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Accenture Federal Services

Agile Development of Shared Situational Awareness: Two Case Studies in the U.S. Air Force and Army

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High performance. Delivered.

Agile Development of Shared Situational Awareness: Two Case Studies in U.S. Air Force and Army

- In a world of a fast changing threat, software development has to handle requirements for unknown threats that cannot be identified ahead of time.
- Agile software development methodology enable fluid delivery of capability in a timely manner
- Two cases: U.S. Army and U.S. Air Force

U.S. Army Intelligence Center of Excellence

Agile Development of Shared Situational Awareness: Two Case Studies in U.S. Air Force and Army

- U.S. Army Intelligence Center of Excellence
 - USAICoE is building a next generation software application to solve a knowledge management and collaboration problem with respect to the Capability Development & Integration process
 - The vision is to maximize the return on this investment by broadly applying this application across USAICoE, the Army, the DoD, and the Federal Government
 - The capability is being demonstrated to a wide variety of organizations and is helping to solve the government knowledge management and collaboration challenges

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Knowledge Management Challenges

Challenge

- High turnover leads to knowledge retention issues
- Long Ramp Up Time due to difficulty in accessing knowledge
 - Tacit knowledge
 - Disparate (hard drive silos)
 - Document centric
- Hard to Collaborate
 - Identify who has expertise in particular topics
 - Know what others are working on that may be related



Opportunity

- Better Connect:
 - People to Content
 - People to People
- Knowledge Creation:
 - Rapid and Easy
 - Process Centric
 - Collaborative

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Solution: Wiki On Steroids

- ✓ **Centralized Knowledge** – tacit and disparate knowledge is gathered and organized in a centralized repository
- ✓ **Topic-Centric** – content is organized around topics, not “captured” inside documents
- ✓ **Cooperative Content Creation** – knowledge workers all contribute to the content



Hard to get knowledge in:

- ✗ **Manually Populated** – content must be manually gathered & populated
- ✗ **Manually Organized** – hyperlinks and page categories must be manually created
- ✗ **“Extra Duty”** – contributing knowledge is a separate task outside of my normal job / process

Hard to get knowledge out:

- **Unstructured Content**– limited to keyword search
- **Limited Collaboration Capabilities**

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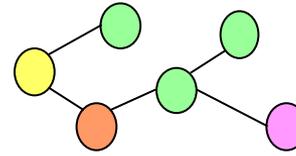
What is the solution?



+



+



+



Wiki

- ✓ Topic-centric Knowledge Management
- ✓ Collaborative Content Creation

Social

Think
“Facebook @ Work”

- ✓ Rich User Profiles
- ✓ Personal Spaces
- ✓ Activity Feeds
- ✓ Status Updates

Semantic

- ✓ Faceted Search
- ✓ Inferred Relationships
- ✓ Visual Navigation
- ✓ Advanced Reporting & Analytics

Text Mining

- ✓ Document Ingestion
- ✓ Automatic Link identification
- ✓ Automatic Page categorization
- ✓ Crowd-sourced for maintenance efficiency and data quality

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Two sides of the Collaboration

Reference Library



- Knowledge “Hubs”
- Used to get up to speed on new topics quickly;
- Place to “contribute back” to the institutional memory of the organization

