

FACILITIES

AND

EQUIPMENT

MAINTEENANCE

SYSTEM

FEM

**AUTOMATED PERSONAL
PROPERTY MANAGEMENT
SYSTEM (APPMS)**

**INTERFACE CONTROL
DOCUMENT**

FOR THE

**NAVY SUPPORT GROUP
(NSSG)**

**FACILITIES AND EQUIPMENT
MAINTENANCE SYSTEM (FEM)**

(DRAFT)

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**USACE
APPMS INTERFACE CONTROL DOCUMENT**

FOR THE

NAVY SYSTEMS SUPPORT GROUP (NSSG)
FACILITIES AND EQUIPMENT MAINTENANCE (FEM) SYSTEM

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TABLE OF CONTENTS

	Page
<u>1. SCOPE</u>	1
1.1 <u>FEM Overview</u>	1
1.2 <u>APPMS Overview</u>	3
<u>2. POINTS OF CONTACT</u>	3
<u>3. INTERFACING SYSTEMS INFORMATION</u>	4
3.1 <u>FEM Databases</u>	4
3.2 <u>APPMS Databases</u>	4
<u>4. INTERFACE DETAILS</u>	6
4.1 <u>Personal Property Records</u>	7
4.2 <u>Business Rules</u>	8
4.3 <u>Error Handling</u>	10

1. SCOPE

This Interface Control Document documents the interface between the Facilities and Equipment Maintenance System (FEM) and the US Army Corps of Engineer's Automated Personal Property Management System (APPMS).

1.1 FEM Overview.

The Naval Systems Support Group (NSSG) is delivering to selected DoD major depots the enterprise functionality to support improved business processes required for effective depot maintenance. Providing this functionality requires the development and delivery of a set of Automated Information Systems (AIS) that automate selected depot processes, improve the efficiency of these procedures and continue to meet mission needs within budget constraints. The Program is initially deploying a suite of migration applications composed of Commercial Off-The-Shelf (COTS), and Government Off-The-Shelf (GOTS) and modified GOTS software packages that address major end-items, reparables, tool management, hazardous material information, enterprise information management, and inter-service workload tracking, and equipment maintenance. These migration applications were selected by the Services to form an initial baseline suite of capability to satisfy the improved functional baseline, derived from the Joint Services functional users.

FEM is the system identified by the Joint Services functional users to be employed by the Services for managing industrial plant facilities and capital equipment resources. The FEM system is to provide the depots with an automated tracking and control system for the management of facility and equipment maintenance, equipment calibration, equipment maintenance contracts, inventory control, asset costs, preventive and corrective maintenance, and capacity data. The core application of FEM is MAXIMO Series 5 Version 4.0.3 a COTS package developed by Professional Software Development Incorporated (PSDI).

FEM is being implemented at two USACE data processing centers to support all USACE Districts:

1. Portland, OR. Supports all FOA databases assigned to the Western Processing Center
2. Vicksburg, MS. Supports all FOA databases assigned to the Central Processing Center

The table below lists the processing center and assigned Activities:

Central Processing Center		Western Processing Center	
A0	Huntsville Engineering and Support Center	E0	North Atlantic Division
B0	Mississippi Valley Division	E1	Baltimore District
B1	Memphis District	E2	Washington District
B2	New Orleans District	E3	New York District
B3	St Louis District	E4	Norfolk District
B4	Vicksburg District	E5	Philadelphia District
B5	Rock Island District	E6	New England

Central Processing Center		Western Processing Center	
B6	St Paul District	G0	Northwestern Division
E7	Europe District	G2	Portland District
K0	South Atlantic Division	G3	Seattle District
K2	Charleston District	G4	Walla Walla District
K3	Jacksonville District	G5	Kansas District
K5	Mobile District	G6	Omaha District
K6	Savannah District	H0	Great Lakes and Ohio River Division
K7	Wilmington District	H1	Huntington District
M0	Southwestern Division	H2	Louisville District
M2	Fort Worth District	H3	Nashville District
M3	Galveston District	H4	Pittsburgh District
M4	Little Rock District	H5	Buffalo District
M5	Tulsa District	H6	Chicago District
N0	Transatlantic Programs Center	H7	Detroit District
Q0	Water Resources Support Center	J0	Pacific Ocean Division
S0	HQ USACE	J1	Far East District
T0	USACE Finance Center	J2	Japan District
U4	Eng Research and Development Center	J3	Honolulu District
W2	Humphreys Engineering Center Support Activity	J4	Alaska District
W3	Prime Power School	L0	South Pacific Division
		L1	Los Angeles District
		L2	Sacramento District
		L3	San Francisco District
		L4	Albuquerque District

