

**Commander-in-Chief  
United States Pacific Command**



***JV2010 Initiative  
Virtual Information Center (VIC)  
J-08***

**OUTLINE**

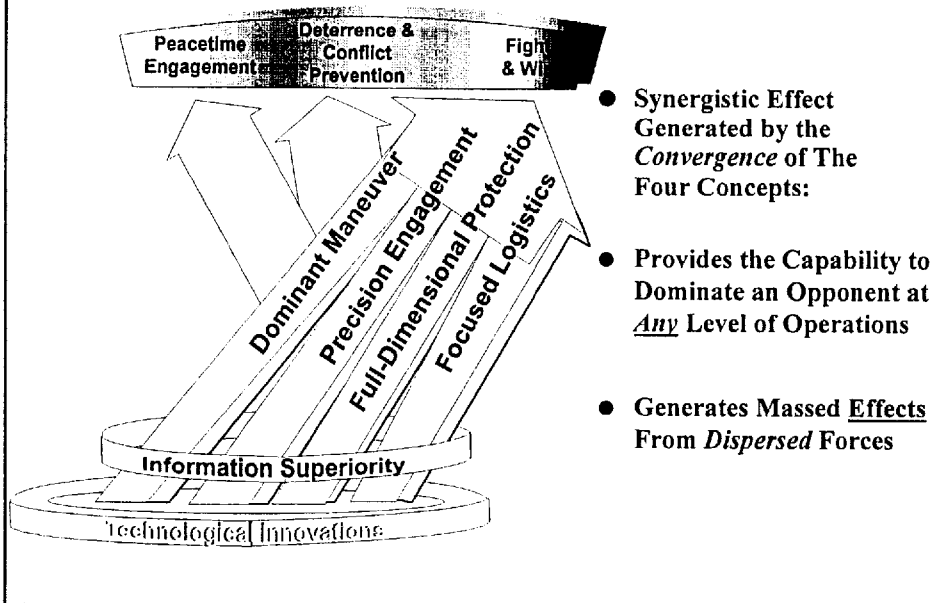
- Overview
- Political-Military Anchor Desk (PMAD)
- Virtual Information Center (VIC)
  - Development
  - Current Activity
  - Future Activity
- VIC R&D

## **OVERVIEW**

### **Project**

**In support of the Chairman's Joint Vision 2010, USCINCPAC takes the lead in developing C4ISR and Information Superiority to achieve Full Spectrum Dominance in Operations Other Than War**

