



**MIMOSA  
OPEN INTERFACES  
FOR  
PLATFORMS**

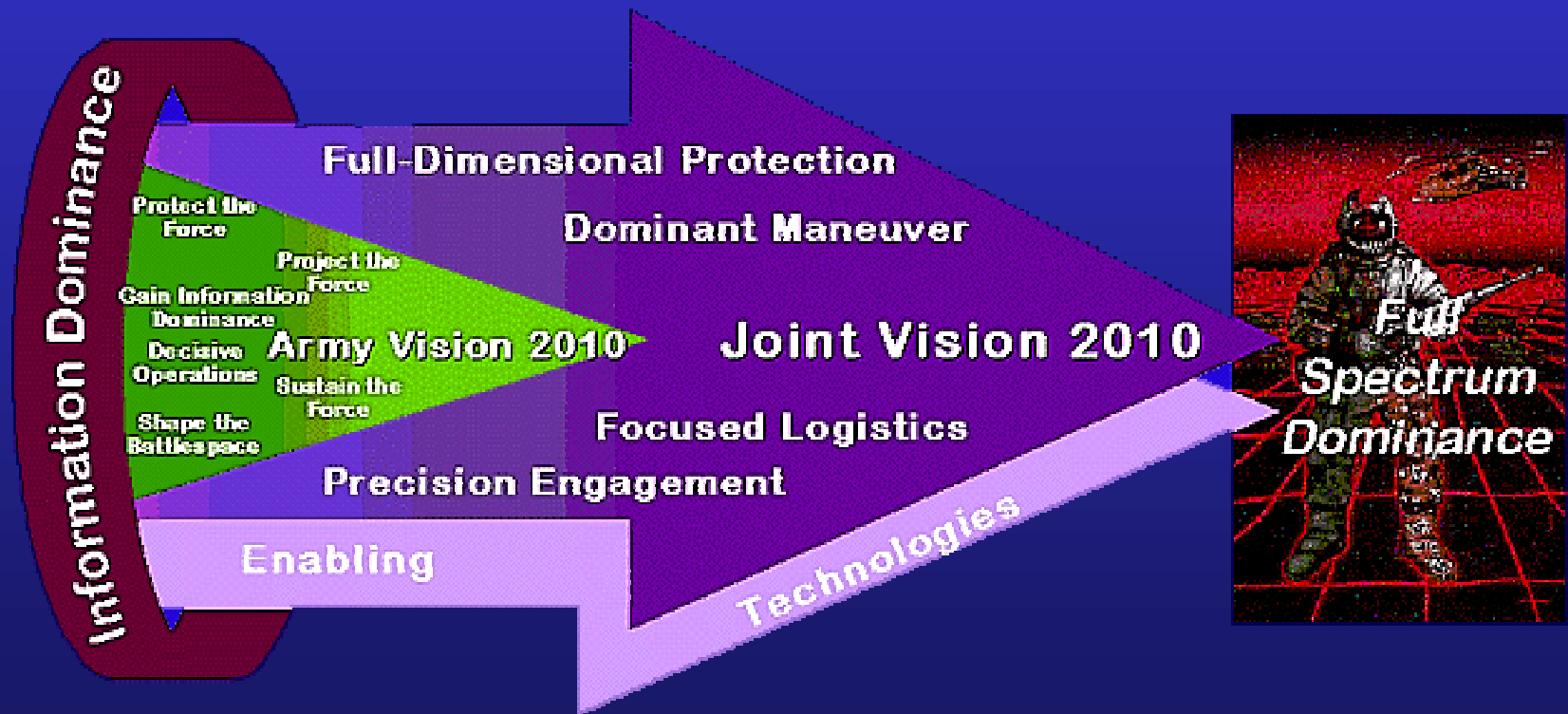
**Dr. Carl M. Powe, Jr.  
SAE Great Ideas Competition  
29 October 2003**

# AGENDA

- INTRODUCTION
- JOINT VISION 2010
- ARMY VISION 2010
- REQUIREMENT
- GLOBAL COMBAT SERVICE SUPPORT-  
ARMY (GCSS-A)
- MIMOSA DESCRIPTION
- OPC FOUNDATION
- OpenO&M™
- GCSS-A DATA FLOW
- SUMMARY



# JOINT VISION 2010



# ARMY VISION 2010

- Protect the Force
- Gain Information Dominance
- Decisive Operations
- Shape the Battle Space
- Project the Force
- Sustain the Force



# DEPLOYABLE

- BRIGADE – 96 HOURS
- DIVISION – 120 HOURS
- 5 DIVISIONS – 30 DAYS



# REQUIREMENT

- **KNOW HEALTH OF PLATFORM**
  - Diagnostics
  - Prognostics
- **GLOBAL COMBAT SERVICE SUPPORT-ARMY (GCSS-A)**
  - Total Asset Visibility
  - Information Integrator
  - Information System for Logistics Execution