1.2 APPMS Overview.

The purpose of APPMS is to provide property management to enable managers to supervise, manage, advise, and perform specialized supply management functions which include authorization, approval of acquisition documents, distribution, issuance and management of formal property accounting (subsidiary accounts of the financial general ledger), reutilization, utilization, , and disposal of property. The mission area expands during Presidential declared emergencies, often to support Federal Emergency Management Agency (FEMA), and domestic or foreign military support when assigned by the Army. APPMS complies with the regulations requiring property accountability: ER 700-1-1, AR 735, AR 710-2, DA PAM 710-2-1, CFO Act

APPMS addresses the following business functions:

- Approves and processes Acquisitions
- Activates property, which has been received in CEFMS and provides the barcode unique number, which is embedded in the financial ledger for CFO tracking.
- Provides for Reutilization, limited utilization tracking, , and disposal of property
- Data Exchange to Corporate System - APPMS is integrated with the Corps of Engineers Financial Management System (CEFMS) and shares essential data critical to the management of property.

APPMS is a web-based program that provides the property book officer with a way to manage personal property. The property book officer uses APPMS to view and approve pending requisitions, view approved and disapproved requisitions, , , activate received property, issue property to a hand receipt account, track property inventory (both expendables and durable), turn property in for disposal and create reports as needed.

APPMS consists of over 58 independent Oracle databases, each supporting a specific Field Operating Agency (FOA).

2. Points of Contact.

Organization	Point of Contact
Navy Systems Support Group (NSSG) Norfolk Navy Shipyard, Bldg 33 Portsmouth, VA, 23709	Les Kramer FEM Program Manager Phone: 757-396-2119 DSN: 961-2119
Headquarters, U.S. Army Corps of Engineers (USACE) Office of the Assistant Chief of Staff for Logistics Washington DC	Ray Urena Chief, Maintenance and Supply Division Phone: 202-761-1618 DSN: 763-1618

Organization	Point of Contact
Headquarters, U.S. Army Corps of Engineers (USACE) Office of the Assistant Chief of Staff for Logistics Washington DC	Jimmie Smith APPMS Functional Manager Phone: 202-761-0852 DSN: 763-0852
Anteon Corporation Montgomery, AL, 36109	Jim Bent Program Manager Phone: 334-260-3348 or 1-800-362-2322, ext. 3348
Anteon Corporation Montgomery, AL, 36109	Al Kent Project Manager Phone: 334-260-3222 or 1-800-362-2322, ext. 3222

3. Interfacing Systems Information

The tables below identify the databases that will be interfaced. Wherever possible the interface will be accomplished using database links. However, there will be some cases where the data will not be updated real time. In these cases data will be stored and a database link will be established periodically to update data on the other system(s).

3.1 FEM Databases

	Name	IP Address	Oracle SID
USACE FEM West	Portland, OR		
USACE FEM East	Vicksburg, MS		

3.2 APPMS Databases

FOA	Name	IP Address Domain Name	Oracle SID
A0	Huntsville Engineering and Support Center	CPC25.USACE.ARMY.MIL	AOCEFMP1
B0	Mississippi Valley District	CPC26.USACE.ARMY.MIL	BOCEFMP1
B1	Memphis District	CPC26.USACE.ARMY.MIL	B1CEFMP1
B2	New Orleans District	CPC26.USACE.ARMY.MIL	B2CEFMP1
B3	St Louis District	CPC26.USACE.ARMY.MIL	B3CEFMP1
B4	Vicksburg District	CPC26.USACE.ARMY.MIL	B4CEFMP1
B5	Rock Island District	CPC26.USACE.ARMY.MIL	B5CEFMP1
B6	St Paul District	CPC26.USACE.ARMY.MIL	B6CEFMP1
E0	North Atlantic District	WPC29.USACE.ARMY.MIL	E0CEFMP1
E1	Baltimore District	WPC29.USACE.ARMY.MIL	E1CEFMP1