Where you go to share knowledge

Analytical Processes

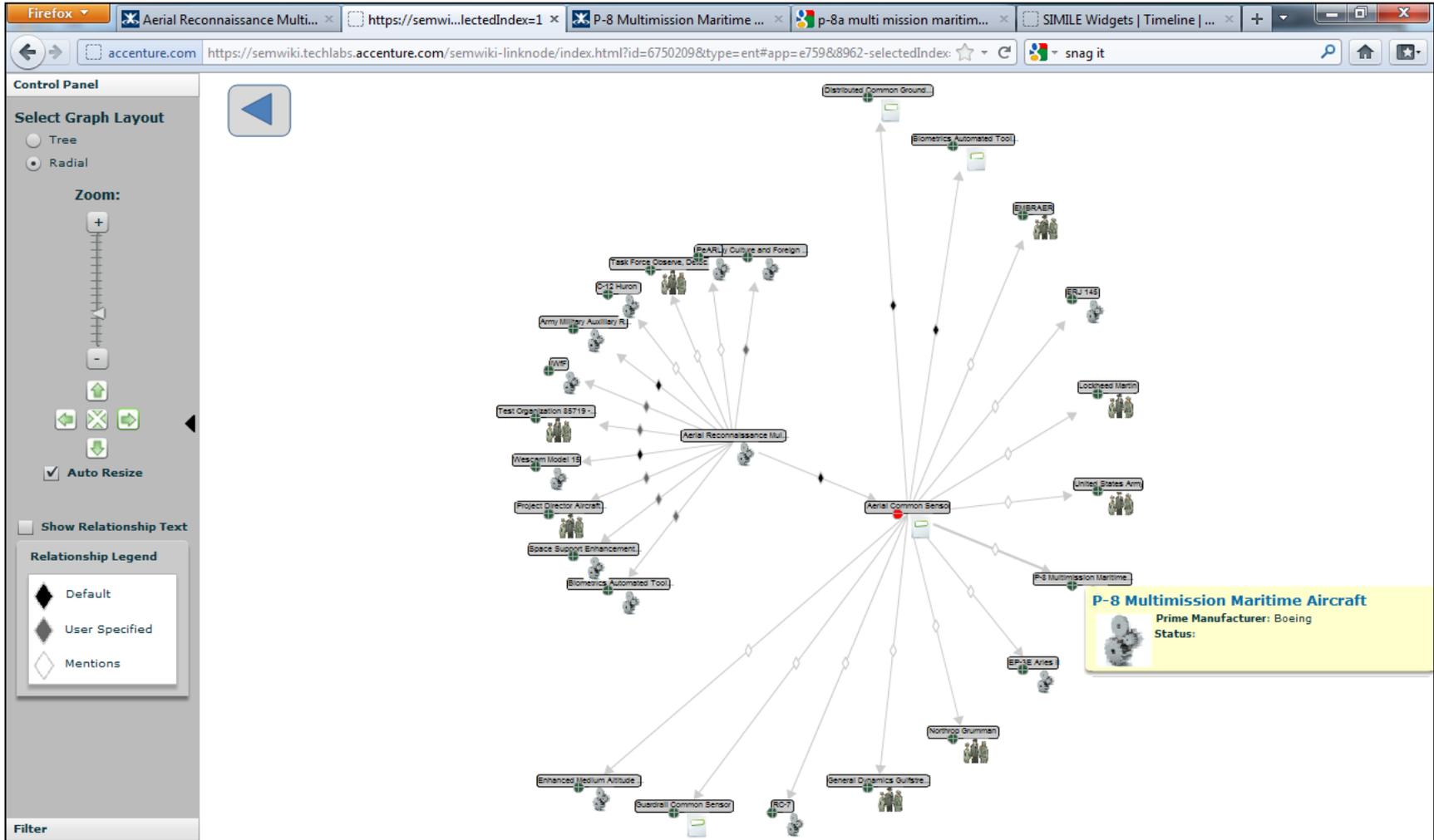


- “Process-Centric” Knowledge Management
- Place to go to execute your organization’s analytical processes and create standard deliverables
- Think “templated” version of Google Docs

Where you go to do your work

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Visual Navigation



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Document Ingestion

The screenshot shows a web browser window displaying a Confluence page. The browser tabs include 'Firefox', 'Poseidon - System - RDD Semantic W...', 'Boeing P-8A Overview - Source Docu...', and 'Chick Ramey - Person - RDD Semanti...'. The address bar shows 'https://semwiki.techlabs.accenture.com/confluence/display/document/Boeing+P-8A+Overview'. The page title is 'Boeing P-8A Overview' and it was added by Chris Zinner. The page type is 'Source Document'. A document viewer overlay is open, showing a document titled 'Backgrounder' with the Boeing logo. The document content includes contact information for Boeing Defense, Space & Security, a description of the P-8A Poseidon aircraft, and a list of customers. The right sidebar contains an 'Entity Viewer' with sections for Systems, Programs, Technologies, Organizations, People, Events, and Installations. The footer of the page reads 'Powered by Atlassian Confluence, the Enterprise Wiki. (Version: http://www.atlassian.com/software/confluence Build#3.3.1 http://www.atlassian.com/software/confluence/tour/enterprise-wiki.jsp) | Bug/feature request | Atlassian News'.

Firefox

Poseidon - System - RDD Semantic W... Boeing P-8A Overview - Source Docu... Chick Ramey - Person - RDD Semanti...

accnture.com https://semwiki.techlabs.accenture.com/confluence/display/document/Boeing+P-8A+Overview

snag it

Dashboard > Source Document > Boeing P-8A Overview

Browse Chris Zinner Search

Boeing P-8A Overview

Added by Chris Zinner

Page Type: Source Document

Expand All / Collapse All

Source Document

General Information

- Ingestor
- Date Ingested
- Document Group
- Document Type
- Originating Organization
- Visibility
- File Information

Show Document

Narrative

Relationships

All Systems

Show 10 entries

DEMONSTRATION LICENSE - This Confluence site is for demonstration purposes only. Evaluate Confluence today.

