

# Infrastructure Operations Tools Access (IOTA) Overview

**AFC2ISRC Messaging and Infrastructure Conference**

*9 December, 2003*





# IOTA Objectives

*Provide AF GDIP community implementation of Global Information Grid Enterprise Services (GIG ES) for*

- Information Discovery
  - Find out what information products are available
- Messaging and Information Dissemination
  - Generate information products in response to requests or subscriptions
- Enterprise Services and Information Management
  - Provide interfaces for monitoring and controlling information flow
  - Provide tools for generating, monitoring, and automatically satisfying information requirements (metadata production and workflow management).
- Information Assurance/Security
  - Provide a secure framework for information services



## IOTA Objectives (cont.)



- Integration with platform and network security infrastructure (JEDI)
- Integration with cross-security boundary devices (STAR Guard)
- Robust, automated interfaces with data source applications/systems (JTT, A2IPB, Isaiah, ...)
- Automated business processes that support accurate and consistent metadata production



# Functional Requirements

- **Information Discovery**
  - multiple data source access, integrated Intelligence products results
- **Messaging and Information Dissemination**
  - query/response, pub/sub
- **Enterprise Services Management**
  - rapid data source configuration/adaptation, data source status, workflow status for meeting information requirements
- **Information Visualization**
  - provide readily visualized information products, provide information objects for standard visualization schemes
- **Client Application**
  - support automatic generation of Web-based client applications to view integrated information products
- **Information Product Production Support**
  - tools to support metadata quality control and business processes
- **Architecture Solution and Standards Compliance**
  - commercial and govt. standards for secure Web services
- **Information Assurance/Security**
  - DCID 6/3, Cross-boundary interface through Star Guard



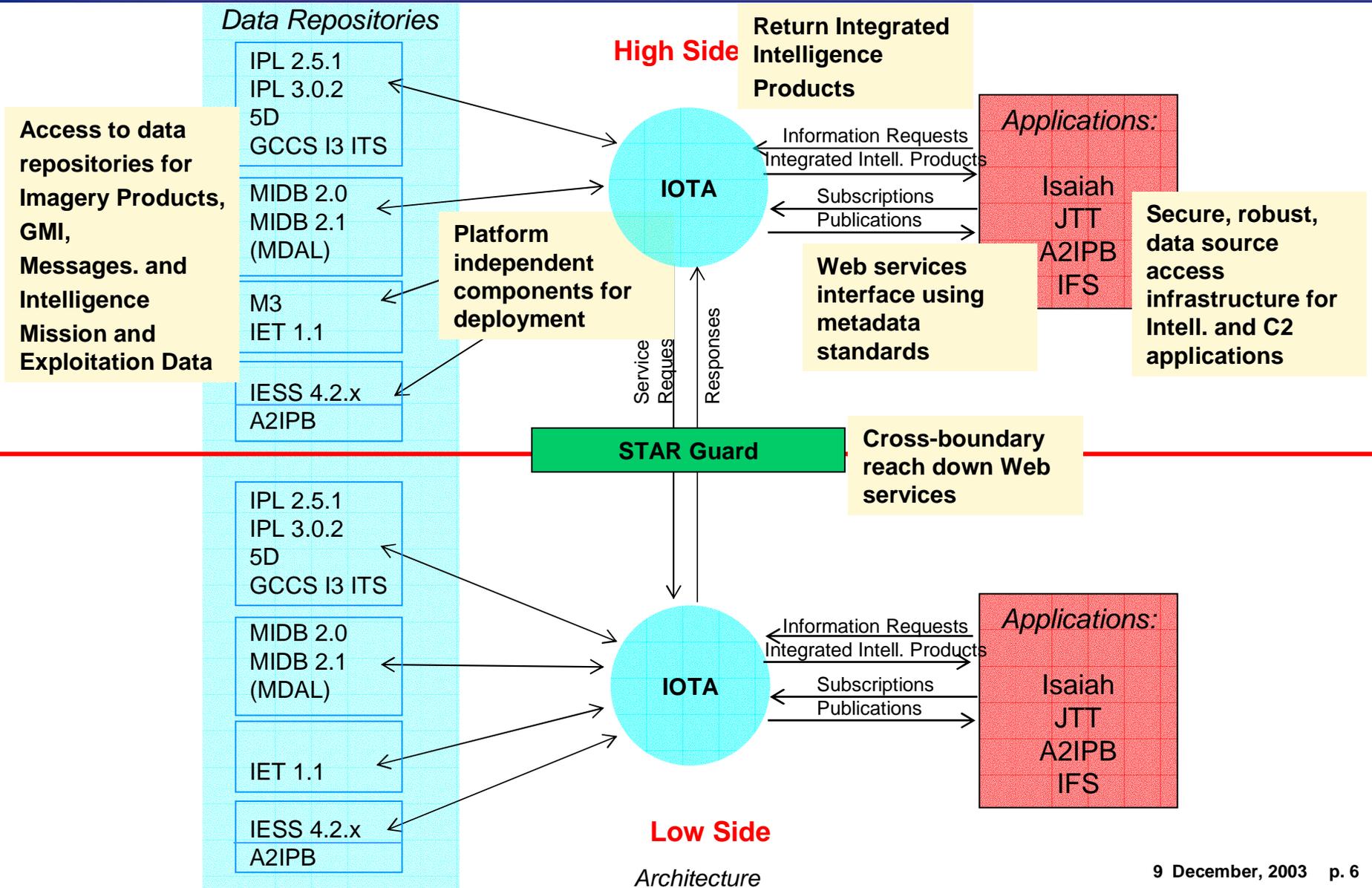
# IOTA FY03 – 06 Infrastructure Transformation



