

LEVEL ✓

③

AD A 076802

Research Memorandum 74-14 ✓

**AN INDUCTIVE TAXONOMY OF
COMBAT INTELLIGENCE DATA**

Samuel M. Patten
Syracuse University Research Corporation

DDC
RECEIVED
NOV 15 1974
RECEIVED
E

SYSTEMS INTEGRATION & COMMAND/CONTROL TECHNICAL AREA

DDC FILE COPY



This document has been approved
for public release and sale; its
distribution is unlimited.

U. S. Army

Research Institute for the Behavioral and Social Sciences ✓

December 1974 ✓

79 11 13 373

**BLANK PAGES
IN THIS
DOCUMENT
WERE NOT
FILMED**

DISPOSITION FORM

For use of this form, see AR 340-15, the proponent agency is TAGCEN.

REFERENCE OR OFFICE SYMBOL

SUBJECT

PERI-TP

Clearance and Transmittal of Reports to DTIC

TO DDC-DAA-1
ATTN: Mr. Schrecengost

FROM ARI Rsch Pub Group

DATE 8 Nov 79

CMT 1

Ms Price/48913

*For the Schrecengost +
See 5c*

1. The reports listed on Inclosure 1 are approved for public release with unlimited distribution (50 numbered ARI Research Memorandums, 74-1 thru 76-30).
2. These are among the previously unrecorded ARI reports which you identified to us 22 June 1979 as not in your retrieval system. The accompanying box contains at least one copy of each report for your retention and reproduction.

1 incl
List of reports, 1974-76

Helen S. Price

HELEN S. PRICE
Research Publications Group
Army Research Institute

Box 4

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DDC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/_____	
Availability Codes	
Dist	Avail and/or special
A	

Army Project Number

16 20062101A754

3

Intelligence Systems

9 Research Memorandum 74-14

6 AN INDUCTIVE TAXONOMY OF COMBAT INTELLIGENCE DATA

DDC PROFILE NOV 15 1979

10 Samuel M. Patten
Syracuse University Research Corporation

Robert S. Andrews, Supervisory Project Director

14 ARI-RM-74-14

Submitted by:
Cecil D. Johnson, Chief
Systems Integration & Command/Control Technical Area

11 December 1974

12 49

Approved by:

Joseph Zeidner, Director
Organizations & Systems
Research Laboratory

J. E. Uhlner, Technical Director
U. S. Army Research Institute for
the Behavioral and Social Sciences

Research Memorandums are informal reports on technical research problems. Limited distribution is made, primarily to personnel engaged in research for the Army Research Institute.

408 010

This document has been approved for public release and sale; its distribution is unlimited.

1073

AN INDUCTIVE TAXONOMY OF COMBAT INTELLIGENCE DATA

Technological advances have led to the more efficient collection of a greater variety and quantity of combat intelligence data than in the past. This development has strained the capacity of the intelligence system to process this information. To effectively handle the increased volume of data, the intelligence analyst working on specific problems must be able to selectively obtain information relevant to a specific problem without becoming bogged down in irrelevant information. To achieve an efficient information retrieval capability, whether using manual or automated procedure, it is desirable for data to be stored in a form compatible with the retrieval requirements of the intelligence analyst.

Any given data base can be organized in many alternative ways, using alternative filing structures which differ both in the categories of information used and in the level of detail on any category. For example, messages coming into an intelligence section might be categorized in terms of the message content per se or in terms of the meaning of the information. That is, a message concerning a unit sighting might be filed with other information about that unit, with cross-references to other information about the specific area, or the message might simply be filed by the category of its basic importance: (a) information with an apparently high degree of accuracy which has immediate relevance for the unit's mission; (b) information which has a low likelihood of being accurate but which, if accurate, has immediate relevance for the unit's mission; (c) information which is likely to be accurate but which has little relevance, to be saved or rerouted as appropriate; and (d) information of doubtful accuracy and little relevance.

Clearly different data-base structures may be suitable for different users, and we should not expect to find some single "best" data structure. What techniques, then, may we use to develop the appropriate data organization for a given intelligence data base? This report presents an outline of one approach to data organization, and provides the information taxonomy produced when this particular methodology was applied to one message set. While a number of information categories are unique to this particular message set, this taxonomy is expected to provide a valuable starting point for future efforts of this type.

METHODOLOGY

The methodology prescribes the necessary steps to follow in determining the categories of information in a message set. Developed on an ad hoc basis, it is similar to the descriptive approach used by biologists in developing a taxonomy of new species. The methodology focuses on the descriptive characteristics of information within the message rather than on the organization of the messages.

Having developed a set of descriptors, one can go back to the message set and categorize the messages in terms of their similarity with respect to the defined characteristics; e.g., two messages might be placed in the same category in the data structure if they contain information about movement of enemy units of a certain type. This use of the information characteristics in developing a data structure will be explored in a separate report. Here we will refer to the developed set of characteristics as a "taxonomy" of the messages although, strictly speaking, we are obtaining a taxonomy of the information within the messages.

The methodology was applied to 96 reports from the files of the 28th (U.S.) Infantry Division, December 1944. The following procedure was used to obtain a set of characteristics which defines these messages:

- Step 1:
 - a. Take a sentence of text.
 - b. Isolate the nouns (including gerunds).
 - c. Eliminate duplications, proper nouns and place names.
 - d. List the remaining nouns as tentative descriptors, arranged horizontally across the page.

- Step 2:
 - a. Take the next sentence.
 - b. Repeat the procedures of Step 1.
 - c. Compare the new list with the results of Step 1.
 - d. Place those which are closely related in meaning to words resulting from the analysis of Sentence 1 under those words. Add the remainder as a horizontal extension of the words in Sentence 1. These are all tentative Descriptors.

- Step 3: Continue the above process with succeeding sentences.

- Step 4: When there are 4-5 descriptors in any column, select the general term which most closely describes the specific terms (descriptors) in the column. This general term becomes the column heading and is called a Descriptor Category.

- Step 5: Continue Steps 2 and 4 above, adding descriptors and descriptor categories as necessary.

- Step 6: Study the descriptor categories to determine which ones are the most closely related. Rearrange columns to place descriptor categories which are most closely related side by side.
- Step 7: Study the closely related descriptor categories (groups, clusters), to determine whether there is a more general term which will embrace most of the categories in each cluster. If there is, group the affected categories under the appropriate term, which designates a Descriptor Class.
- Step 8: Continue Steps, 1, 2, 4, 6, and 7 above.
- Step 9: If any descriptor category gets much longer than the others, examine it closely to determine whether it may be logically subdivided into two or three smaller categories.
- Step 10: If subdivisions of descriptor categories are made, examine them to determine whether they should be retained in the same descriptor class as the descriptor category from which they were derived. If not, transfer them to another class, or temporarily let them remain separate, unclassified categories.
- Step 11: If any descriptor category fails to accumulate more than four or five descriptors, examine it closely to determine whether it is really part of another category. If so, transfer its descriptors to the category which can best embrace them.
- Step 12: Examine the descriptors in each category and rearrange them in some logical order; e.g., ascending or descending order, parts under the whole or alphabetically.
- Step 13: Examine descriptors to determine their relationship, if any, to categories other than their own, starting first with categories within the same descriptor class. Determine the relative value of the descriptor to each descriptor category. If it can be determined that a descriptor is of more value to a category other than the one to which it is now assigned, transfer it to the category to which it contributes most. Then record the relative contributions the descriptor makes to each category to which it makes a significant contribution.

- Step 14: Repeat Step 13 for Descriptor Categories with respect to Descriptor Classes.
- Step 15: When Step 8 reaches the point of diminishing returns and continued analysis of sentences of text results principally in repetition of descriptors, descriptor categories, and descriptor classes, discontinue further analysis of new material on the subject matter at hand.
- Step 16: Review the organization of material resulting from the above and make such changes as may be necessary to enhance its capabilities for use as a labeling system in computer storage and retrieval of qualifying and quantifying data.

INDUCTIVE TAXONOMY

Applying the procedures described above to the messages in the data base (Appendix) led to the identification of the information characteristics listed below. These characteristics define a taxonomy of the information in the messages and may be used as the basis for developing a taxonomy of the messages themselves, which may in turn serve as the structure for the organization of a tactical intelligence data base.

Noun Form

Primary information content in messages is conveyed by the nouns. Therefore the descriptive taxonomy categorized noun forms taken from the 96 message data base. Overlaps between certain categories allow some to be collapsed into others. On the other hand, some categories prove to be too broad and have to be divided into categories of smaller scope.