Powered by Atlassian Confluence, the Enterprise Wiki. (Version: http://www.atlassian.com/software/confluence Build#3.3.1 http://www.atlassian.com/software/confluence/tour/enterprise-wiki.jsp) | Bug/feature request | Atlassian News

Show Document Show Text

1 / 3 61.7%

Comment Share

Backgrounder

BOEING

Boeing Defense, Space & Security
P.O. Box 516
St. Louis, MO 63166
www.boeing.com

P-8A Poseidon

Description & Purpose:
The P-8A Poseidon is a long-range anti-submarine warfare, anti-surface warfare, intelligence, surveillance and reconnaissance aircraft capable of broad-area, maritime and littoral operations.



A derivative of the Next-Generation 737-800, the P-8A combines superior performance and reliability with an advanced mission system that ensures maximum interoperability in the future battle space.

Customers:
The P-8A is being developed for the U.S. Navy by a Boeing-led industry team that

Entity Viewer

Systems

- P-8 Multimission Maritime Aircraft
- Movement Tracking System
- Poseidon

Programs

Technologies

- CFM56-7
- GPS Anti-Jam
- data diode

Organizations

- Boeing
- Northrop Grumman
- Raytheon
- Spirit AeroSystems
- BAE Systems
- GE Aviation

People

- Chick Ramey

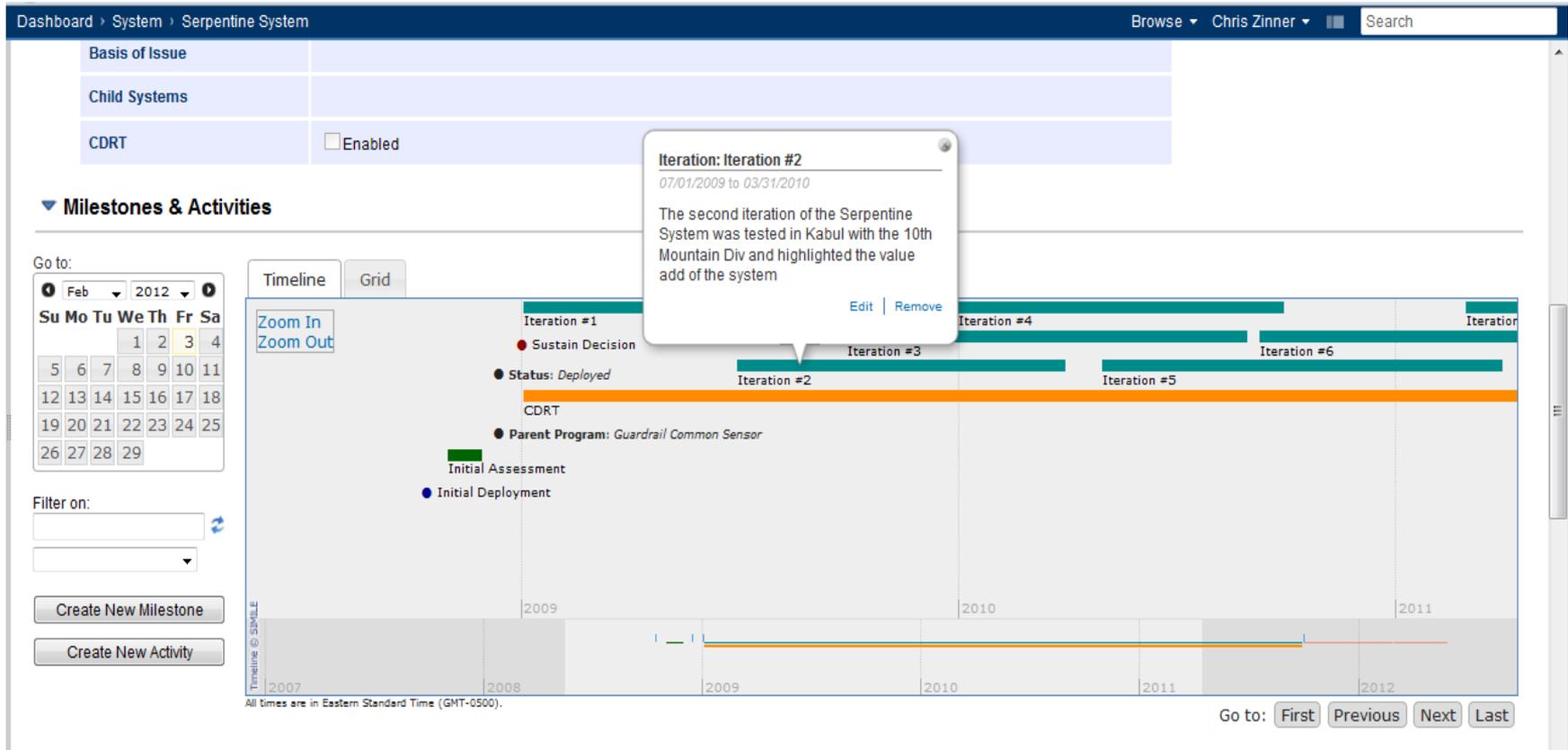
Events

Installations

- Naval Air Station Patuxent River
- Renton Field

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Milestone & Activities Timeline



U.S. Air Force Number Air Force &
Operations Center

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Commanders Situational Awareness (Top Issues)

NetCDS Workspace 624TH OC - System Admin: mark.adkins@af.mil - 624 NetD

Reset | Help | Feedback | Logout

Doc's Tab | Staff Status | **Ops Brief** | Net A | Rolling Operational Widget | Gateway Status | AFSPC | MEL2 | MEL | Map

Commander's Situational Awareness

Current (Assessed) Setup

- 624 ISRD** G 08 2315Z SEP11
- 624 CPD** G 14 0307Z SEP11
- 624 SRD** G 08 2317Z SEP11
- 624 COD** A 19 1213Z JAN12
- 624 CRC** G
- 624 NetA** R 08 1724Z DEC11