<p><b>FY03</b></p>		<ul style="list-style-type: none"> <li>• Gatekeeper 3.2 Accreditation</li> <li>• Isaiah 1.0 built from application components: CSP/SMART, Gatekeeper, Cold Fusion, IET</li> <li>• IOTA Services Oriented Architecture prototype</li> </ul>
<p><b>FY04</b></p>		<ul style="list-style-type: none"> <li>• Service-oriented architecture with Web services standards interfaces</li> <li>• Integrated Intelligence products with metadata standards from multiple data sources</li> <li>• Query and pub/sub for integrated Intell. products</li> <li>• Query services with automated reach down</li> </ul>
<p><b>FY05</b></p>		<ul style="list-style-type: none"> <li>• Tools for rapid data source access and integration</li> <li>• Expanded data source access and integrated Intell. products.</li> <li>• Integration with JEDI for authentication and directory services</li> <li>• Pub/sub services with automated reach down</li> <li>• Initial work-flow management for integrated Intell. products</li> </ul>
<p><b>FY06</b></p>		<ul style="list-style-type: none"> <li>• Enterprise services for workflow management for integrated Intell. products.</li> <li>• Multi-domain query services with automated reach across.</li> <li>• Integrated Intell. product visualization services</li> </ul>



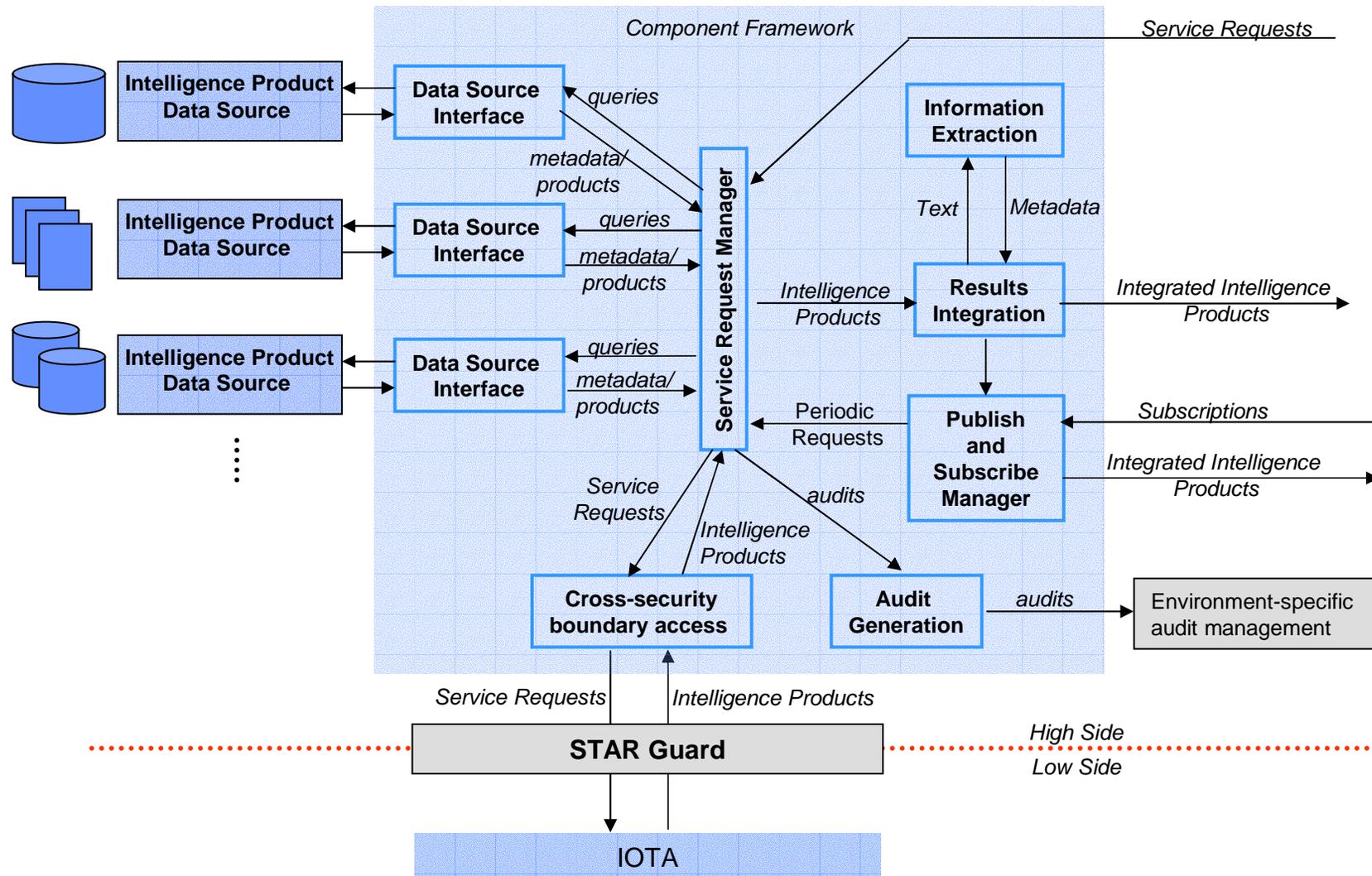
# FY04 IOTA Capabilities



Architecture



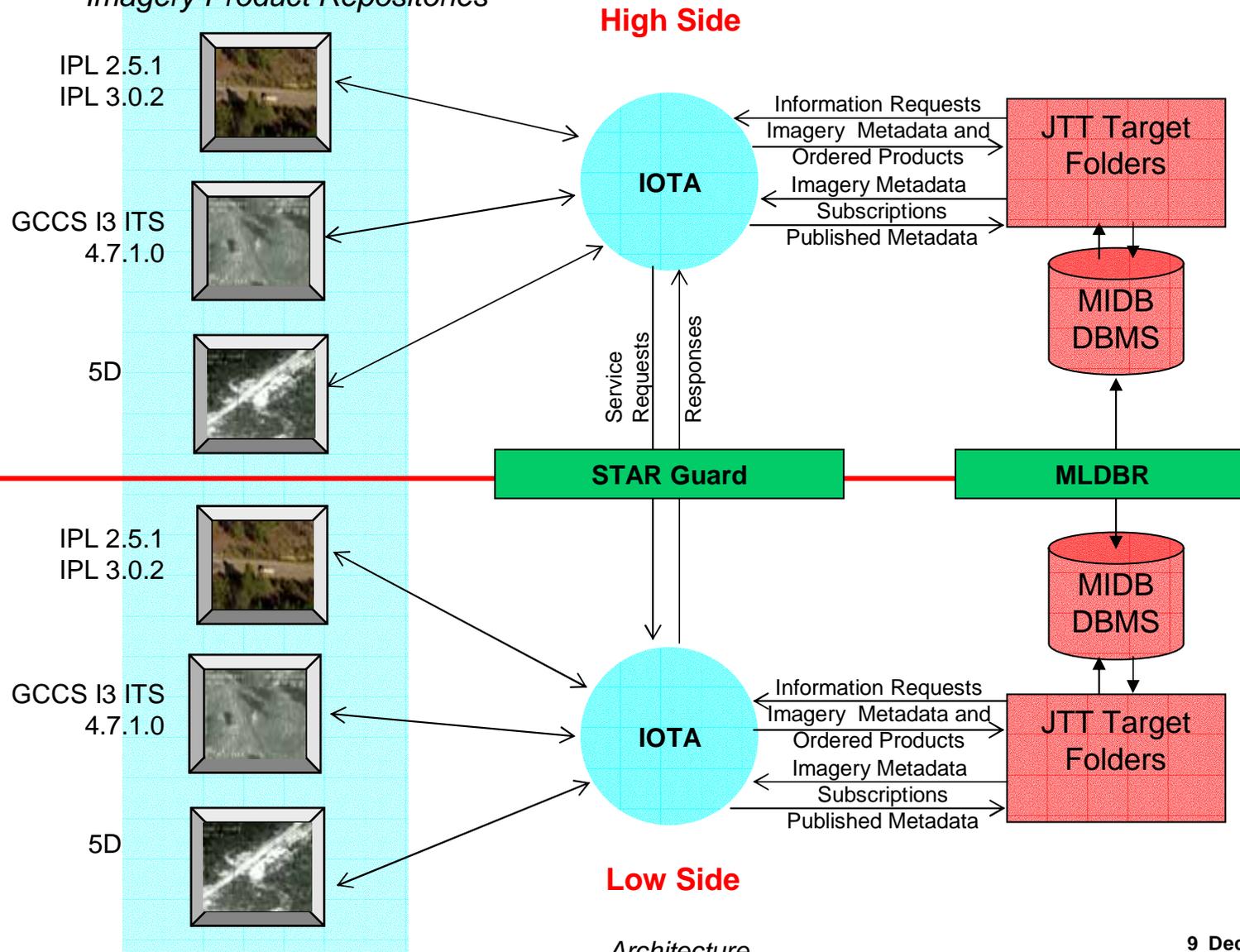
# IOTA Architecture Details





# JTT 3.0 with IOTA

## Imagery Product Repositories





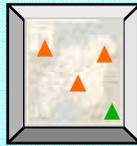
# A2IPB with IOTA

## Imagery and GMI Repositories

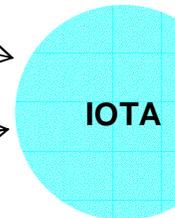
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IPL 3.0.2



MIDB 2.0  
MIDB 2.1 (MDAL)



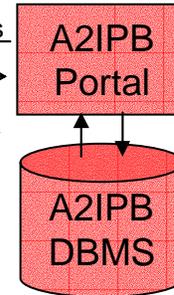
### High Side



A2IPB Products

External A2IPB Product Consumers

Information Requests  
GMI data, Imagery Metadata & Ordered Products



Service Requests  
Responses



STAR Guard

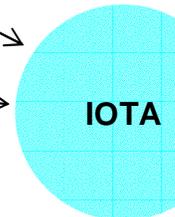
IPL 2.5.1  
IPL 3.0.2



MIDB 2.0  
MIDB 2.1 (MDAL)



