



Geospatial-Intelligence Provisioning for Battle Command Platforms

(so that everyone is literally on the same map sheet)

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and

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Fort Hood, Texas



Agenda

- Introduction
- Overview of the Army's Central Technical Support Facility
- Baseline map set production and distribution- "In the beginning..."
- Expansion from ABCS support to Operational Missions, Homeland Security/Disaster relief efforts, and Training,
- Multifaceted operation and a conduit for information
- Partnership with the Army Geospatial Center
- Road ahead - major impacts
- Conclusion and Questions



CTSF Vision

To become a customer valued organization ensuring the best interoperable net-centric C4I capabilities are available to US Army, Joint and Coalition Warfighters.

CTSF Mission

The CTSF provides a unique scalable environment, with skilled personnel, using qualified processes to support the DoD's net enabled strategic vision by executing configuration management, systems engineering support, and interoperability certification testing for Army and Joint C4I



Bottom Line: CTSF is the Interoperability "Check Ride" for Current & Future Army Programs



Central Technical Support Facility





CTSF Organizational Evolution



1997

2003

2007

FUTURE

Integration

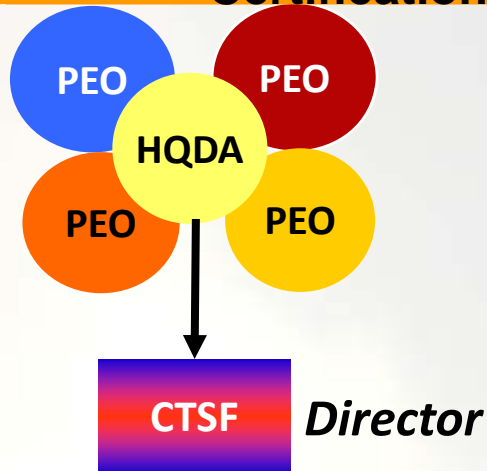
Interoperability Integration and Certification



*1 Digital Division
Proof of Principal
SW Functionality*

11 Systems

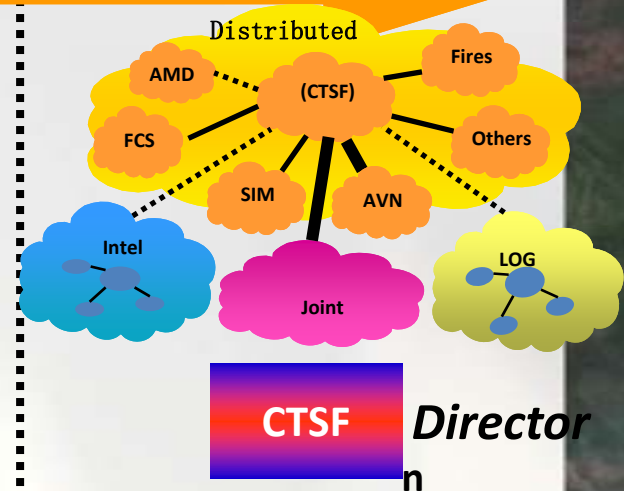
ABCS Integration



*10 Digital Divisions
40+ Brigades
C2 Interoperability*

75+ Systems

SoS Interoperability



*Future Digital Force
Net Centric
Interoperability*

500+ Systems

Army Net-Centric Interoperability



The New CTSF

- **HQDA EXORD - 9 July 2007- “The CTSF is established as the U.S. Army’s strategic and central testing facility...” responsible for:**
 - **Army Interoperability Certification (AIC) testing for HQDA CIO/G6**
 - **Configuration Management of the Army BC baseline for HQDA G3/5/7**
 - **Systems Engineering & Integration support to PMs for ASA (ALT)**
- **CECOM LCMC OPORD 07-02 - reassigned CTSF missions:**
 - **BC collective training and field support coordination* – PEO C3T / AFSB**
 - **DSE, FSR, software replication/distribution – CECOM LCMC SEC**
 - **cable fabrication – Tobyhanna Army Depot**
 - **Installation Yard – CECOM LCMC LRC**

THE CTSF IS STILL A “ONE-STOP SHOP” – JUST A MATTER OF MISSIONS AND FUNCTIONS BEING DISTRIBUTED AMONG THE CTSF AND TENANT ACTIVITIES WITHIN THE CTSF CAMPUS



CTSF Services

- **Army Interoperability Certification (AIC) Testing**
 - Certification testing for BC, LOG-EIS, and Intelligence digital systems
 - Deployable Test Teams to customer test locations
- **Configuration Management**
 - Maintains LWN/BC SW Baseline
 - Maintains CIO/G6 Certified Baseline
 - Configuration support to Program Managers
 - Standard process and control for distributed integration and testing
- **Systems Engineering and Integration Support**
 - Network Engineering support to training and deployed units
 - Network and Systems Engineering Field Support
 - Interoperability integration support to PMs SW development
 - Army Digital Interoperability Subject Matter Expertise
 - Current and future LWN/BC SW Integration facilities and labs



CTSF Services (cont)

- **Information Assurance**
 - Provide Army Digital Systems IAVA, IAVM updates to PMs products
 - Provide C&A Support to MATDEV (Partnering)
 - ATO, IATO, IATT Tracking support to PMs
 - Networkiness (planned capability)
- **Co-located Digital Cable Fabrication Facility**
- **Onsite PdM Netops Data Products Development**
- **24 Hour Onsite C4ISR Support Operations Center**
- **Secure facilities, office space, IT, and Logistics support available to PMs**

CTSF Services are provided via HQDA funding and on a reimbursable basis



Why do we need a map
in the first place?