Area of Operations

- . Area
- .. Country
- .. Part

- . Terrain
- .. Fortifications
- ... Obstacles
- Mine Fields
- Center
- Shape
- Wire
- Concertina
- Rivers (See Physical Characteristics)
- Roadblocks
- ... Pillboxes

- .. Cultural Features
- ... Inhabited Areas
- Cities
- Towns
- Villages
- Buildings
- Farmhouses
- Churches
- Physical Condition
- Ruins

- ... Rail Network
- Branch Lines
- Main Lines
- Marshalling Yards
- Sidings
- Tracks
- ... Road Network
- Bottlenecks
- Crossroads
- Intersections
- Road Junctions
- Bridges
- Foot
- Length
- Width
- Composition
- Railroad
- Vehicular
- Load Limits
- Width
- Length
- Surface
- Paved Roads
- Tracks
- Unpaved Roads
- Width
- ... Footpaths

- .. Physical Characteristics
- ... Vegetation
- Woods
- Coniferous Forests
- Deciduous Forests
- Grassy Pastureland
- ... Ground Forms
- Hills
- Valleys
- Steep Slopes
- ... Soil Condition
- Frozen
- Muddy

- ... Trafficability (for vehicles and tanks)
- Impassable
- Passable
- ... Water
- Rivers
- Streams
- Banks (side)
- Beds
- Current Velocity
- Depth
- Fords
- Width

- . Weather
- See Direction and Weather

Battlefield Illumination

- . Flares
- . Light from fires
- . Searchlights
- .. Searchlight Reflectors

Battlefield Situation

- . Enemy Forces
- .. Divisions
- ... Composition
- Division Artillery
- Battalions
- Field Artillery
- Batteries
- Anti-aircraft Artillery
- Batteries
- ... Regiments
- Battalions
- Companies
- Platoons
- .. Numbers and Types
- ... Infantry
- Panzer
- Paratroop (Parachute)
- SS Panzer
- Volksgrenadier
- .. Personnel Strength
- .. Logistical Situation
- ... Shortage or Weaknesses
- Equipment
- Supplies
- ... Strengths
- .. Overall Personnel Strength
- .. Personality and Experience of the Senior Commander
- .. Tactical Operations (See Tactics)
- .. Tactical Situation

- . Friendly Forces
- .. Divisions
- ... Composition
- Division Artillery
- Battalions
- Field Artillery
- Batteries
- Anti-aircraft Artillery
- Batteries
- ... Regiments
- Battalions
- Companies

Battlefield Situation (con't)

- ... Numbers and Types
 - Airborne
 - Armored
 - Infantry
- ... Personnel Strength
- .. Logistical Situation
- ... Shortage or Weaknesses
 - Equipment
 - Supplies
- ... Strengths
- .. Enemy Attempts
- .. Enemy Presence
- .. Enemy Pressure or Resistance
- .. Overall Personnel Strength
- .. Tactical Operations (See Tactics)
- .. Tactical Situation

- . Terrain (See Area of Operations)

- . Weather (See Direction and Weather)

Combat Effectiveness

- . State of Training
- .. Individual
- .. Unit
- .. Combined Arms
- .. Maneuvers and Field Exercises

- . Personnel Strength
- .. Casualties
- .. Replacements
- ... Quality of Replacements

- . Quality of Units
- . Status of-
 - .. Discipline
 - ... Saluting
 - .. Esprit de Corps
 - .. Equipment
 - .. Supplies
 - .. Morale
 - .. Self Confidence

Communications

- . Communications Deception (See below)
- . Communications Interruptions
 - .. Radios Out
 - .. Wire Lines Out
 - ... Capability for Restoration
 - ... Time for Restoration

- . Communications Security
 - .. Communications Deception
 - ... False Messages
 - ... False Radio Networks
 - ... False Radio Stations
 - .. Cryptographic Security
 - .. Physical Security
 - .. Transmission Security
 - ... Radio Silence

- . Messages
 - .. Oral
 - .. Telephonic
 - .. Written
 - ... Electrically Transmitted
 - ... Messenger Delivered

- . Orders (as for messages)
- . Reports (as for messages)

Directions (of the wind or of movement)

- . North (N)
- .. North-Northwest (NNW)
- .. Northwest (NW)
- .. North-Northeast (NNE)
- .. Northeast (NE)
- . East (E)
- .. East-Northeast (ENE)
- .. East-Southeast (ESE)
- .. Southeast (SE)
- . South (S)
- .. South-Southeast (SSE)
- .. South-Southwest (SSW)
- .. Southwest (SW)
- . West (W)
- .. West-Southwest (WSW)
- .. West-Northwest (WNW)

Intelligence

- . Collection of Information
- .. Sources
 - ... Aerial Photos
 - ... Civilians
 - Local
 - Enemy
 - Escapees
 - Line Crossers
 - Police
 - ... Documents
 - ... Orders
 - ... Reports
 - ... Studies
 - ... Enemy Activity
 - ... Maps
 - ... Sheets
 - ... Soldiers
 - Enemy
 - Deserters

Intelligence (con't)

- POWs
- Friendly
- Escapees
- Evaders
- ... Rumors
- ... Statements
- ... Terrain (See Terrain)
- ... Weather (See Weather)

- .. Agencies
- ... Aerial Observers
- Observers other than pilots
- Military Aircraft (Planes)
- Heavy Bomber Crew
- Observation Aircraft Crew
- Divarty Air Observation Post Observer
- Reconnaissance Aircraft Crew/Equipment
- Photo
- Visual
- Pilots of Single Seated Aircraft

- ... Units (See Friendly Military Organization)
- Companies
- Artillery Forward Observers
- Listening Post Personnel
- Observation Post Personnel
- Patrols
- Battalions
- Listening Posts
- Observation Posts
- Patrols
- Regiments (Combat Commands)
- Observation Posts
- Pioneer Platoons
- Division
- Armored Cavalry Squadron
- G2
- G2 Air
- Interrogation of POW (IPW) Team
- Military Police
- Division Artillery
- Division Artillery Battalion Forward Observers
- Division Artillery Observation Posts
- Air
- Ground
- Corps
- Armored Cavalry Regiment
- Corps Artillery
- Corps Artillery Battalions
- Forward Observers
- Observation Posts
- Aerial
- Ground
- Corps Artillery Observation Battalion
- Observation Posts
- G2
- G2 Air
- Weather Detachment
- Army
- G2
- Agents
- G2 Air
- Supporting Tactical Air Force
- Photo Reconnaissance
- Visual Reconnaissance
- Armed Reconnaissance
- Army Group

- G2
- Agents
- G2 Air
- Supporting Tactical Air Command
- Photo Reconnaissance
- Visual Reconnaissance
- .. Dissemination
- .. Form
- ... Estimate
- Oral
- Written
- ... Intelligence Annexes
- ... Intelligence Summaries
- ... Reports
- Order of Battle Reports
- Periodic Reports
- Special
- Spot
- ... Situation Maps
- .. Means
- ... Electrical
- Radio
- Telephone
- Teletype
- ... Oral
- ... Mail
- ... Messenger

- .. Enemy Order of Battle
- .. Deployment
- .. Dispositions
- ... Troop
- .. Identifications
- ... Use
- .. Strength
- ... Great

- .. Indications (Signs)
- .. Abrupt Changes in Enemy Routine
- .. Additional Units in Reserve or Reinforcing Positions
- .. Changes in Enemy Discipline
- .. Changes in Enemy Military Bearing
- .. Changes in Enemy Morale
- .. Changes in Enemy Uniforms
- .. Changes in Enemy Use of Terrain(Ground Patterns)
- .. Outpost Personnel
- ... Greater Confidence
- ... More in Evidence
- .. New Troop Units in Contact
- .. Unusual Vehicular Activity, including Tanks

- .. Information Item
- .. Interrogation
- .. Debriefing
- ... Observations
- .. Statements

Intelligence (con't)

- . Security
- .. Counterreconnaissance
- .. Counterintelligence
- .. Communications (See Communications)
- ... Cover and Deception
- ... Radio Silence
- ... Secure Codes (Cryptographic)
- .. Cover and Deception
- .. Local
- ... Guards
- Guard Posts
- ... Listening Posts
- ... Observation Posts
- ... Outposts
- ... Patrols
- .. Physical
- ... Document
- ... Equipment
- ... Personnel

Location

- . Area
- .. Assembly
- .. General
- .. Regimental

- . Command Post
- .. Army
- ... Corps
- Division (See Military Organization)
- Division Artillery
- Regiment
- Battalion
- Company
- Battery
- Platoon

- . Bend (in a river)
- . Center

- . Coordinates
- .. Map
- ... Multiple Locations
- Area
- Line
- ... Single Location

- . Distance
- . Front
- . Front Lines
- . Line of Contact
- . Lines
- . Location

- . Machine Gun
- . On Line
- . Overhead

- . Part
- .. East
- .. North
- .. South
- .. West

- . Pillbox
- . Points
- . Populated Area
- .. Building
- ... Church
- ... House
- .. City
- .. Town
- .. Village
- . Position
- . Radius (from a point)

- . Railroad Marshalling Yard
- . Rear
- . River Bank
- .. East
- .. North
- .. South
- .. West

- . Sector
- .. Army
- ... Corps
- Division (See Military Organization)
- Regiment
- Battalion
- Companies

- . Unit Dispositions
- . Vicinity (of)
- . Zone
- .. Army

Logistics

- . Construction
- .. Bridges
- ... Materials
- Planks
- .. Roads
- .. Troop Shelters

- . General
- .. Loads

- . Hospitalization
- .. Field Hospital
- ... Drugs
- Morphine Sedation
- .. Medical Evacuation
- ... Hospital Trains
- .. Injuries
- .. Wounds

- . Maintenance
- .. Equipment
- .. Tanks
- .. Vehicles
- .. Weapons

- . Repair
- .. Equipment
- ... Signal
- .. Tanks
- .. Vehicles
- .. Weapons

Logistics (con't)

