



DATABASES FOR THE 21ST CENTURY II (DB21 II):

Air Force Research Laboratory
Contract No. F30602-01-D-0167

AN OVERVIEW



DB21 II Overview: Agenda



- **Background**
- **DB21 AFIWC Accomplishments**
- **AFRL/AFIWC Partnership**
- **Description**
- **Scope**
- **Approach**
- **Expected Technology Applications/Capabilities Improvements**
- **Contract Overview**
- **Points of Contact**



DB21 II: BACKGROUND



- **Follow-On to DB21, Contract F30602-97-C-0030, Ended 8Dec01**
- **DB21 Was A CPFF LOE PDL R&D Contract:**
 - AFIWC Primary Customer & Reason for Contract
 - Primarily Supported AFIWC/IOA Information Systems O&M and Development of Components of AFIWC Information Architecture
 - Focused on Implementing DoD Migration/Consolidation Philosophy
 - Supported R&D of AFRL/IFEB & IFED
- **AFIWC Satisfaction with AFRL Support Under DB21 was the Driving Force for Acquisition of DB21 II**



DB21 AFIWC Accomplishments



- **On site daily system and database administration within AFIWC/IOAS**
- **Supported transition off of XIDB to MIDB 1.0 and then to the MIDB 2.0 Architecture**
- **Configuration Management support and administration of CM databases**
- **Development of platform independent Change Management System (CMS) to track local AFIWC/IOAS software baseline and database changes**
- **Inclusion of inventory tracking capability in CMS**
- **Database design and modeling (Networks structures, C2WSpace)**
- **Facilitated AFIWC support to DIA in the design of data models for physical and functional networks**



DB21 AFIWC Accomplishments (Cont'd)



- **Database maintenance applications design, development and support (C2WSpace)**
- **Database application development tools (Java Engine, Application Kinetix, Advent)**
- **Platform independent and deployable applications and databases (Microweb 2.0)**
- **Advanced database access architectures for AFIWC/DB (Data Kinetix)**
- **Database products exchange and data product generation technology (SPG)**
- **Design & Development of Sensor Harvest Database/Applications**



DB21 AFIWC Accomplishments (Cont'd)



- Design and implementation of Information Operations Planning Tool (IOPT) OB database
- Design and development of IOPT OB maintenance applications
- IOPT OB database object development (Stored procedures, triggers)
- IOPT database replication support
- System and database administration
- IOPT OB initial load capabilities
- Conversion of IOPT to the MIDB 2.0 Architecture
- Completion of test procedures and database design documentation for IOPT
- Completion of AOC Architecture of the Future white paper



AFRL/AFIWC Partnership



- **Through the DB21 program, AFIWC and AFRL have combined resources in the development & operational use of many key technologies**
 - **Data production and maintenance applications and support architectures**
 - **Multi-Database access middleware**
 - **Database application development tools**
 - **Data product generation and data transformation technologies**
 - **Database schema management tools**
 - **Map graphics middleware**



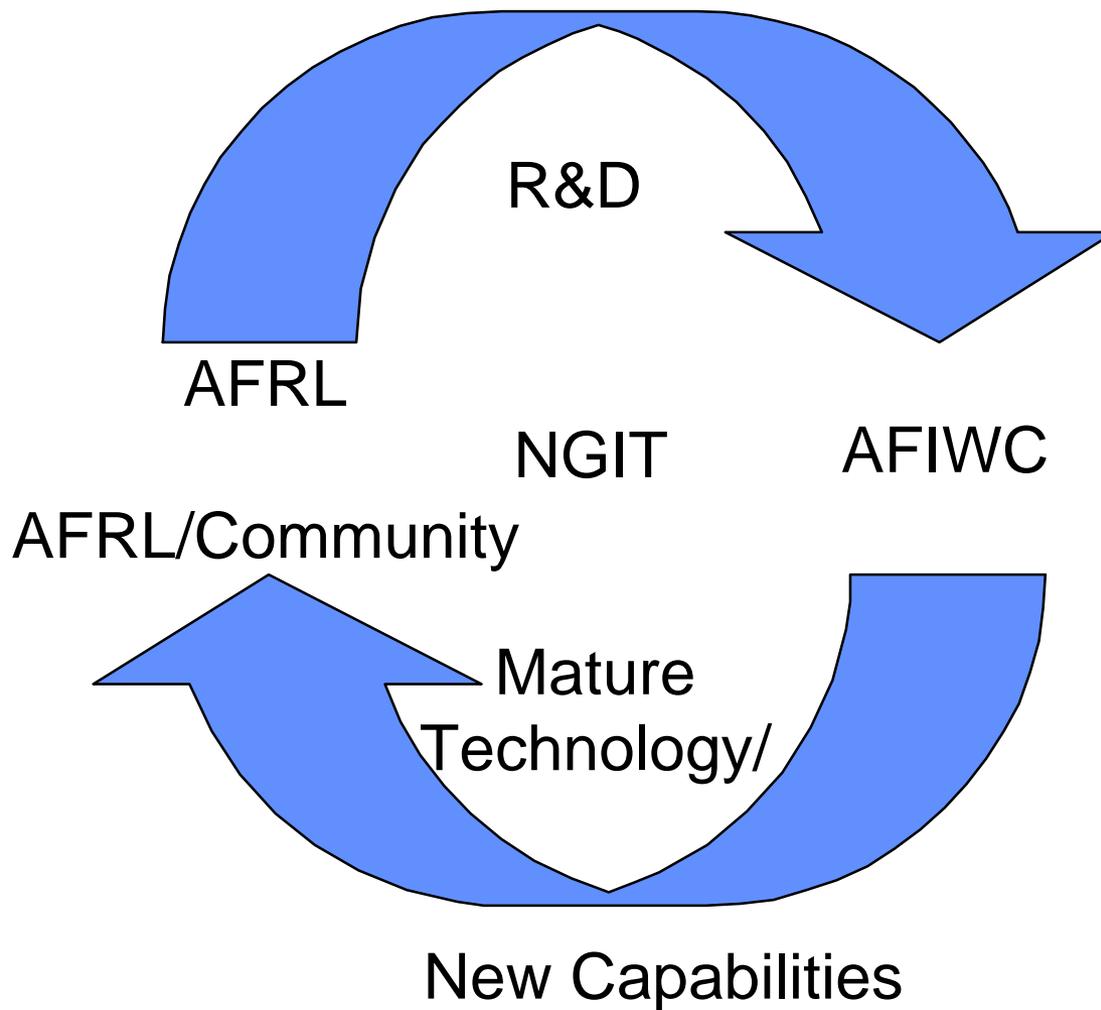
AFRL/AFIWC Partnership (Cont'd)