Where am I?

Where are the friendlies?

Where is the enemy?

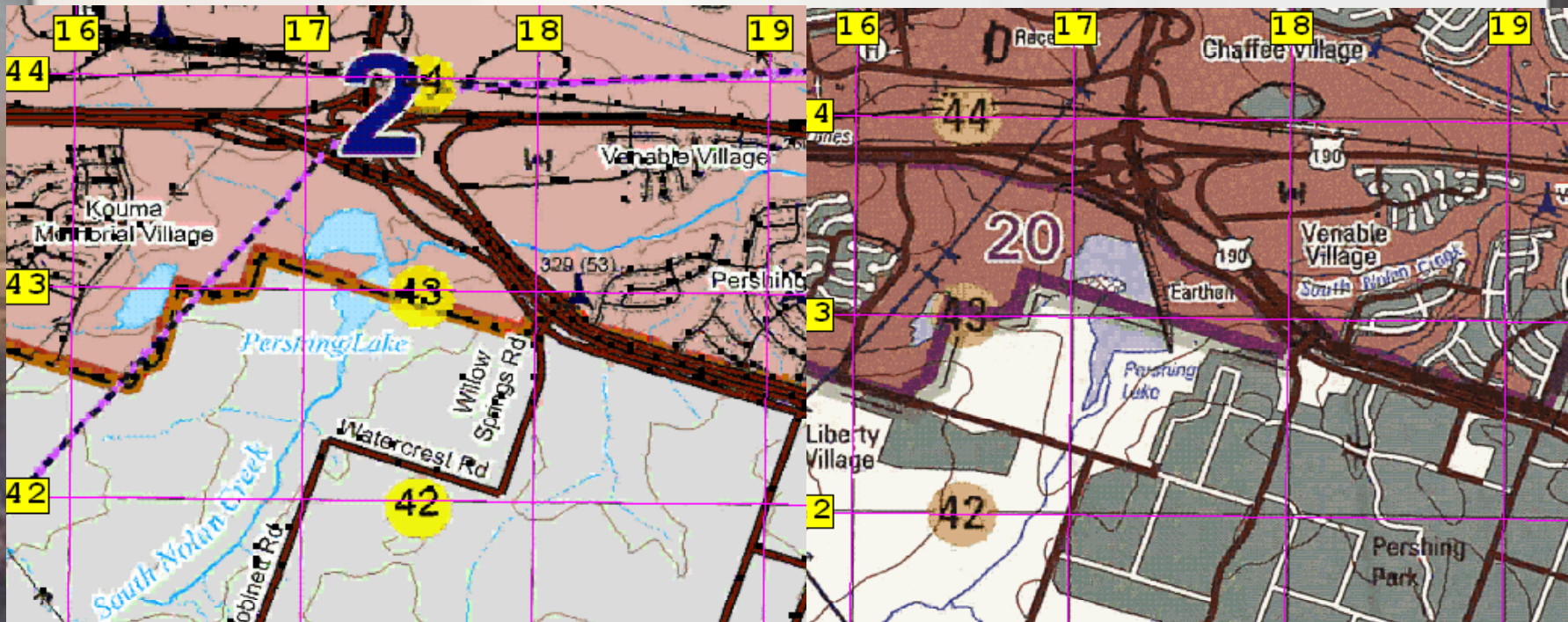
Where are the noncombatants?

**Where are the obstacles, natural
and manmade, and how do I
navigate among them?**



Brief history of Geospatial Support provided by the CTSF – “In the beginning...”

- Began as Force XXI in 1996 as a test-bed for the first digitized Brigade
- Program managers loaded what ever map data they had available
- Quickly discovered discrepancies in Geospatial data among the various systems
- The CTSF-Configuration Management office assumed the mission to resolve this issue



Fort Hood Edition 005

Fort Hood Edition 007



Brief history of Geospatial Support provided by the CTSF (cont)

- Began to assemble a CD Library of NGA products
- Generated a baseline or common map data set for use on all CTSF test floors
- Baseline map data sets have since been generated to support various training exercises, operational missions, homeland security and disaster relief operations



Brief history of Geospatial Support provided by the CTSF (cont)

- Initially supported 11 systems
- Program started strictly with digital data sets only
- Today that number of supported systems has grown to over 500
- Geospatial Support program has become a multi-faceted operation



Who does the CTSF Currently Support?

