



**U.S. AIR FORCE**

# **Common Geopositioning Services (CGS) Project**

## **Industry Day Briefing**

**DCGS-N Program Office**

**29 Jul 04**



# CGSP Industry Day Agenda

- Administrative Remarks 1000 – 1005
- Introductions
  - DCGS-N DRPM.....Ms. Lorraine Wilson 1005 – 1020
  - CGS Project Lead.....Ms. Elizabeth Jackson 1020 – 1030
- CGS Technical Overview
  - CGS Technical Lead.....Mr. Barry O'Neal 1030 – 1130
- Break 1130 – 1145
- Schedule/Contracting Overview 1145 – 1200
- Formal Question Period 1200 – 1230
- Lunch 1230 – 1345
- Formal Answer Period 1345 – 1445
- Closing Remarks 1445 – 1500



# CGSP Administrative Remarks

- Welcome
- Location of Facilities
- Purpose of Meeting
- Meeting Ground Rules



# CGSP Industry Day

## *Purpose of Meeting*

- Provide an overview of the Navy/Air Force Common Geopositioning requirements and notional development schedule
- Request you ask questions on anything you think is unclear or on which you have concerns
- Request your feedback on the draft SOO and TRD
  - The clearer the SOO and TRD are; the better the product you produce



# CGSP Industry Day

## *Meeting Ground Rules*

- This is a competitive acquisition and the CGS Team is here to insure the integrity of the competition is not compromised
  - Please do not ask members of the government/contractor support team or any users you see questions about CGS outside the formal question period
    - All questions you have will be provided in writing to the CGS team
    - All answers will be briefed after full discussion between CGS team members
    - Briefing slides and questions and answers will be posted on the NAVAIR website within 2 weeks after the meeting
  - Please do not try and market any of these personnel either
- Award of this effort will be based on your proposal, NOT what you may say at this meeting



# CGSP Industry Day Agenda

- Administrative Remarks 1000 – 1005
- Introductions
  - DCGS-N DRPM.....Ms. Lorraine Wilson 1005 – 1020
  - CGS Project Lead.....Ms. Elizabeth Jackson 1020 – 1030
- CGS Technical Overview
  - CGS Technical Lead.....Mr. Barry O'Neal 1030 – 1130
- Break 1130 – 1145
- Schedule/Contracting Overview 1145 – 1200
- Formal Question Period 1200 – 1230
- Lunch 1230 – 1345
- Formal Answer Period 1345 – 1445
- Closing Remarks 1445 – 1500



# Precision Geolocation

*Current USAF and USN Solutions*

**RAINDROP**

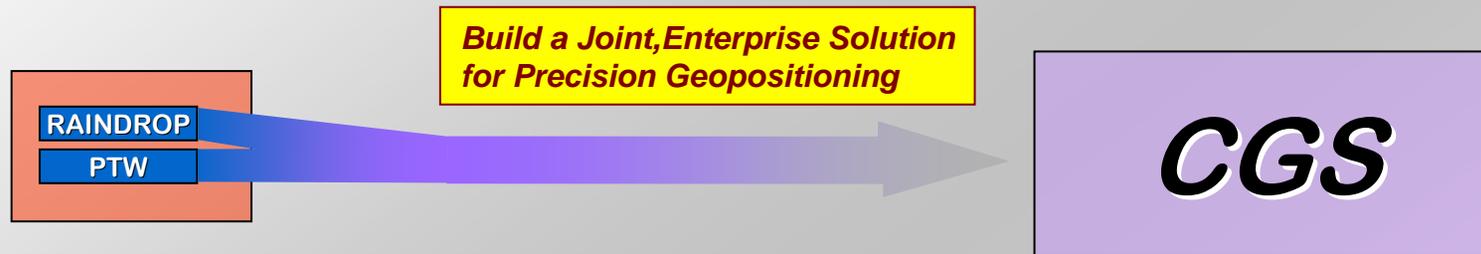
**PTW**

- Raindrop in use by AF, Army, and Marines
  - Precision Targeting Workstation (PTW) in use by Navy and Coalition Partners
- 
- **Applications built by different vendors, using different algorithms and photogrammetric approaches, for different image types, potentially providing different answers.**



# Precision Geolocation

## *The Goal*



- ***Single Precision Geopositioning Software “Engine”***
  - *Can be integrated into the DCGS Integration Backbone*
  - *Can be integrated into COTS Electronic Light Table Applications and GOTS image viewers*
    - *Deployable within a Stand Alone Workstation*
  - *Can be integrated into other Targeting, C2, or ISR System*
- ***Service choose the host system, but geopositioning “engine” the same***



# Collaborative Acquisition

## *Building on the DCGS 10.2 Model*

- Air Force Leads DCGS 10.2
  - Develops and Funds the USAF/common architecture
  - Develops and Funds the DCGS Integration Backbone (DIB)
  - Services Take Delivery of DIB and other 10.2 Software Components as desired (or directed), Hosts Common Solution on own Hardware
- Army Leads ACS (SIGINT Effort)
  - Army Develop Airborne Common Sensor Aircraft
  - Using DCGS for Ground Station (10.2 based)
  - Hooks in Army RFP for Navy participation (replace EP-3)
- Navy Leads Common Geopositioning Services
  - Develops and Funds Common Core
  - Built for easy integration into COTS ELTs and DIB
  - Provide simple “stand alone tool” and “integratable” SW service
  - Other Services Take Delivery of Navy Software Components, Host on their Hardware and/or integrate into their systems