## The Vision

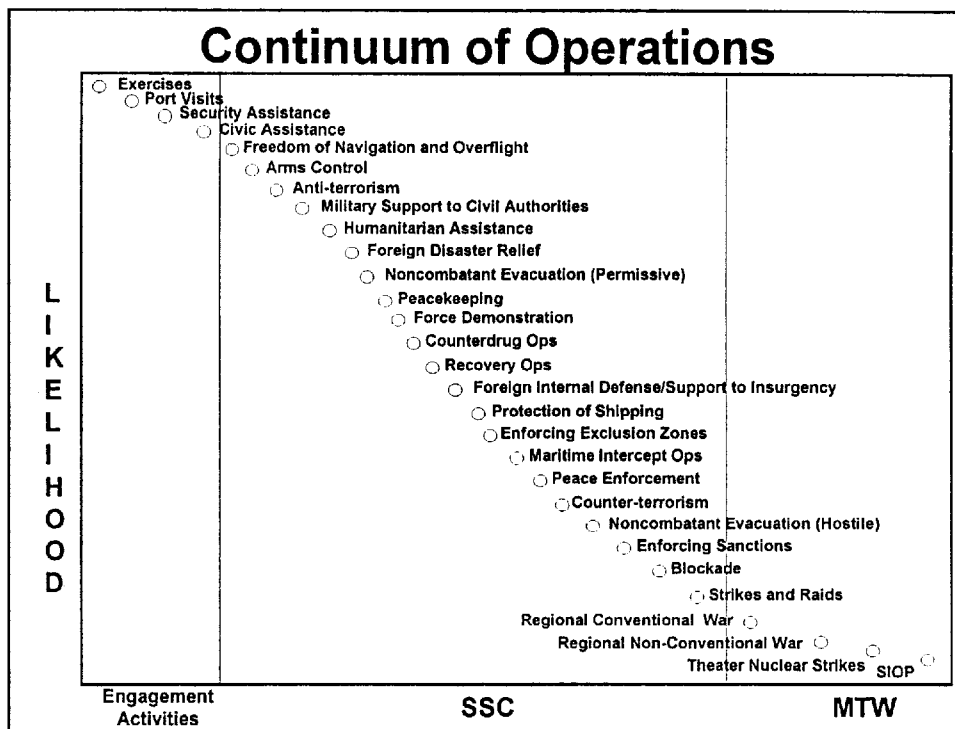


## Program Rationale

Testimony to the House Military Procurement and Research and Development Subcommittees on March 20, 1997

***“We must also understand that information superiority is not solely limited to combat environments. Other military operations, from peacekeeping to humanitarian assistance to nation-building, also depend upon available and robust information exchange.”***

Lieutenant General Douglas D. Buchholz, USA  
Director for Command, Control, Communications  
and Computer Systems  
The Joint Staff



## A CHANGING WORLD

- **Changing Operational Focus**
  - From global conflict and major regional contingencies
  - To smaller scale contingencies and operations other than war
  - From deliberate planning to crisis action planning
- **Changing Participants**
  - DOD, other government agencies, UN, independent organizations, non-government organizations, local authorities, other militaries
  - PDD 56 mandates interagency response for complex emergencies
- **Changing Information Requirements and Sources**
  - Includes political, military, economic, social, environmental, etc.
  - Much information outside normal ops and intel expertise
  - Much information open source

## **CINCPAC Perspective on HA/DR**

- **Most frequently named operation today**
- **CINC involvement to “Shape and Respond” throughout**
- **Gov’t inter-agency activity: State Dept., OFDA, etc.**
- **Non-Gov’t: Host Nation, IO/NGO/PVO’s**
- **Military: Security, Logistics, Medical, Engineering**
- **Complex Command and Control, Information Interoperability**

## **VIRTUAL INFORMATION CENTER**

- **Virtual Information Center developed to achieve information superiority in the changing world**
  - **Responds to requests for information or frequently asked questions**
  - **Rapid structured search of open sources: electronic, hard copy, people, models, etc.**
  - **Appropriate experts in variety of locations collaborate to formulate search and analyze information**
  - **Applies government expertise such as intel or medical as needed**
  - **Condenses product to a few “drips of knowledge” for policy and decision makers**
  - **Products disseminated to DOD, government and non-government as appropriate**
  - **Political-Military Anchor Desk (PMAD) is electronic search tool**

**POLITICAL-MILITARY  
ANCHOR DESK  
(PMAD)**

**Info Management Goal**

**Use existing information management technology and in-place data sources, such as IO's and NGO's, the Business Community, Internet, On-line services, predictive modeling, and remote sensing to make us**

**... Smarter**

**... Faster**

**... At less cost**

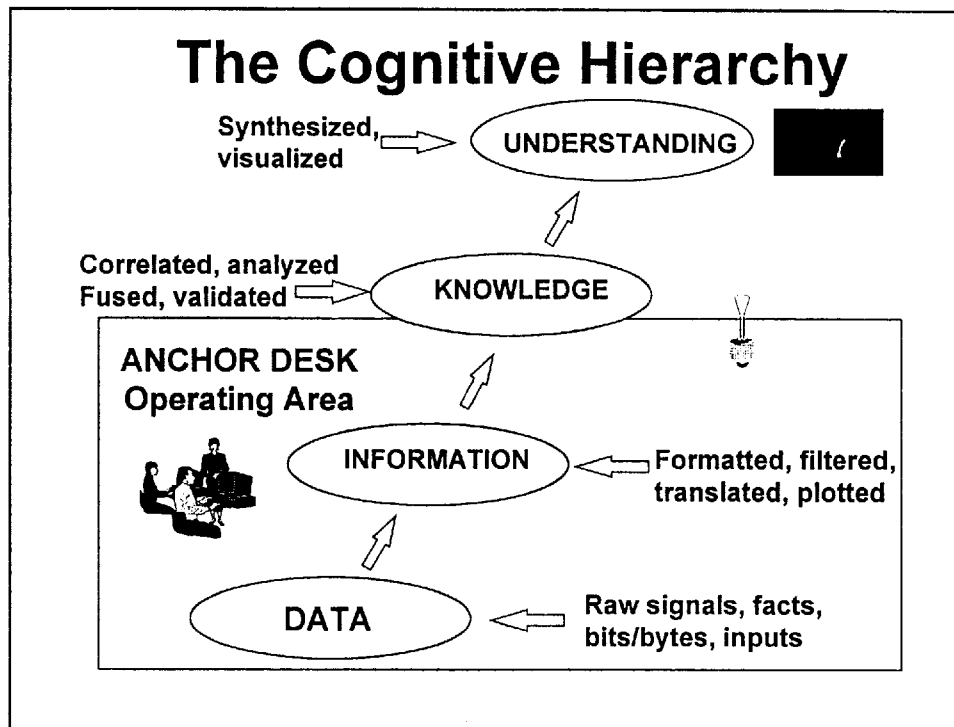
## What is a PMAD ?

