehouse and wInsight is extracted from SAP

<table>
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<tr>
<th>WBS</th>
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<th>LVL</th>
<th>LL</th>
<th>SV</th>
<th>CV</th>
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<th>BAC</th>
<th>%C</th>
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<td>3400 ADPE</td>
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Project Growth

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<th>Nov '01</th>
<th>Jan '02</th>
<th>May '02</th>
<th>Oct '02</th>
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<td>&lt;10</td>
<td>&lt;200</td>
<td>&gt;200</td>
<td>&gt;450</td>
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<tr>
<td>Users</td>
<td>&lt;10</td>
<td>&lt;25</td>
<td>150</td>
<td>&gt;400</td>
<td>&gt;1500</td>
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</tbody>
</table>
Raytheon Sample
WebEVR Background

• Raytheon Company profile:
  79,000 employees worldwide
  $16.9 billion in net sales for 2001

• Command, Control, Communication & Information (C^3I) Systems is one of 12 business segments in Raytheon. **C^3I is organized into three major business units and a US/French joint venture.**
  • Command, Control and Communication Systems, *headquartered in Marlborough, Massachusetts*;
  • Imagery and Geospatial Systems, *headquartered in Garland, Texas*;
  • Strategic Systems, *headquartered in Falls Church, Virginia*;
  • Thales Raytheon Systems - US, *headquartered in Fullerton, California*.

• C^3I profile:
  20,000 employees
  $4 billion in net sales for 2001
  hundreds of individual programs

**Diversified core businesses spread throughout the country.**
WebEVR Project Overview

We enhanced a COTS web package with additional capabilities to create an enterprise-wide Earned Value reporting solution.

- **Accessibility**: Provide access to wInsight Analysis tool, “Free” and on the web, for programs across C3I.
- **Efficiency**: Providing EVMS and schedule data in a more timely fashion to users, from engineering through senior management.
- **Security**: Provide each user with visibility to only those programs, organizations, and features appropriate to their work.
- **Empowerment**: Providing the user local control of loading data and customizing their “look and feel” of the data.

Provide a powerful product that addresses enterprise issues.
The following features are included CS-Solutions’ wInsight Web:

– Celebrated sort windows, reports, trend charts, and C/S Glue schedule correlation to any client running version 4.0 (or higher) of Internet Explorer or Netscape Navigator.

– Standard browser-based interface that supports Executive users, CAMP/IPT members and financial managers.

– Users can select projects, elements, charts, reports, a Gantt view of the schedule, and generate management by-exception sort windows for a single project or across multiple projects.

– Provides the capability to collect narrative feedback to explain what caused the problem, corrective action to be taken, and impact to the overall project.

– No software installation is required on the client computer.

CS-Solutions provided critical core functionality.
WebEVR Added Features Include

The following features are included in the proposed solution:
– WEB-based EVMS and schedule reporting across the enterprise
– User Favorites – shortcuts to frequently used views & charts
– On-line user request and maintenance system
– Group programs according to the enterprise organizational structure
– Control level of detail that the user sees based on “need to know”
– Local control of views, filters, and charts
– “Current” EVMS data light indicator
– Link to pertinent EVMS web pages
– Automatic PowerPoint chart generation
– Local control of loading earned value & schedule data
– Drag-and-drop style of loading data

Developed solutions to address enterprise issues.
Integrated additional features with the COTS product.
WebEVR Geographical View

Provide enterprise wInsight analysis via internal WEB access, centralized data storage, and administration.
WebEVR Classes of Users

- **Viewing User**
  - Reviews and analyzes EV and schedule data via the web
  - Belongs to one or more groups
  - Has access to view one or more programs
- **Data Loader**
  - Responsible to load EV and schedule data for one or more programs
  - Retrieves presentation files
- **Group Administrator**
  - Establishes and maintains custom views, filters, and charts for one or more groups

*Grouped related system responsibilities into logical user roles.*
WebEVR Classes of Users (cont’d)

• Super User
  – An EV subject matter expert
  – Resource to help answer business and technical questions

• System Administrator
  – User with business focus (not IT person)
  – Define Users
  – Define Groups
  – Define Programs/Contracts
  – Assign Access rights
  – Assign Group Administrators
  – Assign Data Loaders
  – Set start of month
  – Set date for new News
  – Work Issues with users

*Grouped related system responsibilities into logical user roles.*
WebEVR Data Flow by User Class

Data Loader

Unix Server Holds IFS and Oracle DB

EV & Schedule Data

E-Mail Notification of success or failure

Windows 2000 web server

IFS submits data to be loaded into the database

Request PP slides

Group Admin

Slides e-mail back

View & Filter Definitions

E-Mail Notification of success or failure

Analysis Via the web

Viewing User
WebEVR Group Organization

Groups are designed with flexibility to meet the business needs.
Generic MS SharePoint Sample
AI Report

WBS AI Narrative (Dollars)

As of: JAN 93
Contract Name: MOH-2
Contract Number: F04695-86-C-0050
Contractor: MEGA HERZ ELEC & VEN

Element Code: 3600
Element Name: PCC
Project Officer: Zepka
Office Symbol:

CUMULATIVE PERFORMANCE

As of JAN 93, the work scheduled was 1,692.8. This means that the effort was expected to be about 29.2% complete (100% BCWS/BAC). Accomplishments, represented by the value of BCWP, indicate that 1,681.4 worth of work has been performed.

Work accomplished to date (BCWP) is less than the work that was scheduled (BCWS) indicating that the effort is behind schedule. Last period, BCWS was 1,250.0 and BCWP was 1,242.6.

Actual expenditures through this period are 1,977.6, which means that to date, the effort is costing more than expected.

In total, this element has a budget of 5,800.6. The latest revised estimate indicates a projected cost of 5,687.8. Last period the budget was 5,547.2 and the estimate was 5,734.4.
### Program Portfolio

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<th>CV</th>
<th>VAC</th>
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<th>CV $</th>
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<th>ACWP CUM</th>
<th>BCWP CUM</th>
<th>% CMP</th>
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<td>↑</td>
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<td>504,775.2</td>
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<td>82.21</td>
<td>-51,381.7</td>
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<td>0.949</td>
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<td>Gold Finger</td>
<td>↓</td>
<td>↓</td>
<td>↔</td>
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<td>504,775.2</td>
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<td>82.21</td>
<td>-51,381.7</td>
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### Cost Data

#### IVAC Chart

**AI Narrative**

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<th>BAC</th>
<th>EAC</th>
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