- **AFIWC has benefited from technologies that originated as AFRL research projects:**
 - Data Kinetix
 - Application Kinetix
 - Common Mapping API
- **The AFRL and community have benefited from software developed and funded by AFIWC:**
 - MIDB Database Design for Physical and Functional Networks
 - MIDB Networks Production Applications
 - Stand-Alone Product Generator (SPG)



Partnership Process





DB21 II: PROGRAM DESCRIPTION



- **General Description/Technical Objectives:**

- An R&D Contract to Support the Advancement, Integration, and Application of Information Systems Science and Technology to Meet AF, Intel & C2 Community's Information Dominance Requirements.
- Facilitate the Transition of this Technology to the Operational World

- **Primary Customers:**

- AFIWC - the entire Center
- AFRL/IFEB's DAWS/DMFE/IET Message Handling Program
- AFRL's Information & Intelligence Exploitation Division (IFE)
- AFRL's Defensive Information Warfare Branch (IFGB)
- The Customers of all of the above



DB21 II: Scope



- **Basic Research Through O&M**
- **Work may include, but shall not be limited to: analytical studies, system feasibility studies, system design, engineering efforts, system trade-off studies, experimental design efforts, experimental hardware/software demonstration efforts, software specification efforts, software development efforts, system simulations, component and systems integration, test and evaluation analyses, advanced system developments and advanced hardware component development efforts, rapid prototyping, and system analyses**
- **Support AFIWC & AFRL's DAWS/DMFE/IET Information Architecture and their Customers Information Needs**
- **Support the Technical Areas of AFRL/IFE & AFRL/IFGB**



DB21 II: APPROACH



- **Perform Development, Integration, Testing Demonstration, Technology Insertion, and Support activities as Required**
- **Use a Combination of COTS/GOTS, State-of-the-Art, and R&D**
- **Promote:**
 - Prototyping/Spiral Development/ Proof of Concept
 - Scalable, Flexible Systems Conforming to Open Systems Architecture
 - Component and System Interoperability
- **Incorporate Lesson's Learned from DB21**
- **Draw Upon AFRL/AFIWC/NGIT Partnership**



DB21 II: Expected Technology Applications/ Capabilities Improvement



- **AFIWC**

- Systems, Applications, and Database O&M
- Development, Demonstration, and Deployment of Various Databases, Applications and Tools for the production, maintenance and dissemination of Information Supporting AF C2W & Information Planning Operations
- Development/Improvement of AFIWC's Information Architecture

- **AFRL/IFEB's DAWS/DMFE/IET Program**

- Similar to AFIWC, but supporting AF & DoD Message Handling Requirements
- Provide the Intel Analyst with Value-Added Message Profiling, Retrospective Search and Message Generation Capabilities



DB21 II: Expected Technology Applications/ Capabilities Improvement (Cont'd)