- 624 NetD** B 19 1213Z JAN12
- 624 NetOPS** R 08 2332Z SEP11

624 NetD Status

Cyber Incidents Response <ul style="list-style-type: none">CAT I @ Bellview 11-4383: Server back on line [COMPLETE]	Defensive Posture <ul style="list-style-type: none">IOP FAK @ Corinne City: Bypass Mode; ETC: 071600ZJUL11
Dynamic Defensive Cyber Actions <ul style="list-style-type: none">3 New Domains added to BHL4 IP addresses dynamically blocked1 site added to download whitelist	Other Items of Interest <ul style="list-style-type: none">Mission 33-435 UnderwayMission 33-436 HAZCON (50% degradation in IDS)Mission 33-437 Upcoming

Map Views & Documents

NetD

Internet | Protected Mode: On | 125%

Commanders Situational Awareness (Color Details)

NetCDS Workspace System Admin: mark.adkins@af.mil - AFCYBER
624TH OC

Reset | Help | Feedback | Logout

Doc's Tab | Staff Status | **Ops Brief** | Mission Execution | CYBER Mission | CYBER ROW | Gateway Status | AFSPC | Mission Management | Mission ROW | 24th AF | MEL | Map

Commander's Situational Awareness

Issues | **Details** | MEL Events

Current (Auto) Setup

- 624 ISRD** G 08 2315Z SEP11
- 624 SRD** G 24 1539Z APR12
- 624 CPD** G 14 0307Z SEP11
- AFCYBER** B 07 1504Z MAR12
 - AFGIG** G
 - CRC** G 14 0006Z MAR12
 - DCO** B 02 1402Z APR12
 - OCO** R 02 1402Z APR12

AFCYBER Expand/Collapse

R **OCO** All Air Force

- G** Network Attack Storage (NAS)
- R** Cyber Operations Liason Element (COLE)

Davis-Monthan AFB

- A** Network Attack Storage (NAS)

Peterson AFB

- R** Network Disrupt

G **CRC**

B **DCO** All Air Force

- A** HBSS (Host Based Security System)
- R** Gateway

Davis-Monthan AFB

- B** CAT I
- A** CAT IV
- A** HBSS (Host Based Security System)

G **AFGIG**



Commander's Situational Awareness

Issues **Details** MEL Events

Current (Auto) Setup

- 624 ISRD** G
08 2315Z SEP11
- 624 SRD** G
24 1539Z APR12
- 624 CPD** G
14 0307Z SEP11
- AFCYBER** B
07 1504Z MAR12
- AFGIG** G
- CRC** G
14 0006Z MAR12
- DCO** B
02 1402Z APR12
- OCO** R
02 1402Z APR12