- . Personnel Replacements
- . Shortage
- . Supply
 - .. Ammunition
 - ... Aircraft
 - Bombs
 - Machine Guns
 - Rockets
 - ... Artillery (Rounds, shells)
 - Field Artillery
 - High Explosive
 - Propaganda
 - 75mm
 - Anti-aircraft Artillery
 - Rocket Projectiles
 - .. Bombs
 - ... Explosives
 - ... Machine Guns
 - ... Mortars
 - 80mm
 - 120mm
 - ... Multiple 20mm Guns
 - ... Small Arms
 - Burp Guns
 - Pistols
 - Automatic Pistols
 - Rifles
 - Automatic Rifles
 - ... Tanks
 - Panther
 - Patton
 - Sherman
 - Tiger
 - Jagd
 - King
 - .. Clothing
 - ... Overcoats
 - Insignia
 - Uniform
 - Collar patches
 - .. Equipment
 - ... Organizational
 - Axe
 - Hammer
 - Vehicles (See Transportation)
 - Full Tracks
 - Half Tracks
 - Horse-Drawn
 - Artillery Pieces
 - Carts
 - Vehicles
 - Wagons
 - Motorcycles
 - Staff Cars
 - Tanks
 - Flame Throwing
 - Markings
 - Panther
 - Patton
 - Tiger
 - Trucks
 - 1/4 T
 - 1/2 T
 - Heavy
 - Kitchen
 - ... Personal
 - Helmet
 - .. Rations
 - ... Food
 - Pigs
 - ... Specialized
 - Aircraft (Planes)
 - Generators
 - River Crossing Equipment
 - Boats
 - Rubber
 - Bridging
 - Lumber
 - Planks
 - pontoons
 - Searchlights
 - .. POL
 - ... Diesel
 - ... Gas
 - ... Oil
 - .. Weapons (See Ammunition Supply above)
 - ... Calibers
 - . Transportation (See Transportation)
 - .. Aerial Transports
 - .. Movements
 - .. Railroads
 - .. River Barges
 - .. Vehicles
 - ... Horse-drawn
 - ... Tracked
 - Full
 - Half
 - ... Truck
 - Measurements
 - . Inches
 - . Meters
 - . Miles
 - . Numbers
 - . Single
 - . Zero (No, None)

Military Organization (con't)

- Penal Regiments(Numbered)
- Penal Battalions(Numbered)
- Penal Companies(Numbered)
- Fortress Machine Gun Battalions

- .. SS (ELITE NAZI) Units
- .. Undefined Groups
- ... Elements
- ... Enemy
- ... Formation
- ... Forces
- ... Headquarters Mess
- ... Members
- ... Men
- ... Part
- ... Pursuers
- ... Troops
- ... Unit

- . Friendly
- .. Supreme Headquarters, Allied Forces, Europe(SHAEF)
- ... Army Groups(Numbered)
- Armies(Numbered)
- Airborne Corps(Numbered)
- Airborne Corps Artillery
- Airborne Corps Artillery Groups
- Airborne Corps Artillery Battalions
- Airborne Corps Artillery Batteries
- Corps(Numbered)
- Corps Artillery
- Corps Artillery Groups
- Corps Artillery Firing Battalions
- Corps Artillery Firing Batteries
- Field Artillery Observation Battalions
- Field Artillery Observation Batteries
- Weather Detachments
- Airborne Divisions(Numbered)
- Airborne Division Artillery
- Airborne Division Artillery Battalions
- Airborne Division Artillery Batteries
- Airborne Infantry Regiments
- Airborne Infantry Battalions
- Airborne Infantry Companies(Numbered)
- Platoon
- Armored Divisions(Numbered)
- Armored Division Artillery
- Armored Division Artillery Battalions

Military Organization (con't)

Armored Division Artillery Battalions (con't)

- Armored Division Artillery Batteries
- Combat Commands (A, C, R)
- Tank Battalions
- Tank Companies
- Platoons
- Armored Infantry Battalions
- Armored Infantry Companies
- Platoons
- Infantry Divisions(Numbered)
- Infantry Division Artillery
- Infantry Division Artillery Battalions (Numbered)
- Infantry Division Artillery Batteries (Numbered)
- Infantry Regiments(Numbered)
- Infantry Battalions(Numbered)
- Infantry Companies(lettered)
- Platoons
- Heavy Weapons Companies
- Heavy Weapons Platoons
- Patrols(Numbered)

- Combat Engineer Battalions
- Anti-aircraft Artillery Battalions

- .. Headquarters
- ... Command Post
- ... Rear Echelon

- .. Headquarters Staff Sections
- ... Chief of Staff
- Personnel Officer (G1)
- Intelligence Officer (G2)
- Counterintelligence Officer
- G2 Air
- IPW Team
- Security Officer
- Operations Officer (G3)
- Logistics Officer (G4)
- ... Aide (de Camp)

Military Personnel

- . Age
- . Enemy
- .. Officers
 - ... Field Marshal
 - General
 - Colonel General
 - General(of Branch)
 - Colonel
 - Lieutenant Colonel
 - Major
 - Captain
 - Lieutenant
- .. Enlisted
 - ... Sergeant
 - Corporal
 - Private
- . Branch
 - .. Air Force
 - .. Artillery
 - ... Field
 - ... Flak
 - .. Engineer
 - .. Infantry
 - .. Navy
 - .. Panzer
 - .. Panzergrenadier
 - .. Volksgrenadier
- .. Nationality
- .. Other
 - ... Dead
 - ... Deserter
 - ... Pilots
 - ... Guards(Sentinels, Sentries)
 - ... POW
- . Friendly
 - .. Officers
 - ... General
 - Lieutenant General
 - Major General
 - Brigadier General
 - Colonel
 - Lieutenant Colonel
 - Major
 - Captain
 - First Lieutenant
 - Second Lieutenant
 - .. Warrant Officers
 - .. Enlisted Personnel
 - ... Sergeant Major
 - First Sergeant
 - Technical Sergeant
 - Staff Sergeant
 - Sergeant
 - Corporal
 - Private

- . Branch
 - .. Air Force
 - .. Armor
 - .. Artillery
 - ... AAA AW
 - ... AAA Gun
 - ... Field
 - .. Engineer
 - .. Infantry
 - .. Navy
 - .. USMC
- .. Other
 - ... Dead
 - ... Deserter
 - ... Guards(Sentinels, Sentries)
 - ... Outpost Personnel
 - ... Pilots
 - ... POW

Military Training

- . Individual Training
 - .. On-the-job training
 - .. School Training
 - ... NCO Training
- . Unit Training
 - .. Battle-weary Unit Re-training
 - .. Infiltration Training
 - .. Newly Arrived Unit Training
 - .. Newly Formed Unit Training
 - .. Physical Training (Calisthenics)

Miscellaneous Activities

- . Activity
 - . Fighting
 - . Hammering
 - . Laying Mines(Mining)
 - . Movement
 - . Saluting
 - . Woodchopping

Persons

- . Age
- . Civilians
- .. Casualties
- ... Killed
- ... Injured
- ... Wounded
- .. Employees
- .. Enemy
- .. Escapees
- .. Friendly
- .. Men
- .. Morale
- .. Nationality(National)
- .. Neutrals
- .. People
- .. Police
- .. Relatives
- .. Women

- . Soldier
- .. Enemy
- ... Branch
- ... Air Force
- Artillery
- Field
- Flak
- Engineer
- Infantry
- Navy
- Panzer
- Panzergrenadier
- Volksgrenadier

- ... Nationality
- ... Casualties
- Killed in Action(Dead)
- Missing in Action
- Noncombat Death(Dead)
- Noncombat Disease
- Noncombat Injury
- Wounded in Action

- ... Clothing
- ... Equipment
- ... Men

- ... Morale
- Poor
- Fair
- Good
- Very Good
- Excellent

- ... Status
- Deserter
- On Duty With Parent Unit
- Normal
- Special-KP
- On Special Duty Away from Unit
- Outpost Personnel
- Schools
- NCO Schools
- POW

- .. Friendly
- ... Branch
- Airborne
- Armor
- Artillery
- Anti-aircraft Artillery
- Field Artillery
- Engineer
- Infantry
- Armored Infantry
- Military Police
- ... Casualties
- Bodies
- Killed in Action(Dead)
- Missing in Action
- Noncombat Death(Dead)
- Noncombat Disease
- Noncombat Injury
- Wounded in Action

- ... Clothing

- ... Equipment

- ... Morale
- Poor
- Fair
- Good
- Very Good
- Excellent
- ... Observers
- Aerial
- Listening Post
- Observation Post
- Forward Observer

- ... Status
- On Duty With Unit
- Normal
- Special-KP
- On Special Duty Away from Unit
- Schools
- POW

Psychological Warfare

- . Delivery Means
- .. Artillery
- ... Propaganda Shells

Railroads (See Transportation)

Reconnaissance

- . Enemy Reconnaissance
- .. Aerial
- ... Aircraft
- Observation
- ME 109
- .. Ground
- ... Patrols

- . Flight
- . Friendly Reconnaissance
- .. Aerial
- ... Air Force
- Photographic
- Visual
- Bombers
- Reconnaissance Aircraft
- ... Army
- Aerial Observation Post
- Divarty Aerial Observation Post
- Visual
- .. Ground Reconnaissance
- ... Company
- Patrols

- . Mission

Sensory Perception

- . Hearing (Sound)
- .. Explosion
- .. Hammering
- .. Motor Activity
- .. Motors
- .. Noise
- .. Sawing
- . Sight (Seeing, observing, sighting, noting, visually discovering, noticing)
- .. Flash