- **AFRL/IFEB's DAWS/DMFE/IET Program(Cont'd)**
 - Supplement the DMS and Facilitate Its Evolution as a potential Replacement for the Legacy DODIIS AMHS
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 - Facilitate DODIIS Community Transition to SCI DMS Architecture
- **AFRL/IFE and AFRL/IFGB**
 - Technology Advancement and Application in IFE, IFEA, IFEB, IFEC, IFED and IFGB Areas Encompassing Global Awareness, Information Exploitation, Information Fusion, Global Information Base and Defensive IW



DB21 II: CONTRACT SUMMARY



- **Type: CPFF IDIQ R&D Contract/ 2 Portions:**
 - IDIQ CPFF Term Level-Of-Effort (LOE) Employing Performance Details Letters (PDLs): IDIQ Order No. 1
 - For AFIWC & DAWS/DMFE/IET Recurring LOE O&M and Information Architecture Development
 - IDIQ CPFF Completion Based Upon Individual Orders (Nos.. 2 ...)
 - For AFRL/IFE & IFGB and AFIWC & DAWS/DMFE/IET Completion Requirements
- **Fund Types:**
 - Term LOE Portion: 3400 Only
 - Completion Portion: 3400 or 3600



DB21 II: CONTRACT SUMMARY(Cont'd)



- **Contract Awarded: 1Dec01**
- **Performance Period:**
 - **Term LOE Portion/Order 1:**
 - 1st Yr - 1Dec01-30Nov02
 - 2nd Yr - Option: 1Dec02-30Nov03
 - 3rd Yr - Option: 1Dec03-30Nov04
 - 4th Yr - Option: 1Dec04-30Nov05
 - 5th Yr - Option: 1Dec05-30Nov06
 - **Completion Portion: 1Dec01-30Nov06**
- **Prime Contractor:** Northrop Grumman Information Technology (NGIT), Bellevue, NE



DB21 II: CONTRACT SUMMARY (Cont'd)



- **Maximum Potential Value: \$48,950,000**
 - **Term LOE Portion/Order 1: \$20,528,785**
 - 1st Yr - \$4,308,776
 - 2nd Yr - Option: \$4,187,389
 - 3rd Yr - Option: \$4,144,708
 - 4th Yr - Option: \$3,977,222
 - 5th Yr - Option: \$3,910,690
 - **Completion Portion: \$28,421,215**



DB21 CONTRACT KEY FEATURES



- **For Term LOE Portion (Order 1) :**
 - Rapid Funds Obligation/Obligate Prior to Defining Work
 - Streamlined Acquisition Process Vs. Traditional Contracting
 - Quick & Easy to Add/Modify Work via PDLs to Meet Changing Requirements.
 - Incremental Funding Allowed up to ~mid Sep
- **Flexible Structure Meets Varied Customer Requirements**
- **Ability to Cross FY's with 3400 Funds**
- **Multiple Funding Sources and Types/Separate Financial Reporting by Customer & Effort**
- **Can Add Subcontractors/Consultants Easily**



AFRL PROGRAM CONTACTS



- **DB21II Program Manager**
 - Office Symbol: AFRL/IFEB
 - Tel: Commercial 315-330-3790; DSN 587
 - Fax: 315-330-3913
- **DB2 II Systems/DB Engineer**
 - Office Symbol: AFRL/IFEB
 - Tel: Commercial 315-330-3296; DSN 587
 - Fax: 315-330-3913



AFRL PROGRAM CONTACTS (Cont'd)



- **AFRL DAWS/DMFE/IET Program Manager**
 - Office Symbol: AFRL/IFEB
 - Tel: Commercial 315-330-3979; DSN 587
 - Fax: 315-330-3913
- **DB21 II Defensive IW Program Manager**
 - Office Symbol: AFRL/IFGB
 - Tel: Commercial 315-330-3617; DSN 587
 - Fax: 315-330-2315



AFRL PROGRAM CONTACTS (Cont'd)



- **Contract Specialist**

- Office Symbol: AFRL/IFKE
- Tel: Commercial 315-330-7035; DSN587
- Fax: 315-330-8091

- **Contracting Officer**

- Office Symbol: AFRL/IFKRE
- Tel: Commercial 315-330-4767; DSN587
- Fax: 315-330-8091



AFIWC PROGRAM CONTACTS



- **Program Manager**

- Office Symbol: AFIWC/IOA
- Tel: Commercial 210-977-2604; DSN 969
- Fax: 210-977-6016

- **Deputy Program Manager**

- Office Symbol: AFIWC/IOA
- Tel: Commercial 210-977-3349; DSN 969
- Fax: 210-977-2145



NGIT PROGRAM CONTACTS



- **Program Manager**

- Office: NGIT, 1410 Wall St., Bellevue, NE
- Tel: 402-293-3924
- Fax: 402-293-3929

- **On-Site AFIWC Program Manager:**

- Office: AFIWC/IOA
- Tel: 210-977-2605
- Fax: 210-977-6016