- B**
- R**
- All Air F
- G**
- R**
- Davis-M
- A**
- Peters
- R**
- G**

R

OCO

<p><u>Last 24 hours:</u></p> <p>Missions fired: EUCOM - 3 PACOM - 1 NORTHCOM - 3</p> <ul style="list-style-type: none"> • ■ RCMA - Vector Check Bravo • ■ Rolling Thunder ETIC 2300Z 30SEP2011 • ■ Operations Polar North OpsSum 	<p><u>Next 24 hours:</u></p> <ul style="list-style-type: none"> • ■ Operation Reya Lokilani • ■ ARCS Assessment 1st Battalion, 6th Marine Regiment Outbrief • ■ Coldsteam Guards Battle Group (UK) • ■ Canadian Helo Force - A (CAN)
<p><u>Current 24 hours:</u></p> <ul style="list-style-type: none"> • ■ Task Force Reya (US Army) • ■ Elements of Dadcon/ISAF (Denmark) 	<p><u>High Priority/Special Interest:</u></p> <ul style="list-style-type: none"> • ■ Availability +1 • ■ C2 Status -2 • ■ Defensive Cyber Operations +1 • ■ Offensive Cyber Operations -2

Updated: 14 1502Z FEB12 by mark.adkins Slide 2 of 4

Previous
Next

Settings

CSA - Real Time Update to Filtered Events Brief

NetCDS Workspace 624TH OC - System Admin: mark.adkins@af.mil - 624 NetD Reset | Help | Feedback | Logout

Doc's Tab | Staff Status | **Ops Brief** | Net A | Rolling Operational Widget | Gateway Status | AFSPC | MEL2 | MEL | Map

Commander's Situational Awareness

Current (Assessed) Setup

624 ISRD G
08 2315Z SEP11

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08 2317Z SEP11

624 COD A
19 1213Z JAN12

624 CRC G

624 NetA R
08 1724Z DEC11

624 NetD B
19 1213Z JAN12

624 NetOPS R
08 2332Z SEP11

Issues | Details | **MEL Events**

MEL Events
Filter: CAT I, CAT VI, CAT VIII, CAT III

#	Ranking	Ops	Location	Event Title	Occurred On	Updated On
CAT I (1) Ops Impact: N/A						
CAT III (3) Ops Impact: A						
331	Medium	A	Peterson AFB	King's Malware with 454 version Java Fat Horse / ...	01 2138Z APR11	24 1344Z OCT11
380	Medium	A	Davis-Montha...	Net D - CAT III_RCMA / Officials at Creech Air For...	14 0343Z SEP11	24 1343Z OCT11
329	Medium	N/A	Lackland AFB	Reya-3 Trojan Horse Backdoor / A Trojan horse is ...	01 2130Z APR11	12 1300Z OCT11
CAT VI (1) Ops Impact: R						
330	High	R	All Air Force	(U/FOUO) Cyberware 3 Probing Increase / Probing...	01 2134Z APR11	24 1345Z OCT11
CAT VIII (3) Ops Impact: R						

Selected Event Details

Event Title: Net D - CAT III_RCMA / Officials at Creech Air Force Base in Nevada knew for two weeks about a viru ...

Event Type: Net D - CAT III

Ops Impact: Minor

Details: Officials at Creech Air Force Base in Nevada knew for two weeks about a virus infecting the drone "cockpits" there. But they kept the information about the infection to themselves — leaving the unit that's supposed to serve as the Air Force's cybersecurity specialists in the dark. The network defenders at the 24th Air Force learned of the virus by reading about it in Danger Room

Event ID: 380 [More Information](#)

Classification: UNCLAS

Locations: Davis-Monthan AFB

Identifier: C-3

Event Occurred On: 14 0343Z SEP11

Response Due By: 14 0343Z NOV11

Multiple Views of data and information

NetCDS Workspace System Admin: sysadmin@accenture.com - 624 NetA

24th AF KST 04:11 HADT 09:11 AKDT 11:11 PDT 12:11 MDT 13:11 CDT 14:11 EDT 15:11 UTC 19:11 Z

My Workspace CDR ROW MEL Map

Rolling Operations

View

Texas Wildfires - 302nd Air Expeditionary Group

Operational Readiness Inspection - 35th FW

Activities

Active Only

Sep 14 Sep 15 Sep 16 Sep 17

ASI

Transfer To Ops

Sep 14 Sep 15 Sep 16 Sep 17

USI

Open USIs

Sep 14 Sep 15 Sep 16 Sep 17

MEL Events

CAT II

CAT II Ripper

CAT II RCMA

Settings Done

NetCDS Workspace System Admin: mark.adkins@af.mil - 624 NetD

624TH OC KST 05:05:38 HADT 10:05:38 AKDT 12:09:38 PDT 13:09:38 MDT 14:09:38 CDT 15:09:38 EDT 16:09:38 UTC 20:05:38

Doc's Tab Staff Status Ops Brief Net D Rolling Operational Widget Gateway Status AFPC MEL Map