# Collaborative Acquisition

## *Building on the DCGS 10.2 Model*

- Based on the DCGS 10.2 Model for Collaborative Acquisition
  - Navy Lead Acquisition, Any/All Services-Agencies Participate
    - Will maintain Configuration Control/Management of GOTS-based CGS “Engine” Software and APIs
    - Broker COTS Software License Fees for the Services
    - Use DCGS 10.2 MET-like Process to Prioritize Fixes and Add New Capabilities to Software
  - Full and Open Competition
    - USN will fund the Common Core Requirements
    - Service Unique Requirements Funded by Individual Services
    - Services use Navy contract for License, LCS & Training CLINs
  - Work Closely with NGA
    - Leverage GRIDLOCK Smart Image ACTD efforts
    - Prepare for NGA Validation of CGS “engine”



# Common Geopositioning Services Project (CGSP)

*Building on the DCGS 10.2 Model*

- Service and NGA Participation Critical to CGSP Success
  - Participate in Competition as Technical Advisors/Experts
  - Bring Unique Capabilities to Effort
    - Leverage Air Force Sensor Model development and Time Critical Targeting (TCT)/C2 Expertise/Capabilities
    - Leverage NGA Sensor Model API development and Geopositioning Validation Services
    - Leverage Army/Marine Corps Fires Expertise
- MOA Status
  - AF and Navy have signed
  - NGA reviewing
  - DCGS-A reviewing
  - Marine Corps Invited...but taking Wait and See Attitude



## WELCOME TO INDUSTRY DAY

First of Many Government/Contractor Interchanges



# CGSP Industry Day Agenda

- Administrative Remarks 1000 – 1005
- Introductions
  - DCGS-N DRPM.....Ms. Lorraine Wilson 1005 – 1020
  - CGS Project Lead.....Ms. Elizabeth Jackson 1020 – 1030
- CGS Technical Overview
  - CGS Technical Lead.....Mr. Barry O'Neal 1030 – 1130
- Break 1130 – 1145
- Schedule/Contracting Overview 1145 – 1200
- Formal Question Period 1200 – 1230
- Lunch 1230 – 1345
- Formal Answer Period 1345 – 1445
- Closing Remarks 1445 – 1500



# CGSP Changing of the Guard

- Replaced CDR Martin Deppe as the DCGS-N Life Cycle Support (LCS) Program Lead on 16 Jul 04
  - With That Came Responsibility for CGSP development
- My Background
- Although New to the CGS Effort, Have A Strong Technical Manager and Multi-Service Support Team Leading the Way

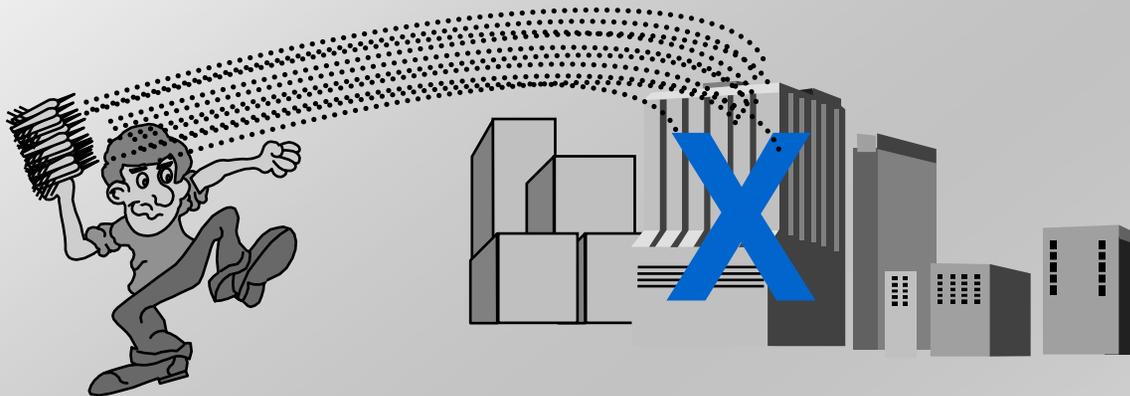


# CGSP Industry Day Agenda

- Administrative Remarks 1000 – 1005
- Introductions
  - DCGS-N DRPM.....Ms. Lorraine Wilson 1005 – 1020
  - CGS Project Lead.....Ms. Elizabeth Jackson 1020 – 1030
- CGS Technical Overview
  - CGS Technical Lead.....Mr. Barry O'Neal 1030 – 1130
- Break 1130 – 1145
- Schedule/Contracting Overview 1145 – 1200
- Formal Question Period 1200 – 1230
- Lunch 1230 – 1345
- Formal Answer Period 1345 – 1445
- Closing Remarks 1445 – 1500



