GIS Overview
U.S. Army National Training Center
Fort Irwin, CA

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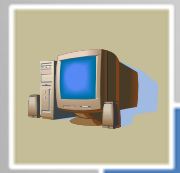
G3 Integrated Training Area Management
Engineering and Environment, Inc.

Primary GIS Data Stewards

- Garrison
  - DPW Engineering/Facilities (CADD)
  - DPW Master Planning
  - DPW Environmental
- Mission
  - **G3 ITAM Office**
  - G3 Strategic Plans Office
  - Military units (a variety of military apps)

ITAM GIS Infrastructure



Hardware

- Servers/Workstations
  - (2) 64-bit HP Database and Web/SharePoint servers
  - (2) 32-bit Application and SAN Storage servers
  - (6) 64-bit HP Quadro-core workstations
- GPS Units
  - (2) Trimble GeoXT and (1) Trimble GeoXH handhelds
  - (1) Xplore tablet field workstation
  - Garmin GPS72 handhelds
- Plotters/Printers
  - (1) HP 5500ps 60" plotter
  - (1) HP Z6100ps 60" plotter
  - (1) HP 1055cm 36" plotter
  - (1) Xerox WorkCentre Pro C3545 multifunctional printer/copier for tabloid mapping

Software

- ArcGIS
  - Server Enterprise Advanced
  - ArcSDE
  - ArcGIS Workstation
  - ArcPad and ArcPad Developer
  - ArcGIS Desktop
    - ArcView
    - ArcEditor
    - ArcInfo
  - Extensions:
    - 3D Analyst
    - Spatial Analyst
    - Geostatistical Analyst
    - Military Analyst
    - MOLE
    - Publisher
- SQL Server 2005 (64-Bit)
- SharePoint Portal Services 3.0

Networking

- File sharing
  - Standard Installation Data shapefiles/rasters
  - PDF maps
  - "NTC's Greatest Hits"
  - Falconview data
- Hosting
  - File/drive space for other units
  - SharePoint Portal
  - ArcGIS map services

GIS Data Holdings

- Airspace Management (internal and external to the installation)
- Buildings and Facilities (downrange and cantonment)
- Climate & Environmental (soil, vegetation, weather stations, air quality)
- Communications (antennas, fiber-optic network)
- Topography & Hydrologic
- Imagery (satellite, fixed-wing)
- Land Ownership & Land Use
- Land Surface (elevation, slope/aspect)
- Military Operations & Maneuver Data
- Range Safety (static ranges, SDZ, Explosive Danger Zones)
- Transportation (roads, landing strips/pads, rail)
- Utilities (electricity, water & fuel lines)

IGI&S Data Matrix identifies the proponent and SME for each data layer

GIS Data Acquisition

- **Internally Created Data**
  - In-house GPS data collection
  - Coordinates provided by military units & range staff
  - 'Crayon Sketches' from military units & range staff
  - Contracted (Imagery, LIDAR)
- **Installation and DOD Sources**
  - DPW (Archeology, Natural Resources, Master Planning)
  - NTC & DOD Contractor Project Data (e.g. fiber, ordnance marking)
  - FalconView Data Set
  - SRP Regional Support Center
  - Army Corps of Engineers (Sacramento District & Topographic Engineering Center)
- **Other Sources**
  - Legal & gov't documentation
  - Valid web sources (USGS, NRCS, BLM, State of CA)
  - Legacy data from NGA & MDEP
  - ESRI base data

GIS Customer Support

Products:

- Digital and hardcopy maps
  - Average of 1300 standard maps per month
  - Average of 25 special map projects per month
- Downrange facility planning and design
- Land surface analysis – viewsheds, LOS, slope, flow accumulations, erosion modeling
- Range support – SDZ and Explosive Danger Zone calculations, range modernization
- Situational awareness products
- Underground utility tracking (dig permit process)

Main Customers:

- NTC Stationed Units – maps for specific training activities
- Rotational Units (3000-5000 military personnel monthly) - standard map products
- NTC Agencies (G3, DPW, Emergency Services) – visualization and planning
- Off-site Contractors – construction
- DoD and other agencies - research & development