Surveillance

- . Aerial Surveillance
- .. Air Force
- .. Army
- .. Divarty

- . Ground Surveillance
- .. Observation Posts
- ... Company
- ... Battalion
- ... Regiment
- ... Divarty

- .. Listening Posts
- ... Platoon
- ... Company

Tactics

- . Artillery
- .. Artillery Fires
- ... Artillery Barrage(See Artillery Preparation)
- ... Counterbattery Fires
- ... Harassing Fires
- Intermittent Fires
- Sporadic Fires
- ... Light Caliber Fires
- 75mm Fires
- ... Rocket Barrage

- .. Artillery Locations(See Positions)
- .. Artillery Positions
- ... Rear Areas (Well back)
- ... Forward Areas
- .. Artillery Preparation(See Artillery Barrage)
- .. Rocket Preparation

- . Attack
- .. Ambush
- .. Assault
- .. Counterattack
- .. Counteroffensive
- .. Formations
- ... Column
- .. Maneuvers
- ... Encirclement
- ... Envelopment
- Single
- Double
- ... Frontal Attack
- ... Infiltration
- ... Penetration
- ... Raid
- .. Offensive

- . Assembly Area

- . Axis of Advance

- . Battlefield Illumination(See Battlefield Illumination)
- .. Flares
- .. Searchlights

- . Boundary

- . Buildup
- . Defense
- .. Barbed Wire
- ... Concertina
- .. Ground
- .. Line of Contact
- .. Listening Posts
- .. Mine Laying
- ... Mines
- .. Observation Posts
- ... Aerial
- ... Ground
- .. Outposts
- .. Pillboxes
- .. Sectors
- .. Strong Points
- ... Company
- Platoon

Tactics (con't)

- . Demolitions
- .. Explosives

- . Dispositions

- . Lines

- . Movement(Move)

- . Patrols

- . Position

- . Reinforcements

- . Reserves

- . Results

- . Retirement

- . Retreat

- . Withdrawal

- . Zone
- .. Army

Time

- . Date
- .. Day
- .. Hour
- .. Minutes
- .. Month
- .. Year

- . Daylight
- . Darkness

- . Duration
- .. Minutes
- .. Hours
- .. Days
- .. Months
- .. Period
- .. Years

- . Frequency

- . Future
- .. Tonight
- .. Tomorrow
- ... Tomorrow Morning
- ... Tomorrow Noon
- ... Tomorrow Afternoon
- ... Tomorrow Evening
- ... Tomorrow Night
- ... Day After Tomorrow
- ... Next Week
- ... Next Month
- ... Next Year

- . Moon
- .. Moonrise
- .. Moonset

- . Past
- .. Yesterday
- .. Last Week
- .. Last Month
- .. Last Year
- .. Several Days Ago

- . Present
- .. Today
- .. This Morning
- .. This Noon
- .. This Afternoon
- .. This Evening
- .. Tonight (See Future)

- . Twilight
- .. Civil
- ... Beginning of Morning Civil Twilight (BMCT)
- ... End of Evening Civil Twilight (EECT)
- .. Nautical
- ... Beginning of Morning Nautical Twilight (BMNT)
- ... End of Evening Nautical Twilight (EENT)

Transportation

- . Aerial Transportation
- .. Divarty Air Observation Post
- .. Observation Aircraft
- .. Reconnaissance Aircraft
- .. Transport Aircraft

- . Changes
- .. Decrease
- .. Increase

- . Land Transportation
- .. Foot Transportation
- ... Double-timing
- ... Marching
- ... Wading
- ... Walking
- .. Vehicular Transportation
- ... Horse-drawn Transportation
- Artillery Pieces
- Carts
- Wagons
- Vehicles
- ... Motor Transportation
- Full Tracks
- Half Tracks
- Motorcycles
- Staff Cars
- Trucks
- 1/4 T Trucks
- (Heavy) Trucks
- Convoys
- ... Movements
- Aerial
- Vehicular
- Water

Transportation (con't)

- ... Railroad (Railways)
- Locomotives
- Steam Locomotives
- Railroad Stations
- Railroad Tracks
- Branch Lines
- Lateral Lines
- Main Lines
- Railroad Marshalling Yards
- Railroad Sidings
- Railroad Rolling Stock
- Railroad Passenger (Troop) Cars
- Railroad Flat Cars
- Railroad Goods (Freight) Wagons
- Carloads
- Type Trains
- Freight Trains
- Hospital Trains
- Troops (Passenger) Trains
- ... Tanks (See Also Equipment)
- ... Markings
- ... Panthers (German)
- ... Pattons (US)
- ... Shermans (US)
- ... Tigers (German)
- Jagd Tigers
- King Tigers
- ... Tracked Vehicles

- . Loads
- .. Loading
- .. Unloading

- . Traffic

- . Water Transportation
- .. Barges
- .. Boats (See River Crossing Equipment-Logistics)
- ... Rubber Boats
- .. Ferries
- .. Personnel
- .. Railroad
- .. Vehicular (Other than Railroad)

Weapons Firing

- . Air Force Firing
- .. Bomb Dropping
- .. Machinegun Firing

- . Artillery Firing
- .. Anti-aircraft Firing
- ... Aerial Target
- .. Field Artillery Firing
- ... Light Artillery
- 75mm Gun
- ... Medium Artillery
- ... Heavy Artillery
- 14-in Railway Gun
- ... Rocket

- . Change
- .. Increase
- .. Decrease

- . Machinegun Firing(Ground Mount)

- . Mortar Firing
- .. 80mm
- .. 120mm

- . Rate of Fire
- .. One burst per fire minutes

- . Small Arms Firing
- .. Automatic Pistol Firing
- .. Burp Gun Firing
- .. Rifle Firing
- .. Unidentified Small Arms Firing

- . Tanks Firing
- .. Panther
- .. Patton
- .. Sherman
- .. Tiger
- ... Jagd
- ... King

- . Type of Ammunition
- .. Bullet
- ... Machinegun
- ... Small Arms
- Pistol
- Rifle
- .. High Explosive Shell(Round, Projectile)
- ... Anti-aircraft Artillery
- ... Field Artillery
- ... Mortar
- ... Rocket
- .. Propaganda Shell
- ... Field Artillery

- . Type of Firing
- .. Artillery
- ... Anti-aircraft Artillery
- Destruction
- ... Field Artillery
- Barrage
- Counterbattery
- Destruction
- Harassing
- Preparation
- .. Small Arms
- ... Destruction
- ... Harassing
- .. Machinegun
- ... Destruction
- ... Harassing

Weather

- . Forecast(Future)
- .. Extended(Long) Range Forecast
- ... 7 Day Forecast
- ... 30 Day Forecast
- ... 60 Day Forecast
- .. Short Range Forecast
- ... 6 Hour Forecast
- ... 12 Hour Forecast
- ... 24 Hour Forecast

- . Past(Climate)

- . Present
- .. Bad
- .. Clouds
- ... Cover
- Cloudy(Overcast)
- Partly Cloudy
- .. Good
- .. Poor
- .. Precipitation
- ... Amount(In Inches of Rain Equivalent)
- Continuity
- ... Duration
- ... Hail
- ... Mist
- ... Probability
- ... Rain
- ... Showers
- Rainshowers
- Sleetshowers
- Thundershowers
- ... Sleet
- ... Snow
- .. Temperature
- ... Cold
- ... Cool
- ... Hot
- ... Warm
- ... Temperature Range
- Maximum Temperature
- Minimum Temperature
- ... Wind Chill Factor
- .. Visibility
- ... Limits(Distance one can see at a given time)
- ... Range(Change in limits in forecast period)
- .. Wind
- ... Direction(See Directions)
- Change in Direction
- ... Velocity(in mph or km per hour)
- Change in Velocity(speed)
- Gusts(Sudden short term increases in velocity)

Activity Verb Form

The methodology and taxonomy presented above focus on the nouns in the message text, yielding a taxonomy which is based on the characteristics of the content (as opposed to the meaning) of the message text. A data base structure which was constructed by putting messages into the same "files" or categories if they were similar in message content would have some shortcomings; messages of similar content might have radically different meaning. For example, two messages would appear similar in content if they both referred to "self-propelled artillery" and "bridges", but one might be discussing the travel of the artillery over the bridge while the other might refer to the shelling of the bridge by the artillery. To properly differentiate between the messages, it is necessary to consider the verbs as well as the nouns in the text. The activity verbs from this message set (Appendix) are presented in this section.