# Precision Geopositioning Required for PGM Planning

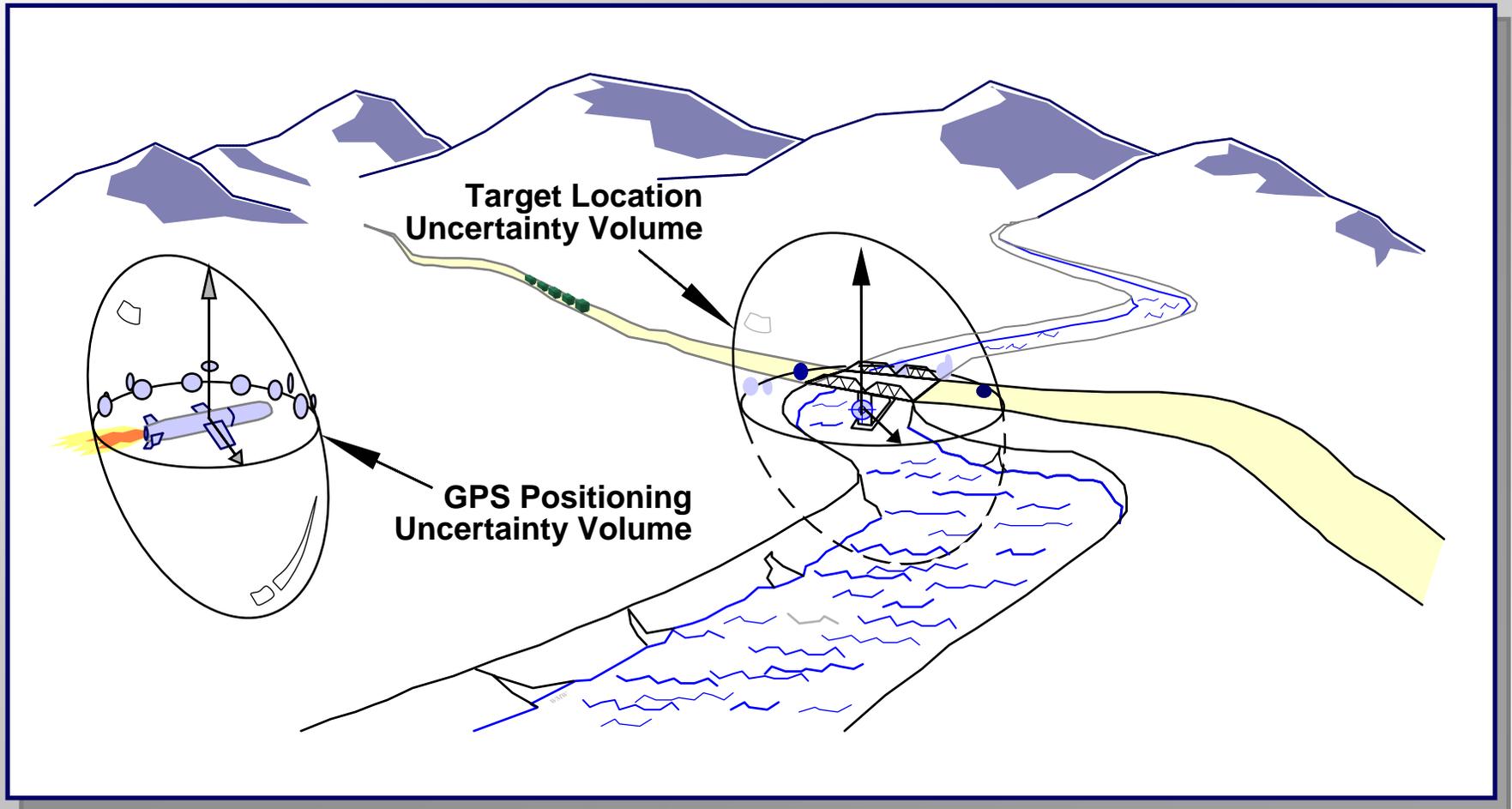


- No longer good enough to create generic “DMPIs” (desired mean point of impact) which define “the center for impact of multiple weapons delivered like area munitions”. (Joint Pub 2-01.1)
- Today’s PGMs enable independent application of military force, focused to contribute to the strike objective and minimize collateral damage...

***– Requires precise/accurate/reliable weapon delivery data***



# Uncertainties Must Be Accounted For In PGM Targeting



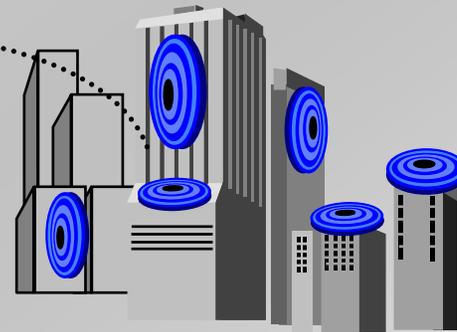


# Precision Geopositioning Required for PGM Planning

- PGM planning requires...



a **critical target element**  
at a **specific location**  
of a **certain facility**  
at a **designated time**



using **precise geopositioning coordinates**

and **precise delivery /detonation parameters**

designed to achieve a **specific outcome**

for a **defined period of time**

supporting **collateral damage requirements**



# Collaborative Acquisition

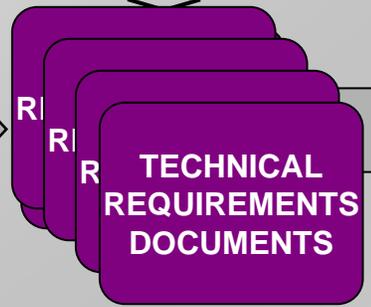
Scope

## OPERATIONAL REQUIREMENTS

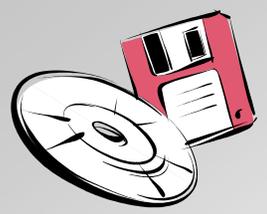


**SOFTWARE COMPONENTS FOR:**

- ✓ Enterprise Geolocation Tools
- ✓ Integrated COTS Image Viewer
- ✓ Public API's to COTS ELTs
- ✓ Public API's to DIB
- ✓ Standalone Application (Platform Independent)