# GCSS-A

**SUPPLY  
PROPERTY**



**MAINTENANCE**



**SUPPLY SUPPORT  
ACTIVITY**



**AMMUNITION**



**INTEGRATED  
MATERIEL  
MANAGEMENT**



**MANAGEMENT**





- **MIMOSA IS A NOT-FOR-PROFIT OPERATIONS AND MAINTENANCE INFORMATION OPEN SYSTEMS ALLIANCE**
- **DEVELOPS AND PROMOTES OPEN STANDARDS FOR OPERATIONS AND MAINTENANCE**
- **CLIENT/SERVER SIMULATON USED IN TESTING**





- **PRODUCES VENDOR, PLATFORM, AND APPLICATION NEUTRAL INFORMATION EXCHANGE STANDARDS**
  - **Open Systems Architecture for Enterprise Application Integration (OSA-EAI™)**
  - **Open Systems Architecture for Condition-Based Maintenance (OSA-CBM™)**
  - **Publicly available at [www.mimosa.org](http://www.mimosa.org)**

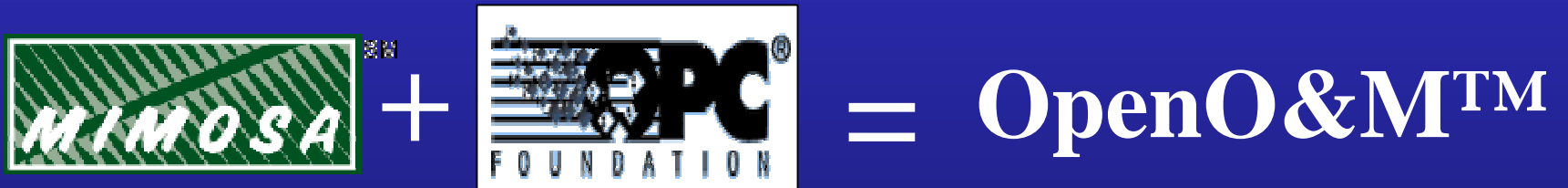




- **OPEN CONNECTIVITY IN INDUSTRIAL AUTOMATION**
- **SEVEN STANDARDS**
  - OPC Data Access
  - OPC Alarms and Events
  - OPC Batch
  - OPC Data eXchange
  - OPC Historical Data Access
  - OPC Security
  - OPC XML-DA
  - OPC Complex Data
  - OPC Commands



# MIMOSA AND OPC COLLABORATION





- **OpenO&M™ ADVANTAGES**
  - **MIMOSA CRIS (Common Relational Information Schema) allows new Described Data Types**
    - **Allows the dynamic creation of new Base Data Types using Type Tables**
    - **Provides Raw Data Description Fields**
      - **Sensor Type**
      - **Gains**
      - **Offsets**
      - **Manufacturer Tables, Measurement Event Tables**





- **OpenO&M™ ADVANTAGES**
  - **MIMOSA Agent Algorithm Table and Data Tables describe:**
    - **Data resulting from Algorithmic processing**
    - **Algorithm Versions and developing Organization**
    - **Fault Code and Prognostic Data**





- **OpenO&M™ ADVANTAGES**
  - **OPC Complex Data Schema**
    - Description and transfer of any type of XML DTD/schema compliant Tagged Data
  - **MIMOSA OSA-EAI**
    - Description of complex platform data





- **OpenO&M™ ADVANTAGES**
  - **Provides XML based Event Notification Capabilities**
    - **OPC XML DA allows a Client to notify a Server to asynchronously notify the Client when monitored Data Values or Fault Values change**
  - **MIMOSA Tech-Web or Tech-XDE provides Query-Response Capability**





- **OpenO&M™ ADVANTAGES**
  - **Allows Platform to GCSS-A/T Hub Compatibility without reformatting data**
    - **MIMOSA XML structure allows use with products such as WebSphere**
    - **SAP Aerospace and Defense Mobile Engine will be compatible with MIMOSA**
    - **Capture data once and use many times with same format**

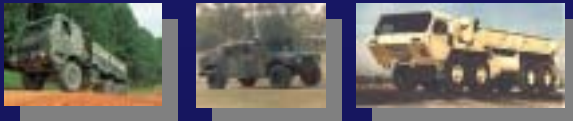




- **OpenO&M™ ADVANTAGES**
  - **Facilitates use of Commercial Off-The-Shelf (COTS) Technologies**
    - **Open Standards allow multiple Vendors to source and compete for New Equipment**
    - **Broad and flexible Standards**
    - **OPC facilitates use of XML-OPC compliant products as available**
      - **Industry off-the-shelf Sensors**
      - **Test Equipment**
      - **Process Control Products**



# GCSS-A/T DATA FLOW



# SUMMARY

- **MIMOSA is a set of Open Information Standards**
  - **Vendor, Platform, and Product neutral**
  - **Open Standards developed by Industrial and Military Members**
  - **Has no Hardware Requirement or Specification**
  - **Transport Mechanism Independent at all Levels**
  - **Not based on a specific Technology**