<u>Action Verbs</u>	<u>Forms most used</u>
Abandon	Abandoned Abandoning
Appear(to be)	Appeared(to be) Appearing(to be)
Approach	Approached Approaching
Arrest	Arrested Arresting
Arrive	Arrived Arriving
Assemble	Assembled Assembling
Balance	Balanced Balancing
Become	Became Becoming
Build	Built Building
Build Up	Built Up Building Up
Call Back	Called Back Calling Back
Capture	Captured Capturing
Carry	Carried Carrying
Cease	Ceased Ceasing
Change	Changed Changing
Chop	Chopped Chopping
Circle	Circled Circling
Circle(over)	Circled(over) Circling(over)
Come	Came Coming
Continue	Continued Continuing
Cross	Crossed Crossed Over Crossing
Decrease	Decreased Decreasing
Deliver	Delivered Delivering
Dig	Dug Digging
Disclose	Disclosed Disclosing
Discover	Discovered Discovering
Do	Done Did Doing

<u>Action Verbs</u>	<u>Forms most used</u>
Double Time	Double-timed Double-timing
Equip	Equipped Equipping
Escape	Escaped Escaping
Find	Found Finding
Fire	Fired Firing
Fly(over)	Flew(over) Flying(over)
Follow	Followed Following
Forward	Forwarded Forwarding
Go	Going out Going across
Hammer	Hammered Hammering
Harass	Harassed Harassing
Hear	Heard Hearing
Identify	Identified Identifying
Indicate	Indicated Indicating
Infiltrate	Infiltrated Infiltrating
Increase	Increased Increasing
Load	Loaded Loading
Maintain	Maintained Maintaining
Make	Made Making
Mine (Lay mines)	Mined Mining
Move	Moved Moving
Need	Needed Needing
Note	Noted Noting
Notice	Noticed Noticing
Observe	Observed Observing
Occupy	Occupied Occupying
Overhear	Overheard Overhearing
Patrol	Patrolled Patrolling

<u>Action Verbs</u>	<u>Forms most used</u>	<u>Action Verbs</u>	<u>Forms most used</u>
Pass	Passed Passing	Throwing(back)	Thrown(back) Throwing(back)
Penetrate	Penetrated Penetrating	To Be	Is, Was Are, Were
Pull	Pulled Pulling	Train	Trained Training
Pull out	Pulled out Pulling out	Unload	Unloaded Unloading
Recall	Recalled Recalling	Wade	Waded Wading
Receive	Received Receiving	Walk	Walked Walking
Reconnoiter	Reconnoitered Reconnoitering	Withdraw	Withdrawn Withdrawing
Relieve	Relieved Relieving		
Repair	Repaired Repairing		
Report	Reported Reporting		
Repulse	Repulsed Repulsing		
Request	Requested Requesting		
Restart	Restarted Restarting		
Return	Returned Returning		
Say	Said Saying		
See	Saw Seen Seeing		
Shoot	Shot Shooting		
Sight	Sighted Sighting		
Start	Started Starting		
State	Stated Stating		
Stop	Stopped Stopping		
String	Strung Stringing		
Surround	Surrounded Surrounding		
Take	Took Taking		
Tell	Told Telling		

APPENDIX

	Page
Message Data Base--96 reports from the files of the 28th (U.S.) Infantry Division, December 1944	25

Message Nr 1

10 December 1944 (10 Dec '44) 28th Infantry Division(28th Inf Div)

The 3d Battalion(Bn), 109th Infantry(Inf) Regiment(Regt) reports(rpts) that a deserter captured(capt) in the vicinity of(vic) coordinates 9241 at 0540 hours(5:40AM) is from the 1st Bn, 915th Regt, 352d Volksgrenadier (VG) Div. The prisoner of war (POW) stated his company is located in the vicinity of(vic) BIESDORF(9743).

Message Nr 2

10 December 1944 28th Inf Div

The 3d Bn, 112th Inf Regt reports(rpts) hearing sounds of hammering and wood chopping vic (coordinates) 886713 at 0730(hours)(7:30AM)

Message Nr 3

10 Dec '44 28th Inf Div

3d Bn, 110th Inf(Regt) reports(rpts) that a patrol observed concertina wire vic (coordinates)855583-862580 at 0910(hours)(9:10AM).

Message Nr 4

10 Dec '44 28th Inf Div

3d Bn, 110th Inf reports(rpts) it observed an 8-man enemy patrol vic 851581 at 1115(hours)(11:15AM). Enemy(En) withdrew(WD) eastward. Enemy(En) crossed river in a rubber boat which was found vic 854584.

Message Nr 5

10 Dec '44 28th Inf Div

3d Bn, 110th Inf(Regt) reports(rpts) that between 0900-1130(hours) it sighted 15 horse-drawn vehicles and 1 staff car between(coordinates) 890570 and 897562.

Message Nr 6

10 Dec '44 28th Inf Div

3d Bn, 112th Inf(Regt) reports(rpts) it observed a 7-man enemy(En) patrol vic(coordinates) 895722 at 1230(hours). It called for artillery (arty, field artillery) fire. It could not observe the effects of the arty fire.

Message (Msg) Nr 7

10 Dec '44

28th Inf Div

28th Inf Div Interrogation of Prisoner of War (IPW) Team(Tm)
reports(rpts) civilians sighted enemy(En) roadblocks vic(coordinates)
974422 and 978421 on 6 Dec.

Message(Msg) Nr 8

10 Dec '44

VIII(8th) Corps Weather Detachment(Det) forecast for the period 102400
(Midnight - 10/11th)-112400(midnight - 11/12th).

Overcast with continuous snow tonight.
Cloudy with frequent snow showers tomorrow.
Visibility poor tonight; 3 miles tomorrow.
Winds (from the) south at 25 mph; gusting to 40 mph.
Winds shifting from south to west-southwest(WSW) tomorrow morning.
Temperature (Range): 29-35 degrees Fahrenheit.

Msg Nr 1

11 Dec '44

28th Inf Div

VIII(8th) Corps Weather Detachment forecast:

Forecast Period: 110800 Dec to 170800 Dec
Forecast Area : Headquarters(Hq) VIII Corps(Bastogne) and surrounding
area out to a radius of 50 miles(From Bastogne directly
east to the Our River in the sector of the 3d Bn
110th Inf is about 20 airline miles).

11th Dec: Cold and cloudy. Snow and sleet showers. Visibility poor
to fair.
Winds moderate (from) southwest(SW) with gusts.
Maximum(Max) temperature: 32 degrees at 1400(2 PM).
Minimum(Min) temperature: 28 degrees at 2400(Midnight 11/12).

12th and 13 Dec: Partly cloudy to cloudy on the 12th.
Snow and sleet on the 13th for a rainfall equivalent
of .2 to .3 inches.
Continued cold but with decreasing winds.
Temperature(Temp)(Range): 26-34 degrees F.

14-17 Dec: 15-18 hours of precipitation throughout the period to
give a rainfall equivalent of .2 to .4 inches
Temp: 25-39 degrees F.

Msg Nr 2

11 Dec '44

28th Inf Div

G2 Air (Intelligence Officer in charge of aerial reconnaissance) at VIII(8th) Corps announced that all (Air Force) aerial reconnaissance (recon) for the day is cancelled because of bad weather.

Msg Nr 3

11 Dec '44

28th Inf Div

4th Inf Div rpts highly intelligent prisoner of war(POW) captured(capt) while on patrol vic ECHTERNACH(1421) on 7 Dec stated his family had written him that people in Frankfurt am Oder(East of Berlin) expect peace overtures to the United States and the United Kingdom before New Year's in an attempt to stop the Russian advance east of the Oder.

Msg Nr 4

11 Dec '44

28th Inf Div

3d Bn, 110th Inf rpts seeing a 6-man German patrol walking towards the Our River vic 871541 at 1100. Observers did not fire, but followed the enemy patrol. Tracks led to the river vic 875543. They could not determine whether the enemy patrol used a boat to re-cross the river or waded. They kept watch in the area until 1300(1 PM)(1300-1200 = 1 PM) but did not see any more activity. The current in the river was swift and the water level with the banks. Observers returned to their unit at 1400(2 PM).

Msg Nr 5

11 Dec '44

28th Inf Div

1st Bn, 110th Inf(Regt) reports(rpts) one of its patrols discovered a rectangular minefield the center of which is at (coordinates) 843628.

Msg Nr 6

11 Dec '44

28th Inf Div

28th Inf Div Interrogation of Prisoner of War Team(IPW Tm) rpts that reliable civilians state:

1. NIEDERGECKLER(9753) and GEICHLINGEN(9451) are full of German soldiers.
2. There is a footbridge 30 meters long and one meter wide vic 895523.
3. Heavy mining activity(many mines being laid) vic BAULER(9052).

Msg Nr 7

11 Dec '44

28th Inf Div

106th Inf Div rpts it observed a 6-man enemy(En) patrol vic (Coordinates) 0390 at 2025(hours)(8:25 PM).

Msg Nr 8

11 Dec '44

28th Inf Div

106th Inf Div rpts deserter who surrendered 9 Dec says he is from 15th Army Hq which recently moved from the Rotterdam area to a location in the Cologne-Bonn-Dueren area. Rumor at his Hq is that Field Marshal von Rundstedt has ordered withdrawal to the East bank of the Rhine because shortage of reserves makes defense west of the Rhine after the first of the year no longer feasible.

Msg Nr 9

11 Dec '44

28th Inf Div

4th Inf Div rpts enemy(En) small arms(rifle and pistol) fire in northern part of sector(vic ECHTERNACH) at 1400(hours)(2 PM). About 50 rounds (shells or projectiles) each of 8 cm(80 mm) and 12 cm(120 mm) mortar fire were received during the day.

Msg Nr 10

11 Dec '44

28th Inf Div

Summary of En activity along 28th Inf Div front for 11 Dec:

1. All units reported a quiet day.
2. Scattered small arms and mortar fire were received all along the front.
3. 11 rounds(shells, projectiles) of light artillery were also received.

Msg Nr 11

11 Dec '44

28th Inf Div

VIII Corps Weather Detachment forecast for 112400-122400(Midnight 11/12th Dec to midnight 12/13the Dec):

Cloudy and cool on the 12th, with continuous rain in the morning, changing to intermittent rain in the afternoon.