NAVY COMPETITION



## NGA VALIDATION



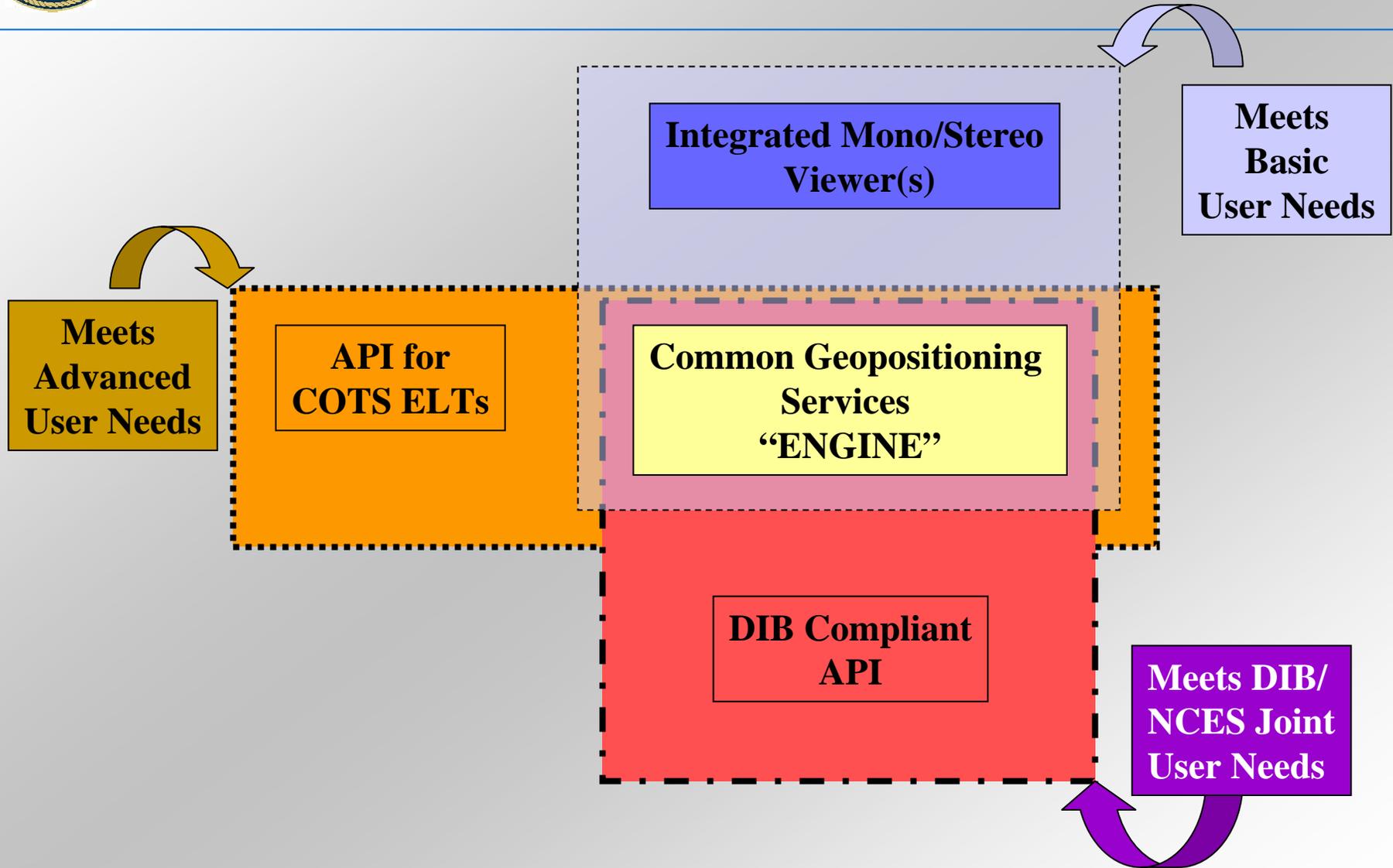
*Potential Integration Activities*

*Commercial Integration*



# Common Geopositioning Services Project (CGSP)

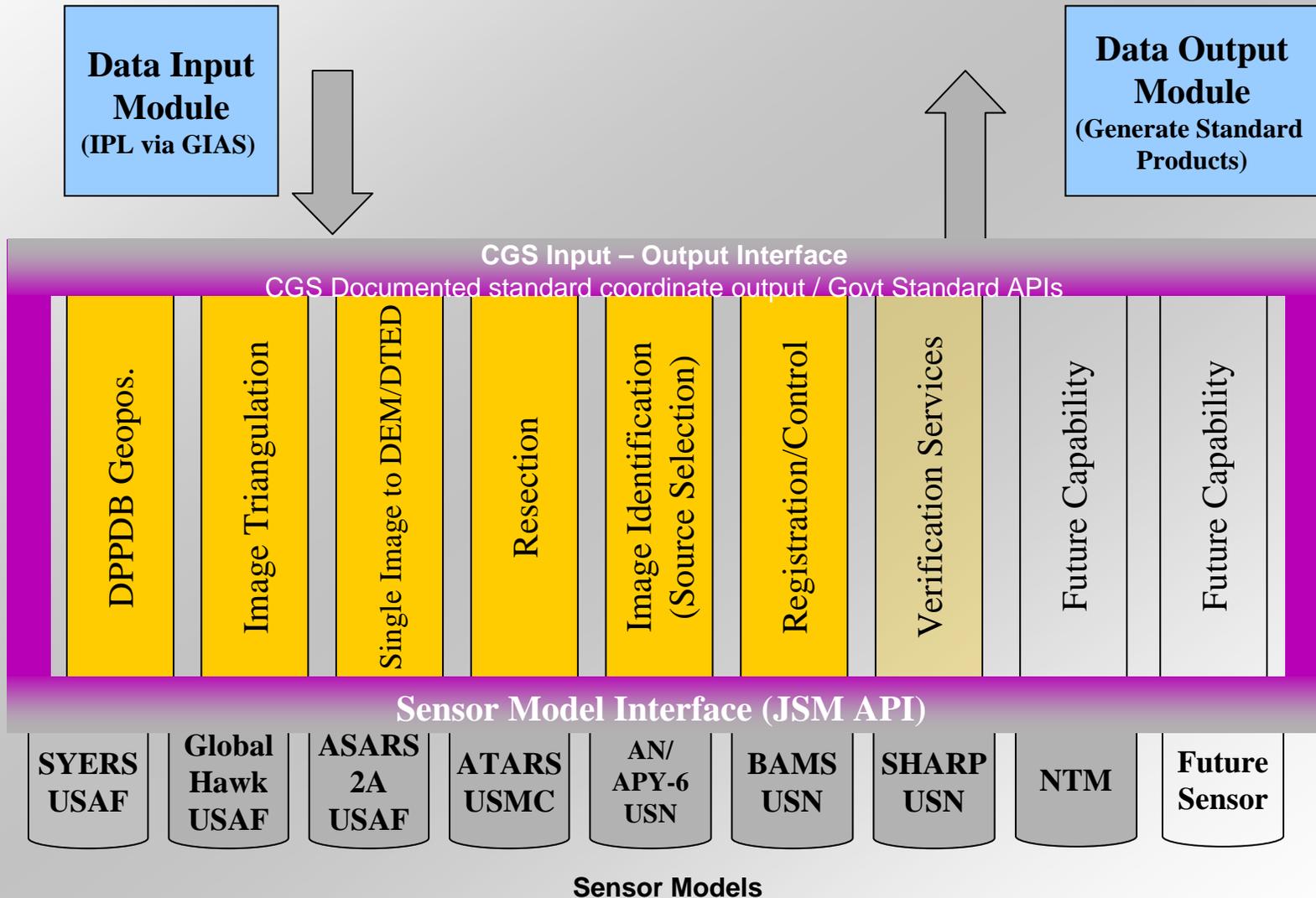
## *Acquisition Strategy*





# Common Geopositioning Services (CGS) Project

## CGS "Engine" Modular Design



Sensor Models



# Common Geopositioning Services (CGS) Project

## *CGS "Engine" Requirements*

- The CGS "Engine" shall be able to measure and provide precise geographic coordinates with valid error estimates using:
  - DPPDB only
  - Single image, with no suitable DPPDB and DEM coverage available
  - Single image, with DEM, but no suitable DPPDB coverage available
  - Single image, with suitable (covers target area) DPPDB coverage available
  - Single image, with additional images available that image the target area but do not contain the target
  - Multiple (2-4) images, when there is no suitable DPPDB and DEM coverage available
  - Multiple (2-4) images, when there is DEM, but no suitable DPPDB coverage available
  - Multiple (2-4) images, with suitable (covers target area) DPPDB coverage available
  - Multiple (2-4) images, with additional images available that image the target area but do not contain the target