Show Labels Time Period Current Save View

Last Updated: 07/20/02 SEP11

MEL Events - Langley AFB - Threats CAT Events

Ops Title

Ripper Gripper Det Corral 456.3 | The prevalence of malware as a vehicle for organized internet crime, along with the general inability of traditional anti-malware protection platforms (products) to protect against the continuous stream of unique and newly produced malware, has seen the adoption of a new method for businesses operating on the internet: the acknowledgment that some sizable percentage of internet customers will always be infected for some reason or another, and that they need to continue doing business with infected customers. The result is a greater emphasis on back-office systems designed to spot fraudulent activities associated with advanced malware operating on customer's computers.

Langley Federal Credit Union Phishing Email asks you to contact and verify your account data at Langley F.C.U. by visiting the given link. You will be taken to a spoof website where your details will be captured for the phishers. Langley F.C.U. never send their users emails requesting personal details in this way. The REAL URL of the spoof website is disguised as 8auk7t@ps.rcsource.langley.af.mil/govt/Login.asp?auth=0. The REAL URL of the spoof website is hidden by a hyperlinked image in the body of the email. This is a technique used to get past spam filters that can only read normal text. The REAL URL of the spoof website looks nothing like the actual Langley F.C.U. URL.

Map Tools & Options

Map Layer Information

User Layers

Map Views

- None
- 24th C2 Map Views
- CAT Incidents - 1
- 624 NetA Map Views
- Lackland Training - 1
- 624 NetA W3 Map Views
- test view - 1
- 624 NetD Map Views
- NetD - 1

System & Background Layers

World Vector Basic

Flexible Status Reporting

Gateway Status

NetCDS Workspace 624TH OC - System Admin: mark.adkins@af.mil - 624 NetD

Doc's Tab Staff Status Ops brief Net A Rolling Operational Widget **Gateway Status** AFSPC MEL2 MEL Map

624 NetA - Gateway

Location	Equipment Status	Traffic Status	Active Secondary	Intrushield (NetD)	IOP (NetD)
<input type="checkbox"/> Aviano AFB	GREEN	GREEN	GREEN	GREEN	GREEN
<input type="checkbox"/> Beale AFB	GREEN	GREEN	RED	GREEN	GREEN
<input type="checkbox"/> Hickam	GREEN	GREEN	RED	GREEN	GREEN
<input type="checkbox"/> Kirtland AFB	GREEN	GREEN	RED	GREEN	GREEN
<input type="checkbox"/> Lackland AFB	GREEN	GREEN	GREEN	GREEN	GREEN
<input type="checkbox"/> Langley AFB	RED	RED	BLACK	BLACK	BLACK
<input type="checkbox"/> Macdill	GREEN	GREEN	RED	GREEN	GREEN
<input type="checkbox"/> Molesworth	GREEN	GREEN	GREEN	GREEN	GREEN
<input type="checkbox"/> Offutt AFB	GREEN	GREEN	RED	GREEN	GREEN

Mission Execution

NetCDS Workspace 624th OC - System Admin: mark.adkins@af.mil - 624 NetD

Doc's Space **Mission Execution** CUB ROW MEL Map

624 NetD - Mission Execution

Classification	Mission Type	Mission Number	ISO	Locations	Unit	Start Date	Stop Date	MSN Status	Systems/Capability/etc
<input type="checkbox"/> Unclassified	NetD	3303-453-456	CENTCOM	Dyess AFB	89th	1/26/2012	2/9/2012	Plan	Aviter-3
<input type="checkbox"/> Unclassified	NetD	0012-123-34	STRATCOM	Hill AFB	90th	1/15/2012	1/25/2012	Delayed	WIZ-12
<input type="checkbox"/> Unclassified	NetD	0012-434-34	USFOR-A	Barksdale AFB	90th	1/20/2012	1/25/2012	LIMFACs	RCMA-313
<input type="checkbox"/> Unclassified	NetA	0012-435-33	CENTCOM	Davis-Monthan AFD	91st	1/3/2012	1/10/2012	MSN Complete	Reya-3
<input type="checkbox"/> Unclassified	NetD	0012-534-33	CYBERCOM	Buckley ANGB	91st	1/9/2012	1/23/2012	Report Pending	Lokelani-3
<input type="checkbox"/> Unclassified	NetA	0012-333-33	CYBERCOM	Elsworth AFB	92nd	1/10/2012	1/31/2012	Execution	JCON