- Resources -- Off-the-Shelf Technology for:
  - Internet access
  - Powerful system of search engines
  - Archived Database
- People -- Anchor desk concept
- Concept of Operation that:
  - Gets the right information  
to the right place  
in time

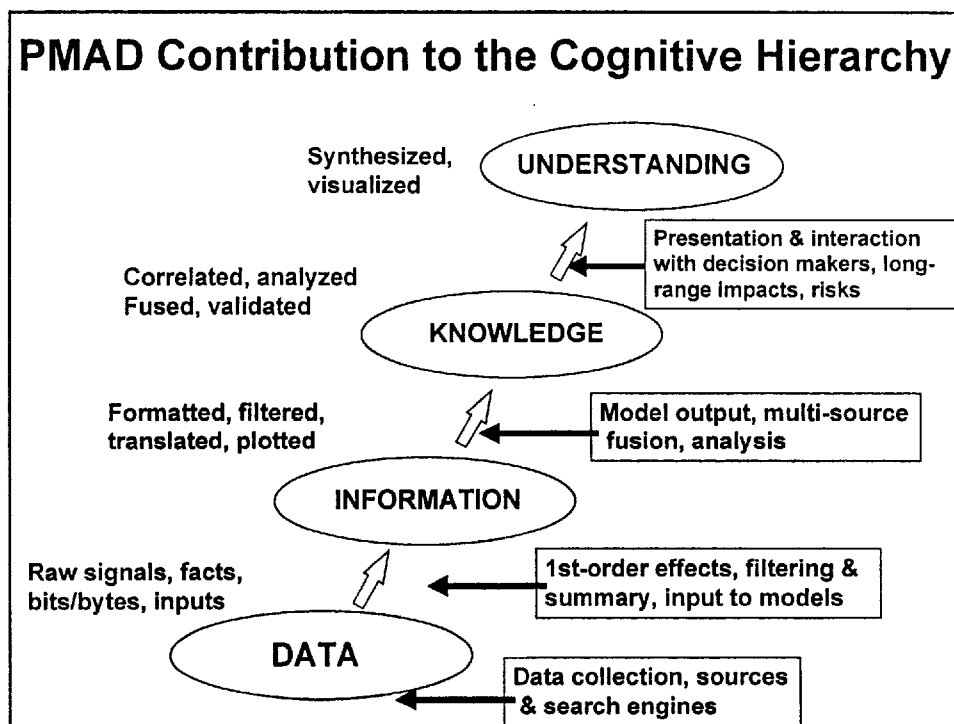
## Who Needs a PMAD ?