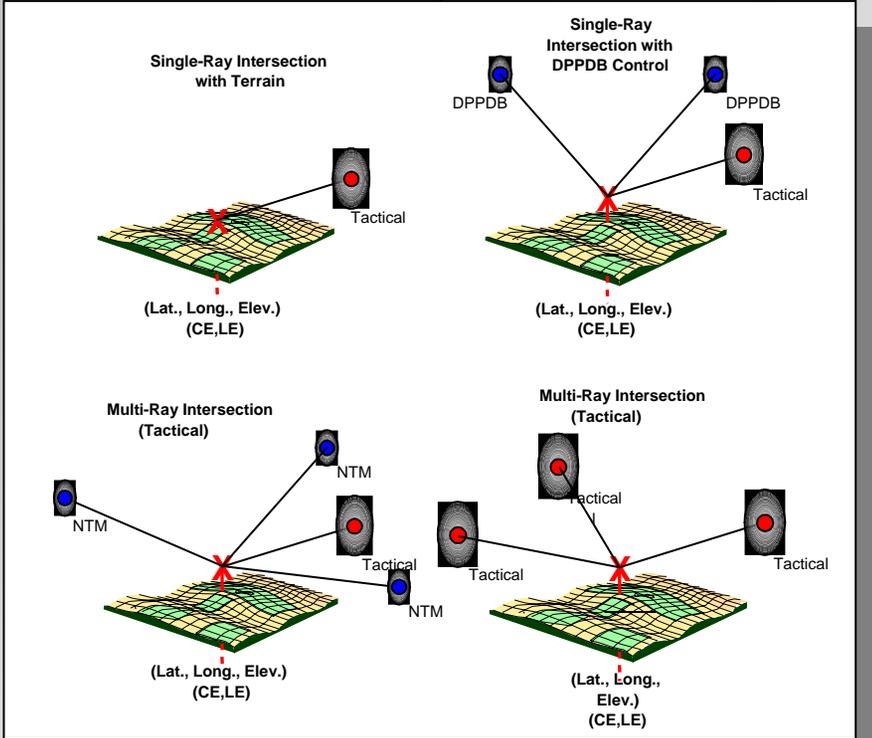
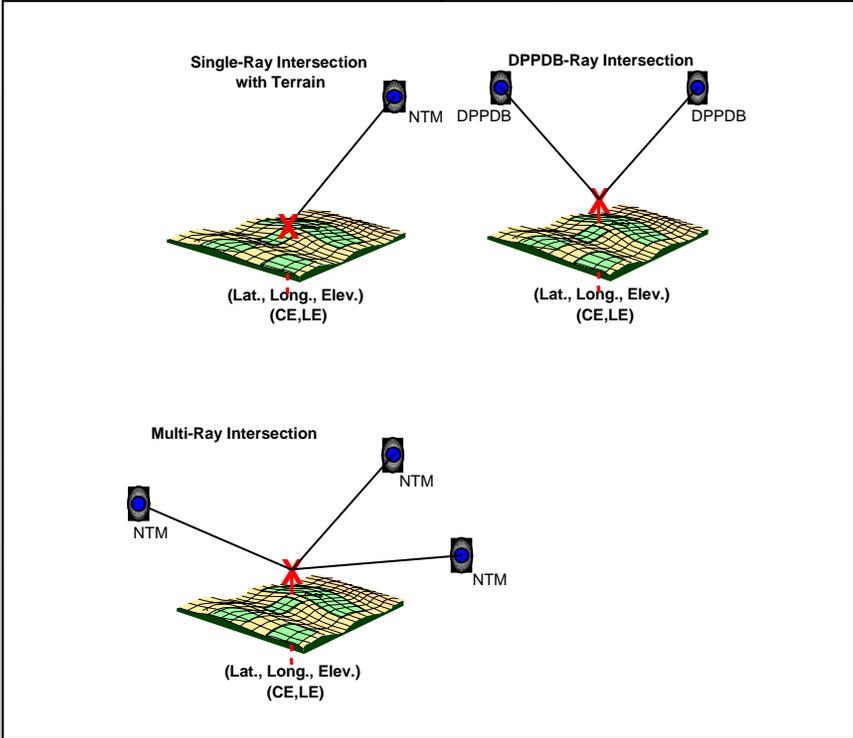
# Common Geopositioning Services (CGS) Project

*Once Complete, CGS "Engine" Validation Mandatory*

## CGS "Engine" Validation

### National

### Tactical





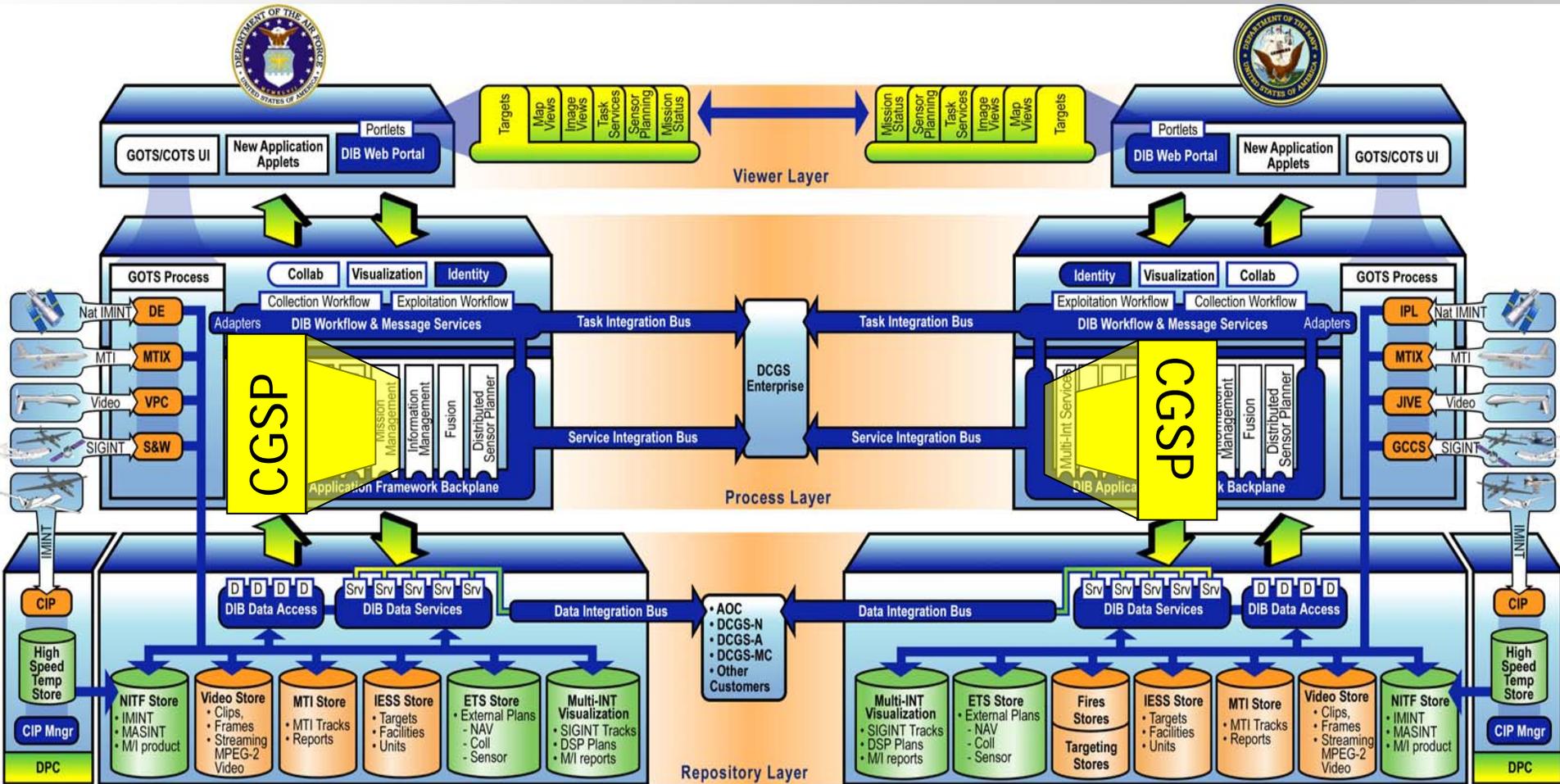
# Common Geopositioning Services (CGS) Project