Visibility 1 mile in the early morning improving to 2 miles in the late morning.

Winds from the South at 2 mph, shifting to SW and then to W.

Temperature: 31-42 degrees F.

Msg Nr 1

12 Dec '44

28th Inf Div

3d Bn, 109th Inf rpts observation post(OP) sighted three(3) TIGER Tanks vic Road Junction(RJ) (952458) south of NIEDERSGEGEN at 0905.

Msg Nr 2

12 Dec '44

28th Inf Div

9th Armored Div reported one(1) Messerschmidt(ME) 109 (airplane) circling the area at 1000.

9th Armored Div also reported machine gun(MG) fire vic 945419 at 1015.

Msg Nr 3

12 Dec '44

28th Inf Div

110th Inf rpts 10 horse-drawn carts moving north(N) from KARLSHAUSEN (9259) to JUECKEN(9262) at 1026.

Msg Nr 4

12 Dec '44

28th Inf Div

110th Inf rpts:

1. Four(4) horse-drawn vehicles observed moving southeast(SE) vic 888575 at 1019.

2. One(1) half-track(vehicle with wheels in front and tank-like tracks in back), several horse-drawn vehicles carrying troops, and one(1) horse-drawn artillery piece(weapon), observed moving southwest(SW) vic 930602 at 1100.

Msg Nr 5

12 Dec '44

28th Inf Div

VIII Corps rpts pilots of heavy bombers returning from mission sighted a 40-truck convoy moving southeast(SE) from WAXWEILER (0167) to BITBURG (1454) at 1100.

Msg Nr 6

12 Dec '44

28th Inf Div

28th IPW Tm rpts civilian of German nationality picked up when he crossed river at VIANDEN(903495) at 112100*hours says he worked for a small German Hq Mess vic BETTINGEN(041500) during November. Officers were of all ages and food was good.

* 2100 - 1200 = 9:00 PM

Msg Nr 7

12 Dec '44

28th Inf Div

VIII Corps Artillery(Arty) rpts 60 propaganda shells fell vic 0294 at 1530 (3:30 PM).

Msg Nr 8

12 Dec '44

28th Inf Div

28th Inf Div Arty reports its air observer(AO) rpts two(2) vehicles(veh) moving East(E) vic 960460 at 1545, and footpaths leading into woods from 882694 show signs of heavy use.

Msg Nr 9

12 Dec '44

28th Inf Div

112th Inf rpts:

1. Occasional small arms fire and flares all along front during hours of darkness.
2. Sound of several vehicles heard vic ROSCHEID(8970) at 1950(7:50 PM).
3. Single enemy planes flew over regimental area at 2015 and 2113 hours.

Msg Nr 10

12 Dec '44

28th Inf Div

28th Div IPW Tm states reliable civilians report mines at 937445, from 938448 on the way to the OUR River, and at 923548 near church.

Msg Nr 11

12 Dec '44

28th Inf Div

VIII Corps relayed following message from First Army at 122000 Dec:
"Train movements indicate that the buildup of enemy forces on the western slope of the MOSELLE Valley continues. The Gross Deutschland(Panzer) Div has again been reported in the area by POW. A conservative estimate would place at least two(2) VG Div and one(1) Panzer Div in the enemy's rear area opposite VIII Corps. These units are observing radio silence (Not turning their radios on even to listen)."

Msg Nr 12

12 Dec '44

28th Inf Div

VIII Corps Weather Detachment weather forecast for 122400-132400 Dec:

Cloudy and cold, becoming partly cloudy.
Visibility three miles.
Winds from northwest(NW) at 10 mph.
Temp range: 29-39 degrees F.

Msg Nr 1

13 Dec '44

28th Inf Div

VIII Corps, G2 Air rpts at 0900 hours.

1. No AF Reconnaissance today because of bad weather.
2. Aerial Photos taken several days ago disclose new ground defenses vic BOLSDORF(2386).

Msg Nr 2

13 Dec '44

28th Inf Div

3d Bn, 110th Inf rpts at 1550 hours that Patrol Nr 6 saw little activity vic ROTH(915482) at 2000 hours on 12 Dec.

Msg Nr 3

13 Dec '44

28th Inf Div

109th Inf rpts at 1800 hours that at 0900, two(2) Germans were observed on the S bank of the OUR River vic 950427. When friendly patrol attempted an ambush, enemy troops in position north of the river opened fire with mortars, machine guns(MG) and arty. The Germans escaped but the firing continued throughout the afternoon.

Msg Nr 4

13 Dec '44

28th Inf Div

9th Armd Div rpts at 2230 hours that OP on a hill overlooking the river 1000 meters east of BIGELBACH (9641) saw an aircraft dive low over the hamlet at coordinates 025371(NW of Echternach(0535) and east of BERDORF (005370)). Flash of light and loud noise followed as if plane had crashed or dropped a large bomb. No similar report from the 4th Inf Div.

Msg Nr 5

13 Dec '44

28th Inf Div

112th Inf rpts in summary at 132400 hours:

1. En patrol of two(2) men approached regt Command Post (CP) at 0100 hours. Guard fired on the men and they withdrew(WD).
2. An unidentified (U/I) plane flew over the regt area from the southeast(SE) at 0550 hours.
3. There was a slight increase in harassing small arms fire during the hours of darkness.
4. Sound of tracked vehicles heard vic 9272 at 2130 hours.
5. Trucks and motorcycles heard in town of ROSCHEID(8970) at 2200. Observation Post(OP) personnel thought they also heard tanks in same area.
6. OP rpts sound of motors vic 874693 from 2215-2245.

Msg Nr 6

13 Dec '44

28th Inf Div

110th Inf rpts in Summary at 132400 hours:

1. Receiving several rounds of motar fire during the afternoon.
2. Hearing vehicles moving South(S) from PREISCHEID(8660) between 1950-2020.

Msg Nr 7

13 Dec '44

28th Inf Div

28th Div Arty rpts in summary at 132400 hours:

1. At 0300 the 229th Field Artillery Battalion (FA Bn) reported a two(2) man enemy patrol vic its CP. Patrol withdrew(WD) when fired on.
2. En Arty fire received during the 13th consisted of six(6) rounds landing in the 110th sector and eight(8) rounds landing in the 109th sector.

Msg Nr 8

13 Dec '44

28th Inf Div

106th Inf Div rpts in summary at 132400 hours:

1. Indiscriminate firing of small arms along entire front during hours of darkness.

2. Unusual motor activity vic SCHEID(064963) and BERG (908750) suggests presence of new troops in the area.

3. Aggressive enemy patrols displayed increased activity along entire front.

Msg Nr 9

13 Dec '44

28th Inf Div

4th Inf Div rpts in summary at 132400:

1. Sound of tracked vehicles heard vic GIRST(1031) at 2040.

2. Deserter from 2d Bn, 316th Regt, 212 VG Div was captured at 100335 Dec. He stated that the 320th Regt, 212th VG Div, was on line for about two weeks and is now reported in reserve.

3. Approximately 600 men on special types of duty in rear areas were called back to their regts(316th and 423d) by a secret order on 11 Dec. They were told to return to their regiments immediately because they were needed for an upcoming attack against the thinly held American line. These men for the most part had been attending noncommissioned officer (NCO) schools in KENN and RUWER.

4. Morale of German troops is from good to very good.

Msg Nr 10

13 Dec '44

28th Inf Div

VIII Corps Intelligence Summary as of 132400 rpts:

1. Message forwarded from First Army at 2000 hours states that a POW says the 116th Panzer Div has moved to the Trier(2129) area. Its rear echelon including Div Hq left MUENCHEN-GLADBACH on 6 Dec. First Army notes this report seems to confirm a southward movement earlier reported on the 116th Panzer(Pz) Div.

2. Scattered units all along the corps front reported hearing considerable motor, tracked, and wagon traffic beginning at 1900 and continuing through 2400 hours.

Msg Nr 11

13 Dec '44

28th Inf Div

VIII Corps Weather Det forecast for 132400-142400 hours:

1. Dense fog in morning, persisting until noon.
2. Visibility zero in morning: 1-2 miles during remainder of period.
3. Cloudy and cool.
4. Winds (from) S at 8-12 mph with frequent calms.
5. Temp: 28-36 degrees F.

Msg Nr 1

14 Dec '44

28th Inf Div

112th Inf rpts at 0600 hours that OP heard two(2) trucks on Hill at coordinates 878698 (SE of ROSCHEID(8970) and opposite the boundary of the 2d and 3d Bn 112th Inf). Time sounds were heard was 0405.

Msg Nr 2

14 Dec '44

28th Inf Div

2d Bn, 112th Inf rpts wounded POW capt near LIELER(838705) at 132345 hours while on patrol states he heard that Hq 26th VG Div moved up to ESCHFELD(902692)-ROSCHEID(8970) area on 5 Dec.

Msg Nr 3

14 Dec '44

28th Inf Div

110th Inf rpts at 1000 hours that vehicular movements have been heard in the vicinity of coordinates 854680 at 0745, 0830, and 0910. Direction and volume undetermined.