- The CINC
  - Where is next crisis? What are the issues?
  - Can I prevent it? ... or its 2nd-order effects
- JTF Commander
  - What should I take? Who can help me?
  - MOEs: What is "normal"
- Staff Organizations (J-5, JIC, OPT)
  - What are the issues? Who are the players?
  - Other opinions... Diverging views

# The Cognitive Hierarchy



# PMAD Contribution to the Cognitive Hierarchy





## **PMAD Provides Opportunities to:**

- **Answer tomorrow's questions today**
  - Define “normal”... Baseline MOEs
  - The past as prologue... El Nino
  - The questions don't change  
*... the answers do*
- **Building knowledge...**
  - Develop “play-book”... what worked before
  - Integrate data into *information*
  - Basis for analysis
  - Stay abreast of fast-breaking “news”

## **Opportunities -- Cont'd**

- **Enhance organizational effectiveness**
  - Better information flow within HQ  
*... and externally*
  - Improved presentation technology
  - Faster data access; better connectivity
- **Save \$\$ and Manpower**
  - Identify space-saving potential
  - Concept development--“fly before you buy”
- **Model for other CINCs & organizations**

# **VIRTUAL INFORMATION CENTER (VIC)**

## **VIC DEVELOPMENT**

- |          |                       |
|----------|-----------------------|
| • JAN 97 | BIG IDEA              |
| • SEP 97 | PAC CHEST             |
| • OCT 97 | CONCEPT DEVELOPMENT   |
| • APR 98 | VIC EXPERIMENT        |
| • NOV 98 | CONCEPT REFINEMENT    |
| • 98Q2   | VIC DEMO (VIC II)     |
| • 98Q3   | VIC IN MAJOR EXERCISE |

## Recent CINCPAC Efforts

**SEP-OCT 97: PAC-CHEST** (PMAD and COE Complex Humanitarian Emergency Support Test) demonstrated the ability to improve situational awareness in HA/DR at the CINC level by accessing information through the Internet and fusing it in a political-military anchor desk. Also demonstrated the need to increase granularity to meet pre-deployment JTF information needs.

**OCT 97: CCRP Workshop** identified new concepts for information superiority architectures, sensors and fusion, information access, prediction, and delivery management in support of HA/DR operations which then led to the VIC Concept.

## The Virtual Information Center What is a "VIC"?

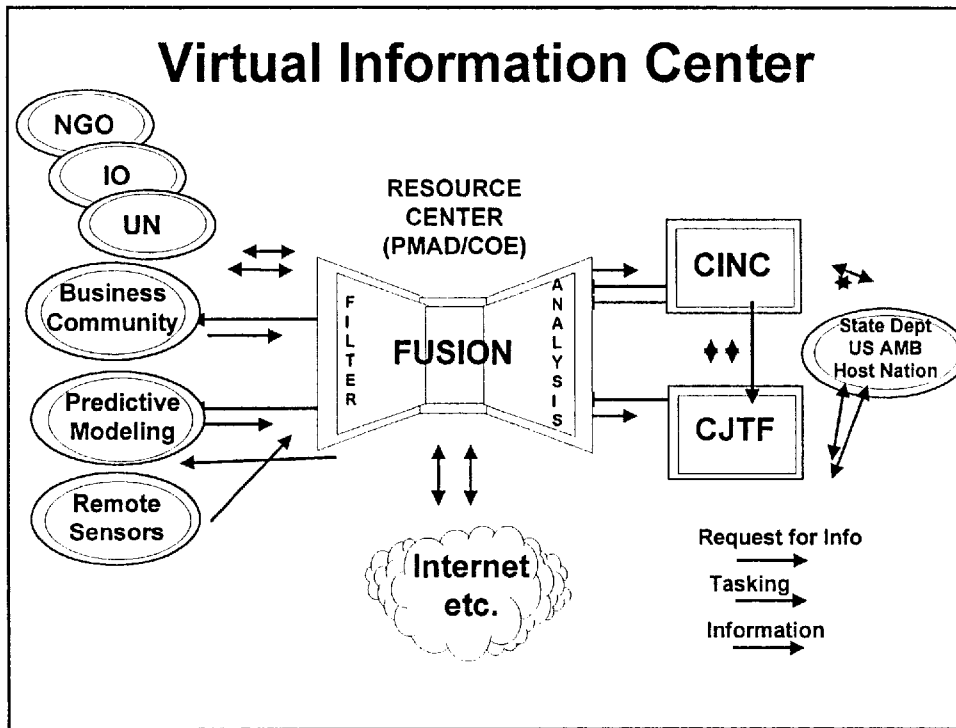
- **Not a thing or place, but a process**
  - Human interaction at a distance
  - Videoconferences, net-meetings, bulletin boards
- **Expands PMAD capability**
  - More people involved--more sources; more views
- **More efficient use of resources**
  - Less travel -- and time
  - More databases and finished information