## *CGS Integrated Viewer*

- Integrated Viewer
  - Platform independent COTS software user-application
    - Capable of locating, retrieving, displaying, and manipulating multiple types of imagery
    - In both monoscopic and stereoscopic modes
    - Allowing an operator to:
      - Extract, save, and export specific coordinates (latitude, longitude, elevation) and error estimates (CE/LE) in multiple coordinate formats
      - Annotate, chip, save, and export user defined image products for use by external C2, mission planning, and targeting systems
  - Must use the same APIs you develop for incorporation of the common geopositioning services into other vendor COTS ELTs



# Common Geopositioning Services Project (CGSP) DIB Integration



- CGSP will Comply with DIB standards and the Developer's Toolkit
- Will be available as a DCGS Enterprise Service



# CGSP Industry Day Agenda

- Administrative Remarks 1000 – 1005
- Introductions
  - DCGS-N DRPM.....Ms. Lorraine Wilson 1005 – 1020
  - CGS Project Lead.....Ms. Elizabeth Jackson 1020 – 1030
- CGS Technical Overview
  - CGS Technical Lead.....Mr. Barry O'Neal 1030 – 1130
- **Break 1130 – 1145**
- Schedule/Contracting Overview 1145 – 1200
- Formal Question Period 1200 – 1230
- Lunch 1230 – 1345
- Formal Answer Period 1345 – 1445
- Closing Remarks 1445 – 1500