Updated: 18 2130Z JAN12 by mark.adkins

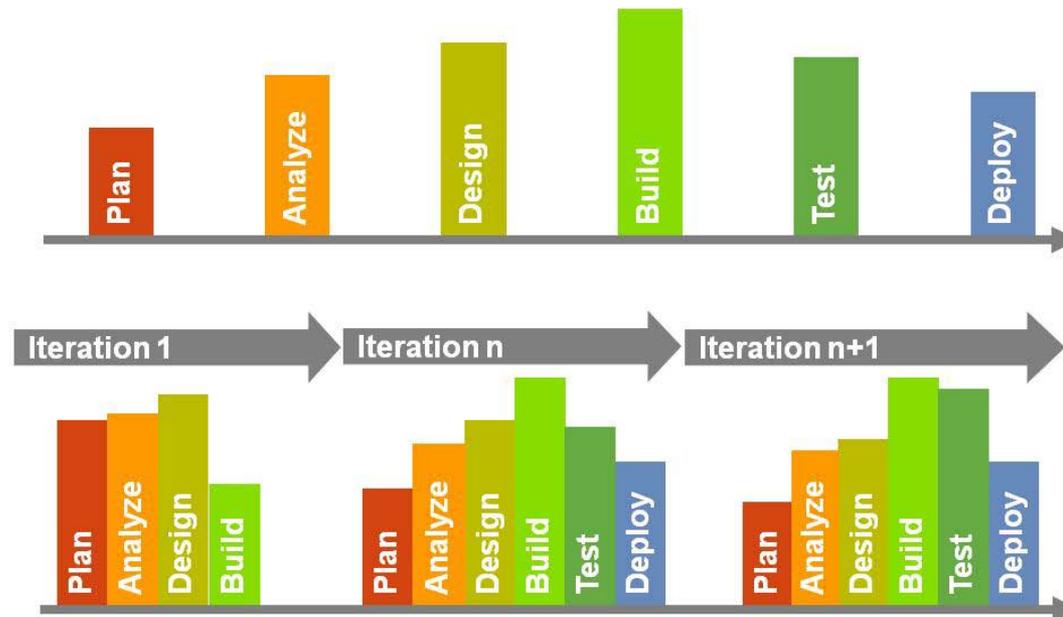
What is Agile?

- Agile is an umbrella term for different processes that promote a disciplined **project management** and delivery approach based on frequent inspection and adaptation.
- It is encapsulated in a simple **Agile Manifesto** written in 2001, which emphasizes the use of **frequent involvement** and **team work**.
 - **Individuals and interactions** over process and tools
 - **Working software** over comprehensive documentation
 - **Customer collaboration** over contract negotiation
 - **Responding to change** over following a plan



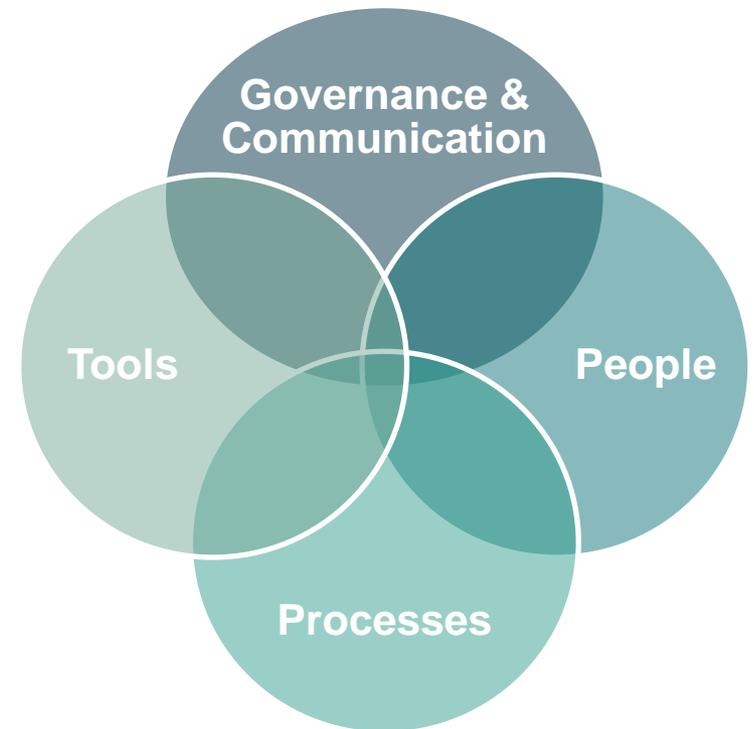
What is Agile? (continued)

- Scrum is an **iterative**, **incremental** framework for **project management** and perhaps one of the most widely adopted Agile methodologies.
- Focused on an **incremental** and **flexible** approach to software development, Agile addresses all the end-to-end development lifecycle in each iteration.