Msg Nr 4

14 Dec '44

28th Inf Div

1st Bn, 110th Inf rpts En deserter picked up at 132300 hours in TINTESMUEHLE, a small village at coordinates 850673 at the bend in the river East of HEINERSCHIED(821675) and SE of KALBORN(840682) says he was born in STRASBOURG (West of the Rhine and South of the VIII Corps sector). He stated that the MG covering the ruins of the bridge at coordinates 850672 was moved on 7 Dec to a better location 100 meters from its former position where it can fire directly down the center line of the old bridge.

Msg Nr 5

14 Dec '44

28th Inf Div

112th Inf rpts at 1100 hours that OP heard heavy trucks or tracked vehicles moving vic 877692 at 0950 hours.

Msg Nr 6

14 Dec '44

28th Inf Div

109th Inf rpts at 1115 hours that one of its OPs observed enemy infantry carrying rations, and some carrying pigs vic 954440 at 1015 hours. Called for arty fire which dispersed them.

Msg Nr 7

14 Dec '44

28th Inf Div

112th Inf rpts at 1400 vehicular movement heard again behind hill at coordinates 878698 and vic 873687 at 1300. Requested Air Observation Post(AOP) to look and report through 229th FA Bn.

Msg Nr 8

14 Dec '44

28th Inf Div

3d Bn, 110th Inf reported at 1200 hours that a large formation of En Infantry was heard in GEMUEND(871557) at 102200 Dec. Suspects assembly area for raid into 110th sector. Requests Corps Arty bring all possible fire on the area as soon as possible(ASAP).

Msg Nr 9

14 Dec '44

28th Inf Div

110th Inf patrol report at 1530 states bridge at 85675881 is a single plank affair suspended. People balance themselves when going across. Three(3) enemy without helmets or rifles crossed to west at 1250 and went north out of sight. Two unused new planks were on the east side of the river.

Msg Nr 10

14 Dec '44

28th Inf Div

28th Div Arty report at 1545 stated that at 0900 a forward observer(FO), from the 107th FA Bn, observed 15-20 enemy infantry behind a building taking calisthenics; coordinates 95404405. He brought artillery fire on them, getting some casualties.

Msg Nr 11

14 Dec '44

28th Inf Div

28th Div IPW Tm in a report received at 1600 reported that a woman who crossed into Germany on 10 Dec was arrested and taken to BITBURG(1353). She escaped and walked back into Luxembourg where she reported to police this morning. She is vouched for by the Luxembourg police as thoroughly reliable. Her statement follows: "I saw many horse-drawn vehicles, pontoons, small boats, and other river-crossing equipment coming from the direction of BITBURG and moving west through GEICHLINGEN (9451). In BITBURG, I overheard some military personnel saying it had taken three weeks to get there from Italy. There were also some troops in the town with gray uniforms with black collar patches. (Uniform of SS(Elite Nazi) troops.) I also saw many artillery pieces, both horse-drawn and carried on trucks."

Msg Nr 12

14 Dec '44

28th Inf Div

110th Inf reported at 1800 that a patrol discovered a road block at coordinates 851674 at 1645 hours. There appeared to be mines in the vicinity of the roadblock.

Msg Nr 13

14 Dec '44

28th Inf Div

112th Inf rpts at 1900 that an OP heard a tank at 878695 at 1745 hours and several motors behind the Hill at 878698 again at the same time.

Msg Nr 14

14 Dec '44

28th Inf Div

VIII Corps G2 Air reported at 1930 hours that a visual recon mission this afternoon made the following observations:

1. Train consisting of 50 goodswagons (small freight cars) was seen moving south(S) vic coordinates 2050.

2. 20 more goodswagons were on sidings in the same general area.

3. Considerable activity was noted in the marshalling yard at TRIER(2129).

Msg Nr 15

14 Dec '44

28th Inf Div

112th Inf rpts at 2000 hours that an OP heard three(3) vehicles headed west at 1840(6:40 PM). Sounded as if they were pulling heavy loads up a hill vic 880696.

Msg Nr 16

14 Dec '44

28th Inf Div

3d Bn, 110th Inf rpts at 2130 hours that a patrol found a dead German vic 847594 at 2000 hours. Only item of military value found on him was a map stamped 2d Co, 78th Inf Regt. (This would indicate the map came from the 1st Bn, 78th Inf Regt, 26th VG Div.) The map was DASBURG, Sheet 5902. There were no other identifications or troop dispositions on the map. Man appeared to have died about 24 hours ago from a bullet wound.

Msg Nr 17

14 Dec '44

28th Inf Div

112th Inf rpts at 2230 that 1st Bn encountered En patrol in LUTZKAMPEN (8973). En fired on pursuers from house at east of town at 2145 hours, then withdrew.

Msg Nr 18

14 Dec '44

28th Inf Div

110th Inf Summary at 142400 reports some enemy patrol activity to its front on west bank of the OUR River during the day.

Msg Nr 19

14 Dec '44

28th Inf Div

112th Inf Summary as of 142400 hours stated that there was unusual intermittent harassing small arms fire from 140001 until dawn. It started again at 1810, but at 2000 hours there was a marked increase. At least one burst of automatic pistol or machine gun fire was reported at different points along the front and extending to the south of the 112th sector, at an average rate of one burst every five minutes. This activity was still continuing at 142400 hours.

Msg Nr 20

14 Dec '44

28th Inf Div

V Corps G2 Periodic Report for 13 Dec had a significant item under "Dispositions." It stated that a POW from the 2d Co, 942d Inf Regt, 353d VG Div who was captured in the V Corps sector reported that the former CP of the 353d Arty Regt while opposite the VIII Corps was in the vic of BETTINGEN(0450). He stated that it is customary for relieving units to occupy the same positions as those of the relieved unit. This points to the possibility that the same CP is now occupied by the Hq of the 352d Arty Regt.

Msg Nr 21

14 Dec '44

28th Inf Div

28th Div Arty Summary as of 142400 hours:

1. During the past week the enemy has kept his artillery well back from the front.
2. No enemy firing has been reported at night.
3. No counterbattery fire has been reported.
4. Enemy arty activity for 14 Dec:
 - a. 11 rounds, reportedly all 75mm, landed in 112th Inf sector.
 - b. Approximately six(6) rocket projectiles believed fired from near 950440 heard and seen at 1940 hours.

Msg Nr 22

14 Dec '44

28th Inf Div

106th Inf Div summary as of 2400 hours:

1. Listening posts reported heavy increase in motor vehicle movement particularly vic ORMONT(0892), SCHEID(0696), and BRANDSCHEID(9881) before dawn and after dark. Sounds suggesting unloading of troops heard.
2. Harassing fires very light.
3. At least three(3) En patrols reported in 106th sector.
4. Two(2) POW, from 3d Co, 295th Regt, 18th VG Div report 1st Bn, 295th Regt in the ORMONT area.
5. One POW stated that no official information has been given to soldiers concerning an impending move although there have been rumors to that effect.

Msg Nr 23

14 Dec '44

28th Inf Div

9th Armored Div Summary as of 2400 hours:

1. Sporadic arty and mortar fire received in division sector during the day.
2. Two unidentified(U/I) aircraft circled over sector in the afternoon then flew east.

Msg Nr 24

14 Dec '44

28th Inf Div

4th Inf Div summary as of 2400 hours stated that vehicular traffic was reported on the 12th Inf front during the evening. Otherwise it was a quiet day.

(Note: 12th Inf occupies the northern regimental sector of the 4th Inf Div in the ECHTERNACH area just south of the 9th Armored Div sector.)

Msg Nr 25

14 Dec '44

28th Inf Div

VIII Corps Weather Det forecast for 142400-152400:

1. Cloudy and cold
2. Visibility zero in the morning but fog will dissipate by noon. Visibility will then vary from 1/2-1 1/2 miles.
3. Rain and snow starting late in the afternoon on the 15th and continuing to the end of the period.
4. Winds from the south at 8 to 12 miles per hour.
5. Temperature:
 - a. Minimum 28 degrees F at 0700.
 - b. Maximum 34 degrees.

Msg Nr 1

15 Dec '44

28th Inf Div

4th Inf Div IPW Tm report received at 0600 states that a German national from SAARBRUECKEN (opposite Third Army zone to the south) who was picked up while visiting relatives vic Luxembourg City on 6 Dec claims he is an employee of the German Reichsbahn (RR). He further states that on 30 Nov the marshalling yards in ZWEIBRUECKEN (also opposite Third Army) were tied up for six hours when two carloads of explosives collided and exploded.

Msg Nr 2

15 Dec '44

28th Inf Div

VIII Corps Arty reported at 0700 that considerable vehicular activity was heard vic BRANDSCHEID (9881) at 0600 hours.

Msg Nr 3

15 Dec '44

28th Inf Div

112th Inf summary as of 2400 hours:

1. The increased harassing small arms fire reported yesterday continued all night until 0800 this morning when it stopped.

2. 112th Inf front has been very quiet all afternoon and evening.

Msg Nr 4

15 Dec '44

28th Inf Div

109th and 110 Inf summaries as of 2400 hours both indicate marked increase of small arms harassing fire between 0400 and 0800, followed by a very quiet afternoon and evening.

Msg Nr 5

15 Dec '44

28th Inf Div

28th Div Arty summary as of 2400 hours:

1. OP 101(964414) observers reported at 1040 hours that enemy in front of them were equipped with overcoats for the first time.

2. During the day when guards were changed, enemy soldiers double-timed to and from their posts and did quite a bit of saluting not observed before.