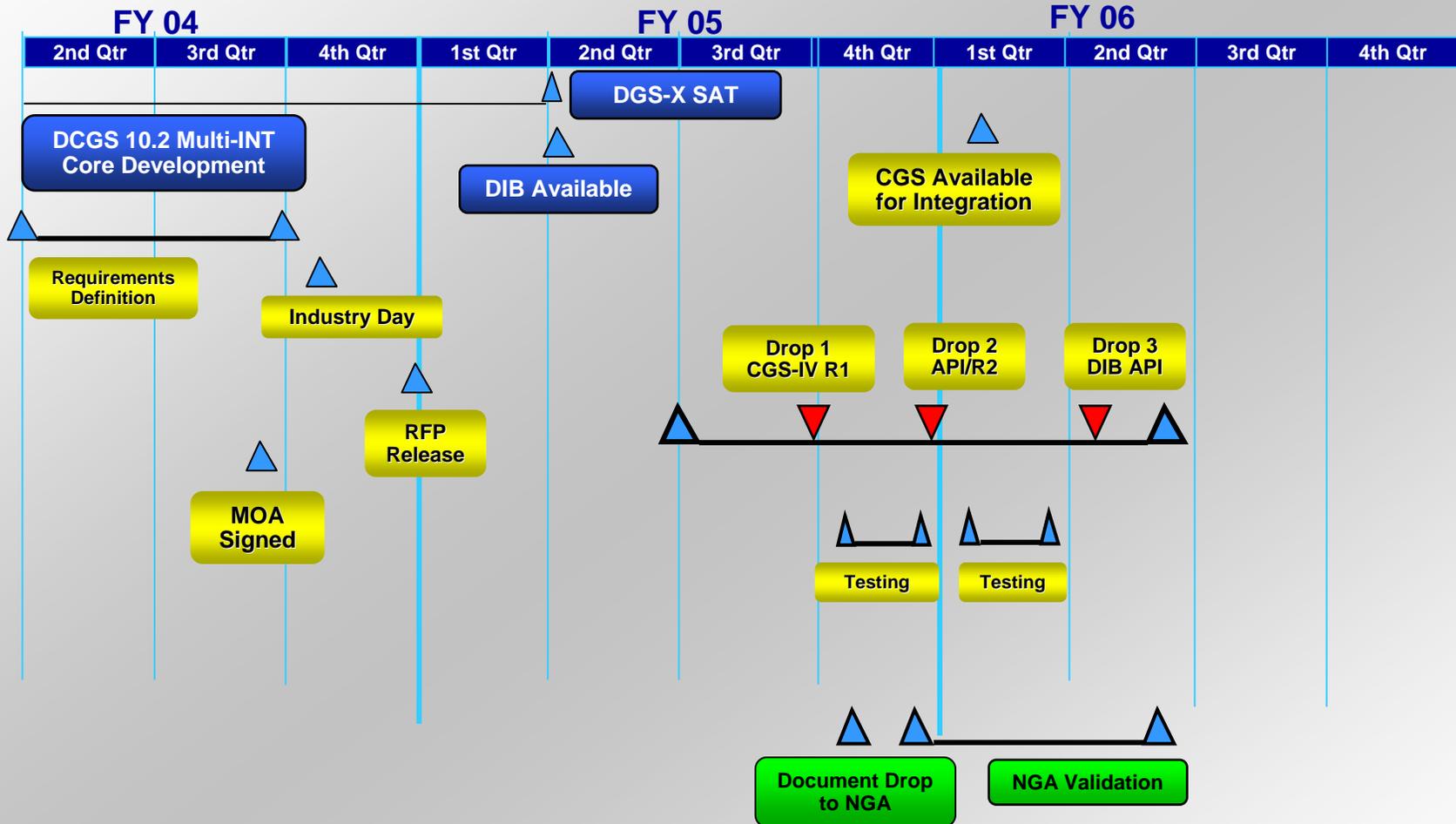
# CGSP Industry Day Agenda

- Administrative Remarks 1000 – 1005
- Introductions
  - DCGS-N DRPM.....Ms. Lorraine Wilson 1005 – 1020
  - CGS Project Lead.....Ms. Elizabeth Jackson 1020 – 1030
- CGS Technical Overview
  - CGS Technical Lead.....Mr. Barry O'Neal 1030 – 1130
- Break 1130 – 1145
- **Schedule/Contracting Overview 1145 – 1200**
- Formal Question Period 1200 – 1230
- Lunch 1230 – 1345
- Formal Answer Period 1345 – 1445
- Closing Remarks 1445 – 1500



# Common Geopositioning Services Project (CGSP)

## *Notional Project Schedule*



- RFP release: Oct 04
- Contract award: Mar 05
- Development: FY05
- Integrated Viewer Software Avail for Test: Jun 05
- Integrated Viewer CGSP Avail for Service Use: Sep 05



# Common Geopositioning Services Project (CGSP)

## *Documentation Development*

- Documents Posted and Comments Requested
  - Statement of Objectives (SOO) out
    - Need your feedback on SOO and CDRLs required to meet SOO tasks
  - Technical Requirements Document (TRD) complete; contractor feedback requested
- Next Steps
  - Receive and review contractor comments on draft SOO/TRD
  - RFP Section L – Bidder Guidance 80% complete
  - RFP Section M – Evaluation Criteria complete and in legal review
  - Post to NAVAIR website earliest date for contractor review
  - Repeat process until final RFP release in late Sep 04



# Common Geopositioning Services Project (CGSP)

*"Draft" Evaluation Criteria*

## **Factor 1. Technical**

Subfactor 1: Experience

Subfactor 2: Architecture Design/Approach

Subfactor 3: Integrated Processes

Subfactor 4: Personnel and Facilities

## **Factor 2. Proposal Risk**

Subfactor 1: Experience

Subfactor 2: Architecture Design/Approach

Subfactor 3: Integrated Processes

Subfactor 4: Personnel and Facilities

## **Factor 3. Past Performance**

## **Factor 4. Cost**



# CGSP Industry Day Agenda

- Administrative Remarks 1000 – 1005
- Introductions
  - DCGS-N DRPM.....Ms. Lorraine Wilson 1005 – 1020
  - CGS Project Lead.....Ms. Elizabeth Jackson 1020 – 1030
- CGS Technical Overview
  - CGS Technical Lead.....Mr. Barry O'Neal 1030 – 1130
- Break 1130 – 1145
- Schedule/Contracting Overview 1145 – 1200
- **Formal Question Period 1200 – 1230**
- Lunch 1230 – 1345
- Formal Answer Period 1345 – 1445
- Closing Remarks 1445 – 1500



# CGSP Industry Day Agenda

- Administrative Remarks 1000 – 1005
- Introductions
  - DCGS-N DRPM.....Ms. Lorraine Wilson 1005 – 1020
  - CGS Project Lead.....Ms. Elizabeth Jackson 1020 – 1030
- CGS Technical Overview
  - CGS Technical Lead.....Mr. Barry O'Neal 1030 – 1130
- Break 1130 – 1145
- Schedule/Contracting Overview 1145 – 1200
- Formal Question Period 1200 – 1230
- **Lunch 1230 – 1345**
- Formal Answer Period 1345 – 1445
- Closing Remarks 1445 – 1500



# CGSP Industry Day Agenda

- Administrative Remarks 1000 – 1005
- Introductions
  - DCGS-N DRPM.....Ms. Lorraine Wilson 1005 – 1020
  - CGS Project Lead.....Ms. Elizabeth Jackson 1020 – 1030
- CGS Technical Overview
  - CGS Technical Lead.....Mr. Barry O'Neal 1030 – 1130
- Break 1130 – 1145
- Schedule/Contracting Overview 1145 – 1200
- Formal Question Period 1200 – 1230
- Lunch 1230 – 1345
- **Formal Answer Period 1345 – 1445**
- Closing Remarks 1445 – 1500



# CGSP Industry Day Agenda

- Administrative Remarks 1000 – 1005
- Introductions
  - DCGS-N DRPM.....Ms. Lorraine Wilson 1005 – 1020
  - CGS Project Lead.....Ms. Elizabeth Jackson 1020 – 1030
- CGS Technical Overview
  - CGS Technical Lead.....Mr. Barry O'Neal 1030 – 1130
- Break 1130 – 1145
- Schedule/Contracting Overview 1145 – 1200
- Formal Question Period 1200 – 1230
- Lunch 1230 – 1345
- Formal Answer Period 1345 – 1445
- Closing Remarks 1445 – 1500