Various Branches of Service

Various Department of Defense Organizations

Real-World Operations and Exercises

C4ISR Program Managers and Developers



CTSF Geospatial Services, Today...

- **Geospatial Products Support – Multi-Faceted Operation**
 - Provide Army Digital Systems tailored digital map products
 - Supporting units with baseline map data for operational missions, homeland security and disaster relief, and training
 - Custom paper maps on request
 - Bulk ordering of DLA catalog items on a case by case basis
 - Assist units in establishing RMF and DLA accounts
 - Conduit for GEOINT information for supported programs and military units through NGA, AGC, DLA, RMF, SRP and many other websites and agencies.
 - Provide basic GIS training upon request

CTSF Services are provided via HQDA funding and on a reimbursable basis

AGC

NGA

DLA

USGS

SOURCE DATA

NAIP

SRP

ITAM

AMP

IGI&S





Partnership with the Army Geospatial Center

- Stemmed from the CTSF's presentation of "Establishing a Standard Geospatial Data Set" during the 2007 AGIC
- The ACG (Army-TEC at that time) was working on a project called the Common Map Background server – CMB for short
- The AGC made an agreement to field a Remote CMB to the CTSF in the Fall of 2007

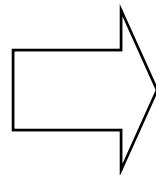
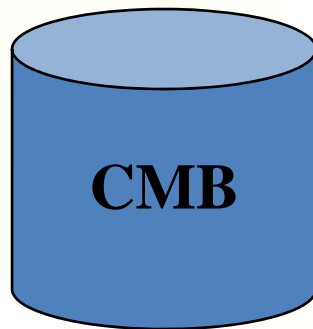


Partnership with the Army Geospatial Center

- The Remote CMB makes it possible to generate large File GeoDBs for a given AOI in a matter of hours instead of days or weeks
- Unit G-2/S-2s, Terrain Teams, Aviation Organizations and many others have realized the benefits of this service.
- The following slides are courtesy of Todd Blyler, AGC, CMB Team Lead

Common Map Background (CMB) Overview

The Common Map Background Tool is designed to provide users with the ability to acquire, manage and distribute custom datasets for various types of geospatial raster data. The CMB tool currently supports most standard ESRI supported raster data formats.



Common Map Background

Custom Software Tool

The CMB is a custom ArcMAP tool designed to dramatically reduce the time and expense required for data users to acquire, manage and distribute geospatial data by:

- Generating A.TOC files for RPF datasets
- Creating ESRI Raster Catalogs
- Copying data to distribution media
- Allowing for the creation of Point-to-Source Raster Catalogs
- Supporting the use of ESRI File Geodatabases
- Managing RPF frame metadata

Common Map Background

Supported Products

- NGA CADRG – GNC, JNC, ONC, TPC, JOG, TLM, CG
- NGA CIB - 1,5 and 10 meter
- NGA DTED- 0,1,2, Shaded Relief Images
- NGA SRTM, SRTM-VF, Shaded Relief Images
- **NGA ADRG**
- NaturalView Imagery (MrSID format)
- **USGS DOQQ and DRG**

Note: The Remote CMB server at the CTSF has limited drive capacity. Data not commonly used across the Battle Command Architecture is not included. These data types are annotated in **RED**.

Remote CMB Server

- The CMB software and library has been supplied to the CTIS Program for inclusion on the DTSS-Base deployed to the Army Geospatial Planning Cell (GPC) sites and The National Geospatial Intelligence College (NGC).
- **The Central Technical Support Facility** (CTSF) at Ft. Hood has received a stand-alone Remote CMB Server to support the digital map requirements of Army Battle Command Systems. Systems supported include FBCB2, MCS...
- Updates currently sent on firewire drives quarterly



The CMB Team

AGC Operations Division

- **Data Dissemination: Source Acquisition Team**

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- **Development: Techniques & GIS Applications Team**

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Major Impacts and Events

- Loss of the resident NGA Geospatial Analyst
- Recent decision by III Corps to close the III Corps Map Warehouse facility at Fort Hood
- Steady increase of geospatial products support request through the CTSF

The Road Ahead

- The CTSF Leadership is addressing future personnel requirements to backfill the NGA position
- Working with the “University XXI Program” to develop an online GIS server to deliver tailored products directly to C4ISR program developers
- Continuing to offer training to units on how to establish RMF and DLA accounts to alleviate some of the issues created with the closing of the Ft. Hood Map Warehouse

Conclusions

- The CTSF GIS Program will continue to provide timely and relevant data to the Warfighter
- The CTSF has become a conduit for data, information and training
- Educating our customers, primarily the Warfighter, on available resources is key for acquiring critical data and information



CTSF P.O.C's

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Questions