## **Virtual Information Center**

- **Open Source**
- **Collaboration**
- **Analysis**
- **Dissemination**

## **Virtual Information Center (VIC)**

- **Interactively seeks non-traditional info**
  - **International Business**
  - **NGO's & UN, etc.**
  - **Commercial Remote Sensors**
  - **Predictive Modeling**
- **Uses technology to encourage data sharing**
  - **Pools schedules, security, POC's, media info., etc.**
  - **Relies on commercial information services and sensors**
  - **Minimizes forward footprint**



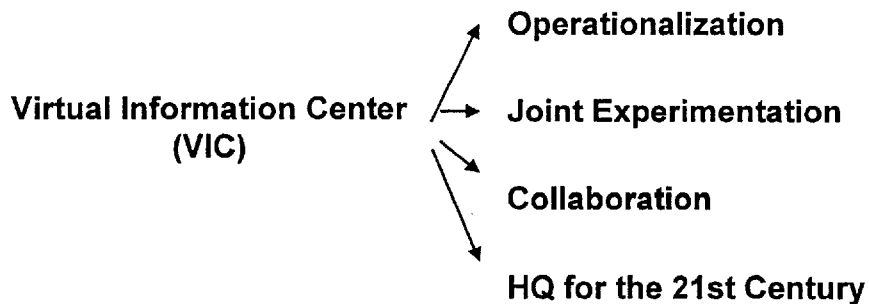
## Insights

- **Information Sources**
  - Predictive modeling and Internet searches are currently productive
  - Links to Remote Sensing, NGO's and international business community, not yet timely
- **Information Processing**
  - Collaborative expert knowledge network
  - Officer-in-the-loop allowed analysis/quality control
- **Information Dissemination**
  - Web-site with color-coded, clickable responses
    - Enabled Warrior Pull, but only limited Smart Push achieved

## VIC CURRENT ACTIVITY

- **\$150K NSAP Workflow Management Task**
  - Refine the VIC process
  - Data-Info-Knowledge-Understanding
  - Automate end-to-end workflow process
  - ID bottlenecks, reduce latency, increase transparency, and guard against info overload
- **Capture/Retrieve Relevant Information from Previous Experiments**
  - Architecture and COTS products
  - Data collection methods
  - Database structure

## VIC FUTURE: The Next Steps



## **VIC FUTURE**

### **(Operationalization/HQ for 21st Century)**

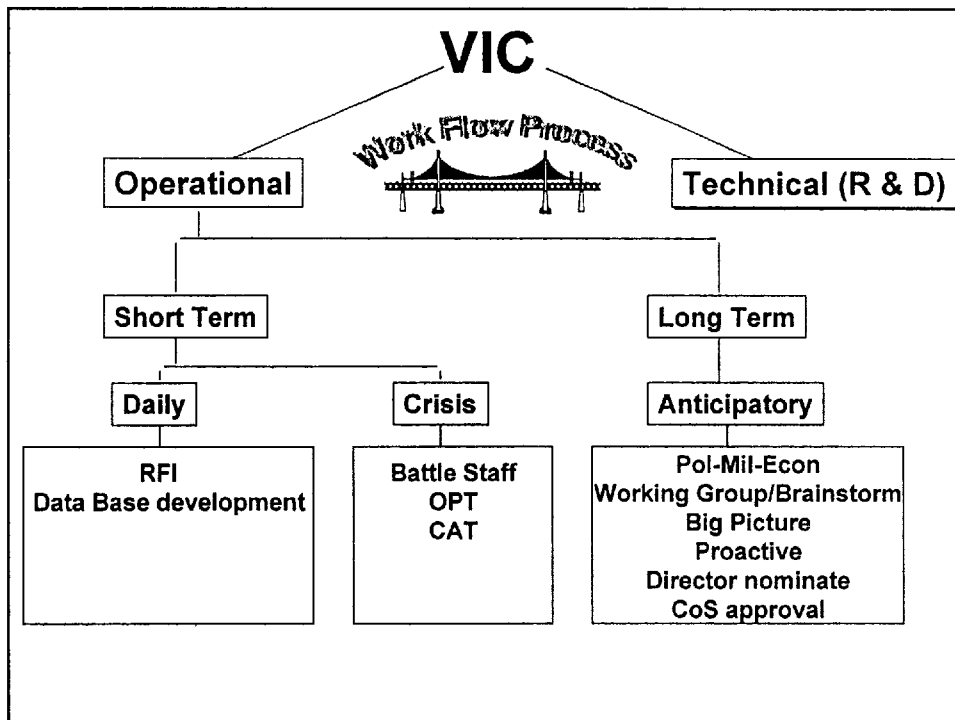
- **Virtual Information Center is good candidate for information and knowledge management in “Headquarters for the 21st Century”**
  - **Provides framework on which to hang DARPA, DISA, ONR, ACTD, and other projects**
  - **Information and knowledge are treated as a utility manned by professionals to support CINC, staff, and headquarters business processes**
  - **Open source Virtual Information Center output and output from traditional ops and intel sources need to be merged in knowledge center**