Agile at Accenture

- Agile at Accenture is an adaptable model which we value differently to each Client and project size.
- It requires **going beyond Scrum** for the majority of clients to enable scalability and sustainability of practices.
- It is more than just a methodology or process that needs to be followed, it requires the **right attitude**.
- Agile is a **cultural behavioral change** in addition to processes and tools.
- Agile at Accenture can be deployed to both co-located and distributed projects.

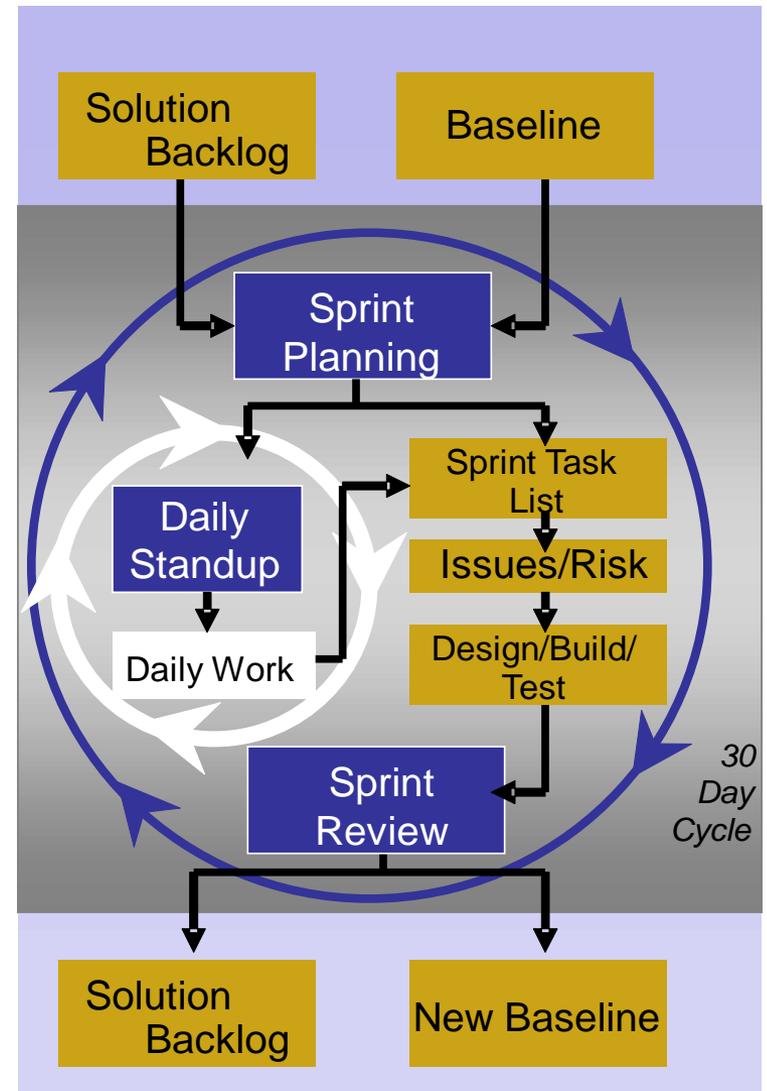


Agile Delivery Methodology

Rapid Delivery

- 30 day “Sprints”
- Rapid prototyping
- Risk management
- Releasable Software
- Quality Assurance

Ability to respond to change...



Team Composition & Agile Structures

- Program Manager
- Solution Owner
- Scrum Master
- Enterprise Architect
- User Interface
- Quality control
- Senior Developers
- Junior Developers
- Roadmap
- Data Management
- User Stories (Backlog)
- Sprit Review
- Retro meeting
- Team Story Selection
- Daily 15 minute Scrum
- Scrum of Scrum
- Defect Review
- Senior Working Group
- Technology Working Group

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- Conclusion
 - Quality
 - Risk Management
 - Delivery
 - Command and Control Capability Evolves Each Sprint
 - SMEs Collaborating
 - Acquisition Challenges
 - Stresses of Complex Symmetry Required to Deliver
 - Challenge to change – Use a framework to guide development