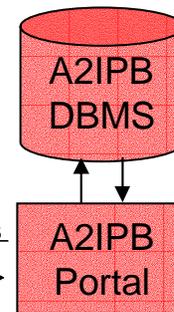
### Low Side



A2IPB Products

External A2IPB Product Consumers

Information Requests  
GMI data, Imagery Metadata & Ordered Products

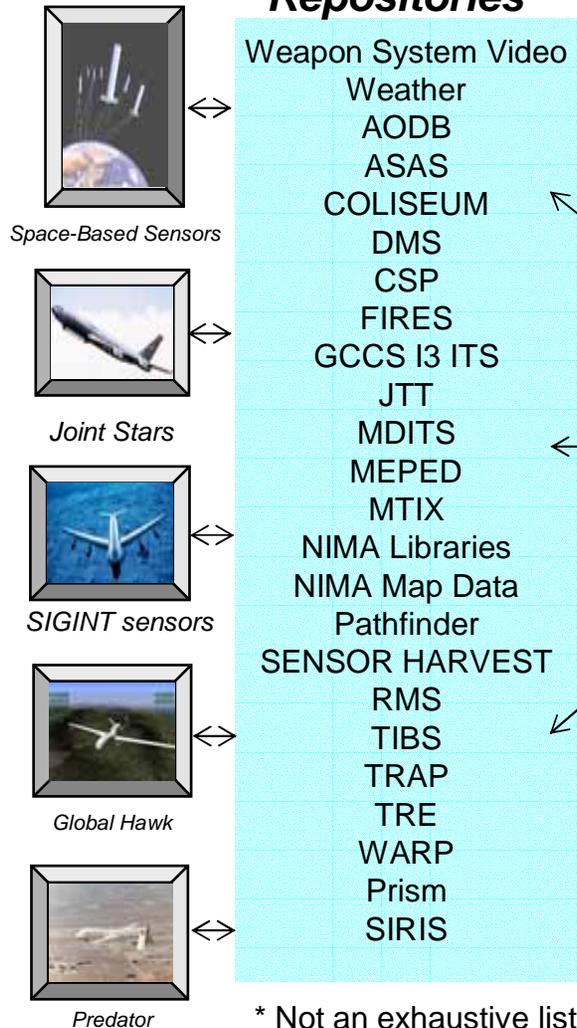


Architecture

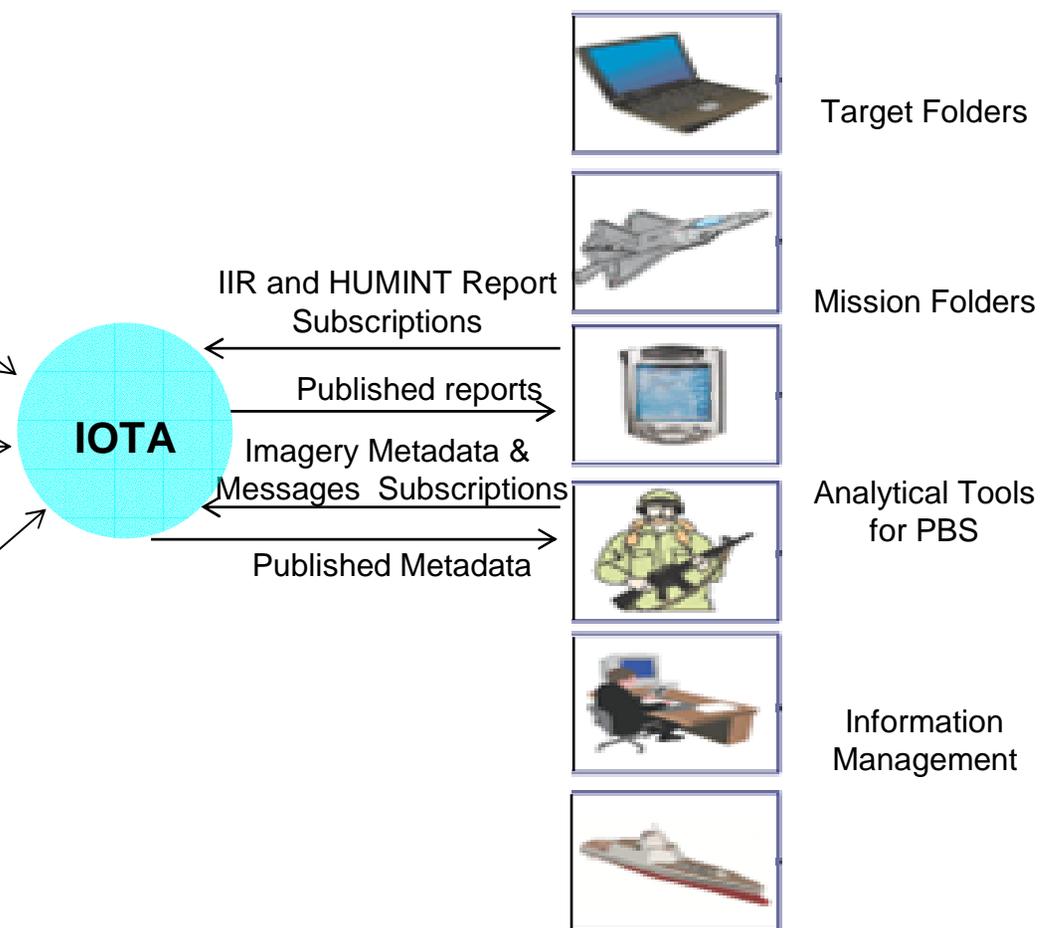


# Potential IOTA Repositories and Applications

## Information Sources and Repositories\*



## User Applications



\* Not an exhaustive list. IOTA will include mechanisms for rapid integration of additional repositories and information sources



# IOTA Information

- **Web sites under construction (12/4/2003)**
  - Internet [unclass open to public] <http://www.rl.af.mil/programs/iota/>
  - Extranet [unclass. open to customer base] <https://extranet.if.afri.af.mil/iota/>
  - SIPRNet [secret] <http://ife.rl.af.smil.mil/iota/>
  - Intelink [jwics/intelink] <http://web1.rome.ic.gov/iota/>
- **Isaiah (480<sup>th</sup> deployment)**
  - INTELINK: <http://intelink.accis.ic.gov>
  - SIPRNet: <http://intelink.ig480.langley.af.smil.mil>

*Click on Current Operations and select one of the AORs*