## **VIC FUTURE**

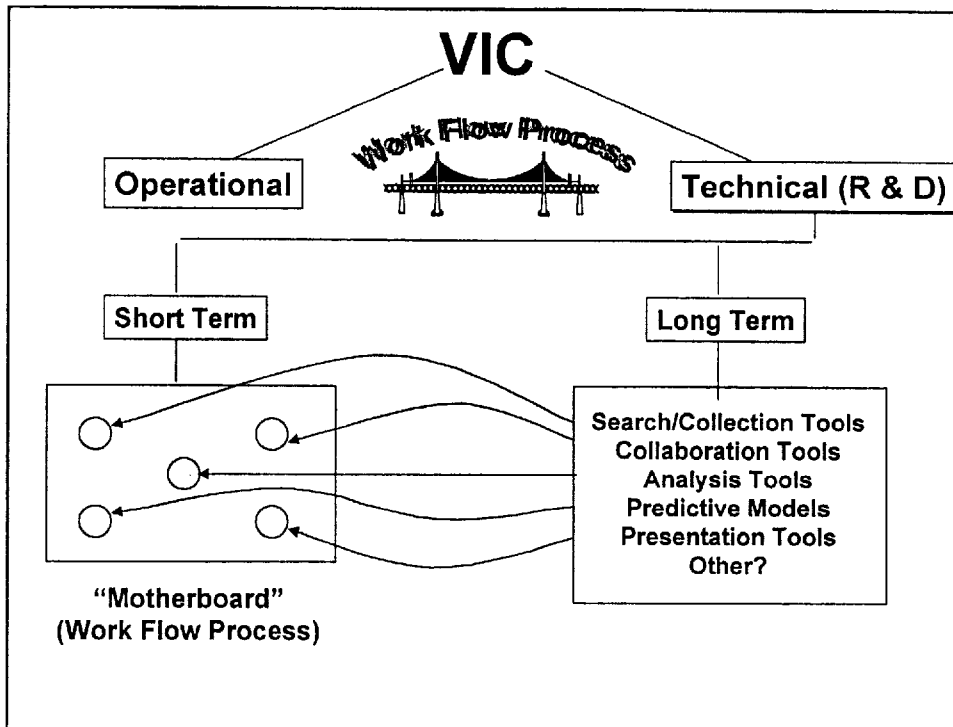
### **(Joint Experimentation/Collaboration)**

- **VIC Concept refinement workshop (Nov 98)**
- **Development and Execution of a Quick Reaction VIC Demonstration (Spring 99)**
- **Integration and Assessment of VIC in a major exercise (Late FY 99)**

# VIRTUAL INFORMATION CENTER RESEARCH AND DEVELOPMENT EFFORTS







## VIC/R&D SYNERGY

- Test Bed for C4ISR Tools
- Operationalize R&D Products
- Joint Experimentation Exposure
- JV2010 Development
- Enhance Information Superiority
- Maintain Current Technology