3. Vic 963436 and 958435 enemy did a lot of moving to and from pillboxes in the morning. Also dug a lot of small holes and strung wire in this area. Movements continued in this area all day.

4. There was also quite a bit of foot traffic vic 965439 all day.

5. 109th Inf sector received 10 rounds of arty fire between 1010-1545 hours.

Msg Nr 6

15 Dec '44

28th Inf Div

4th Inf Div summary as of 2400 hours:

1. At 0515 hours vehicular activity was heard vic coordinates 0106 and an enemy aircraft was over the area.
2. At 1445 hours, an enemy plane dropped one(1) bomb vic 0602. Two other enemy planes were over the area at the same time.
3. Two(2) POW from the 44th Fortress Machine Gun Bn were captured at 995196 at 1830 hours. They said they were told two days ago that a Panzer (Armored) Div and two(2) Infantry Divisions were in the rear of their area and that those units would soon launch an offensive of major proportions.

Msg Nr 7

15 Dec '44

28th Inf Div

9th Armored Div summary as of 2400 hours:

1. Between 1950-2020 hours several bright flashes were observed vic WALLENDORF(962428), but no explosions were heard.
2. Enemy outpost personnel were more in evidence than usual during the day and appeared more confident.
3. Abrupt change of routine of personnel on the other side of the river strongly suggests new troops may have arrived on the front.

Msg Nr 8

15 Dec '44

28th Inf Div

106th Inf Div summary as of 2400 hours:

1. Considerable vehicular activity was heard vic 996806 at 0045 hours.
2. Enemy patrols penetrated to 992830 at 0110 and patrols also were reported vic 101834.
3. An enemy patrol consisting of 34 men was reported in ALLMUTHUN (040948) during the early morning.
4. Enemy observation planes were active over the whole division sector early this evening.
5. Enemy patrols were also active this evening except in the Schnee Eifel area. (Schnee Eifel area starts about 0082 and trends NE.)
6. Enemy vehicular movements have been heard all along the front from early evening and continuing to the time of this report.
7. A POW from the 2d Bn 295th Regt, 18th VG Div who was capt this afternoon says his unit arrived in this area on the afternoon of the 14th relieving an unknown unit which was to be pulled out for an attack along the entire front between the 17th and Christmas. POW had heard that SS (Elite Nazi) troops and searchlights were to be used, employing infiltration tactics.
8. At 2200 hours a report was received from a field hospital that a seriously wounded POW who was under morphine sedation but believed from the 18th VG Div stated he had heard rumors there would be an attack between the 17th and 25th of Dec. He further stated that in the area of his unit there were large generators and 40 large searchlight reflectors.

Msg Nr 1

16 December 1944

28th Infantry Division

0600 hours

The 109th Infantry Regiment reports an enemy barrage beginning at 0530 hours and still continuing.

Message Nr 2

16 December 1944

28th Infantry Division

0600 hours

The 110th Infantry Regiment reports an artillery and rocket barrage beginning at 0530 and still continuing.

Message Nr 3

16 December 1944

28th Inf Division

0620 hours

The 1st Battalion, 112th Infantry Regiment reports shells of an artillery and rocket barrage passing over the Battalion Command Post.

Message Nr 4

16th December 1944

28th Infantry Division

0700 hours

The 106th Infantry Division reports an enemy artillery barrage beginning at 0530. Barrage included all calibers (sizes) of artillery up to and including 14" railway guns. Wire (Communications) lines to regiments are out.

Message Nr 5

16 December 1944

28th Infantry Division

0800 hours

The 3d Battalion, 112th Infantry Regiment reports a German assault on SEVENIG(8771) has infiltrated friendly positions. Enemy strength is estimated at two battalions.

Message Nr 6

16 December 1944

28th Infantry Division

0810 hours

The 1st Battalion, 112th Infantry Regiment reports a kitchen truck was ambushed near HARSPELT(8872) at 0712 hours. Three friendly K.P's were killed in action(KIA). Enemy apparently infiltrated through friendly lines.

Message Nr 7

16th December 1944

28th Infantry Div

1000 hours

The 1st Battalion, 110th Infantry Regiment reports MARNACH(8063) surrounded by Germans at 0900 hours. Two enemy battalions identified from enemy dead as 28th Panzer Engineer Battalion and 2d Battalion 304th Panzer Grenadier Regiment; both from the 2d Panzer Division. No tanks reported.

Message Nr 8

16 December 1944

28th Infantry Regt

1200 hours

The 2d Battalion, 112th Infantry Regiment states its outposts report Germans have seized a destroyed bridge at 853684. Enemy engineers are repairing the bridge. Friendly patrols have captured three POWs from the 1128th Regiment, 560th Volksgrenadier Division.

Message Nr 9

16 December 1944

28th Infantry Div

1205 hours

The 3d Battalion, 110th Infantry Regiment reports five enemy assaults repulsed at CONSTHUM(7954) during the morning. German infantry seemed very inexperienced; attacking in dense formations with frontal assaults. Bodies identified as belonging to the 39th Regiment, 26th Volksgrenadier Division. Attacks were supported by artillery, mortars, and machine guns. No tanks participated.

Message Nr 10

16 December 1944

28th Infantry Division

1245 hours

The 1st Battalion, 112th Regiment reports 60 POWs captured near HARSPELT (8872) at 0830. POWs were identified as belonging to the 116th Panzer Division. Uniform insignia indicates their regiment is the 156th.

Message Nr 11

16 December 2944

28th Infantry Div

1300 hours

Company "B", 707th Tank Battalion reports enemy infantry thrown back from BOCKHOLZ(7958) at 1130. Results: 34 enemy killed in action (KIA), three friendly wounded in action(WIA). POWs identify their unit as part of the 77th Regiment, 26th Volksgrenadier Division.

Message Nr 12

16 December 1944

28th Infantry Div

1400 hours

The 3d Battalion, 110th Infantry Regiment reports enemy infantry assaults repulsed at WEILER(8453). Attacking units identified as elements of the 39th Volksgrenadier Regiment, 26th Volksgrenadier Division. Heavy fighting at HOSINGEN(8259) involved elements of the 2d Battalion, 77th Regiment, 26th Volksgrenadier Division.

Message Nr 13

16 December 1944

28th Infantry Div

1410 hours

The 1st Battalion, 110th Infantry Regiment reports an attack on HEINERSCHIED(8267) and enemy presence in FISHBACK(8065). Enemy believed to be elements of the 2d Panzer Division. No tanks observed.

Message Nr 14

16th December 1944

28th Infantry Div

1700 hours

The 2d Battalion, 112th Infantry Regiment reports Germans thrown out of SEVENIG and friendly positions restored by counterattack. Enemy identified as from the 1130th Regiment, 560th Volksgrenadier Division.

Message Nr 15

16 December 1944

28th Infantry Div

1830 hours

The 3d Battalion, 110th Infantry Regiment reports enemy vehicles attacking near WAHLHAUSEN(8455) are armed with multiple 20mm guns. No communications with 1st Platoon Company "I" at the crossroads near WAHLHAUSEN since 1730 hours. Must assume position has been overrun. WEILER position (8435) surrounded since late this morning; abandoned at 1815 hours. Company "I" successfully fought its way out.

Message Nr 16

16 December 1944

28th Infantry Div

1845 hours

The 1st Battalion, 110th Infantry Regiment reports Germans repulsed from REULER(7863) at 1800 hours. Enemy identified as part of the 304th Regiment, 2d Panzer Division. No tanks participated.

Message Nr 17

16 December 1944

28th Infantry Div

1900 hours

The 106th Infantry Division reports heavy enemy pressure along the entire front except in the Schnee Eifel. Division was forced to withdraw to ANDLER(9691), SCHOENBERG(9588), BLEIALF (9683), and WINTERSPELT(9180). Enemy infiltration continues. Enemy strength is estimated as at least two Volksgrenadier Divisions.

Message Nr 18

16 December 1944

28th Infantry Div

2245 hours

The 3d Battalion, 110th Infantry Regiment reports situation at HOSINGEN (8258) is serious; ammunition supply is low and village is surrounded by enemy infantry. German tanks have come up; identified from markings on tanks in the light of the burning houses as part of the Panzer Lehr Division.

Message Nr 19

16 December 1944

28th Infantry Div

2330 hours

The 1st Battalion, 112th Infantry Regiment reports that enemy activity has subsided. Attacks from LUTZKAMPEN(8973) to the west continued in the early evening, including enemy infantry and three flame-throwing tanks. Attacks were repulsed; all units are holding along line of contact. German attacking unit was identified as the 60th Panzer Grenadier Regiment, 116th Panzer Division.

Message Nr 20

16 December 1944

28th Infantry Div

2335 hours

109th Infantry Regiment reports two enemy regiments infiltrating between friendly company positions. POWs identified as members of the 15th Parachute Regiment, 5th Parachute Division, and 915th Regiment, 352d Volksgrenadier Division. Enemy appears to be advancing along two general axes: VIANDEN(9049) and WALSDORF(8748); and BETTEL(9147) and TANDEL(8845). In addition, enemy attempts to infiltrate up the SAUER River Valley have been repulsed.

Message Nr 21

16 December 1944

28th Infantry Div

2400 hours

The 1st Battalion, 110th Infantry Regiment reports that markings on tanks captured at MARNACH at 2345 hours identified them as part of the 3d Panzer Regiment, 2d Panzer Division. Enemy infantry infiltration continuing throughout the sector.