# PACOM Advantages

HISTORY OF DEVELOPING  
ADVANCED C4ISR

PACNET 21 AND IT21  
INFRASTRUCTURE VISION

## PACIFIC RIM OF FIRE

- Earthquakes
- Typhoons
- Volcanic Eruptions
- Floods



## ASSETS

- Pacific Disaster Center
- Center of Excellence  
in Disaster Management
- Political Military Anchor Desk

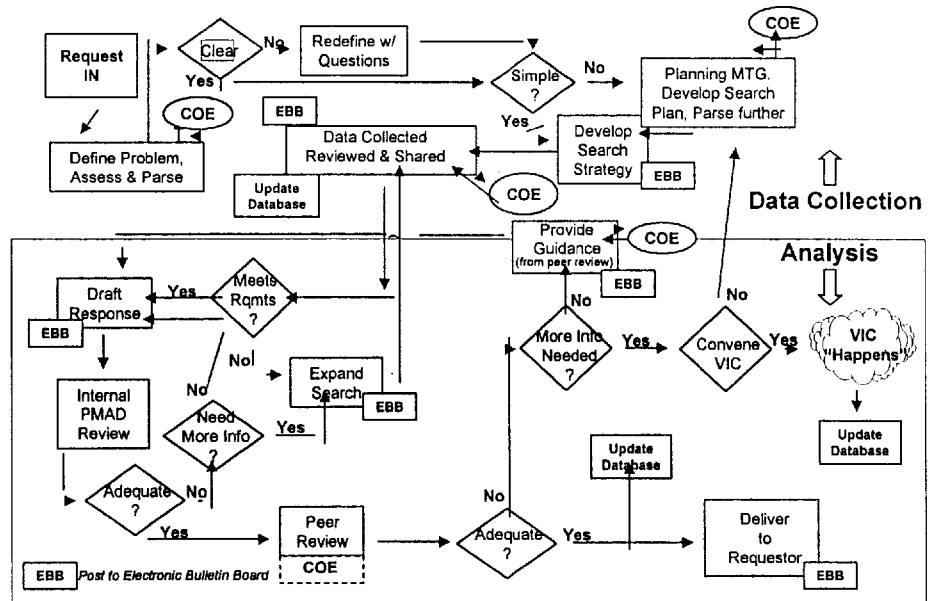
## GEOGRAPHY

- Half the earth's surface;
- 60% of the people

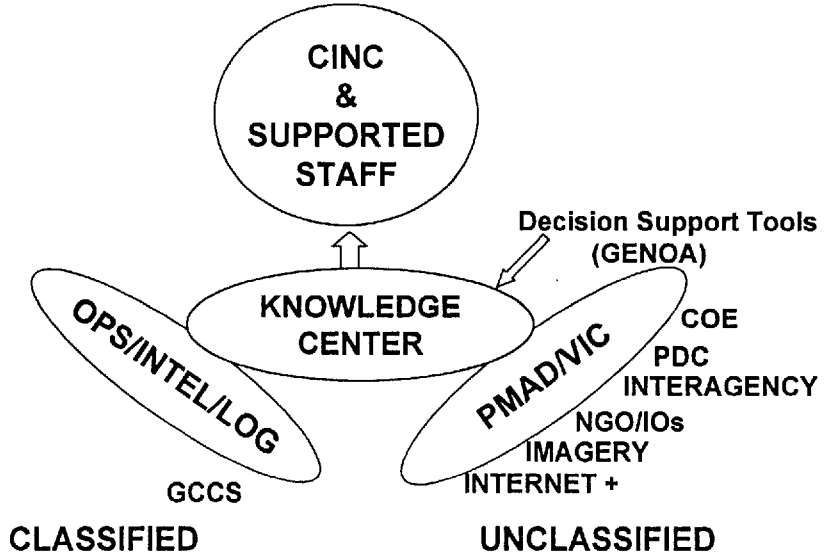
## CHALLENGES

- Complete spectrum  
of operations

# VIC PROCESS



# Information Management System



OSS '99 PROCEEDINGS Global Information Forum Information Superiority through the  
Collection, Sharing and Analysis of Relevant Information: A New Approach to  
Operationally-Driven All-Source Information Management Washington, D.C. 24-26  
May 1999 - Link Page

[Previous](#)      [The Future of All-Source Analysis: What Analysis, Who Does the Analysis?](#)

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