FOA	Name	IP Address Domain Name	Oracle SID
E2	Washington District	WPC29.USACE.ARMY.MIL	E2CEFMP1
E3	New York District	WPC29.USACE.ARMY.MIL	E3 CEFMP1
E4	Norfolk District	WPC29.USACE.ARMY.MIL	E4 CEFMP1
E5	Philadelphia District	WPC29.USACE.ARMY.MIL	E5 CEFMP1
E6	New England	WPC29.USACE.ARMY.MIL	E6 CEFMP1
E7	Europe District	CPC26.USACE.ARMY.MIL	E7 CEFMP1
G0	Northwestern Division	WPC29.USACE.ARMY.MIL	G0 CEFMP1
G2	Portland District	WPC29.USACE.ARMY.MIL	G2 CEFMP1
G3	Seattle District	WPC29.USACE.ARMY.MIL	G3 CEFMP1
G4	Walla Walla District	WPC29.USACE.ARMY.MIL	G4 CEFMP1
G5	Kansas District	WPC29.USACE.ARMY.MIL	G5 CEFMP1
G6	Omaha District	WPC29.USACE.ARMY.MIL	G6 CEFMP1
G7	Missouri River Regional HQ (Consolidated with G0)	N/A	N/A
H0	Great Lakes and Ohio River Division	WPC26.USACE.ARMY.MIL	H0 CEFMP1
H1	Huntington District	WPC26.USACE.ARMY.MIL	H1 CEFMP1
H2	Louisville District	WPC26.USACE.ARMY.MIL	H2 CEFMP1
H3	Nashville District	WPC26.USACE.ARMY.MIL	H3 CEFMP1
H4	Pittsburgh District	WPC26.USACE.ARMY.MIL	H4 CEFMP1
H5	Buffalo District	WPC26.USACE.ARMY.MIL	H5 CEFMP1
H6	Chicago District	WPC26.USACE.ARMY.MIL	H6 CEFMP1
H7	Detroit District	WPC26.USACE.ARMY.MIL	H7 CEFMP1
H8	Great Lake Regional HQ (Consolidated with H0)	N/A	N/A
J0	Pacific Ocean Division	WPC26.USACE.ARMY.MIL	J0 CEFMP1
J1	Far East District	WPC26.USACE.ARMY.MIL	J1 CEFMP1
J2	Japan District	WPC26.USACE.ARMY.MIL	J2 CEFMP1
J3	Honolulu District	WPC26.USACE.ARMY.MIL	J3 CEFMP1
J4	Alaska District	WPC26.USACE.ARMY.MIL	J4 CEFMP1
K0	South Atlantic Division	CPC25.USACE.ARMY.MIL	K0 CEFMP1
K2	Charleston District	CPC25.USACE.ARMY.MIL	K2 CEFMP1
K3	Jacksonville District	CPC25.USACE.ARMY.MIL	K3 CEFMP1
K5	Mobile District	CPC25.USACE.ARMY.MIL	K5 CEFMP1
K6	Savannah District	CPC25.USACE.ARMY.MIL	K6 CEFMP1
K7	Wilmington District	CPC25.USACE.ARMY.MIL	K7 CEFMP1
L0	South Pacific Division	WPC26.USACE.ARMY.MIL	L0 CEFMP1
L1	Los Angeles District	WPC26.USACE.ARMY.MIL	L1 CEFMP1
L2	Sacramento District	WPC29.USACE.ARMY.MIL	L2 CEFMP1
L3	San Francisco District	WPC26.USACE.ARMY.MIL	L3 CEFMP1
L4	Albuquerque District	WPC26.USACE.ARMY.MIL	L4 CEFMP1
M0	Southwestern Division	CPC25.USACE.ARMY.MIL	M0 CEFMP1
M2	Fort Worth District	CPC25.USACE.ARMY.MIL	M2 CEFMP1

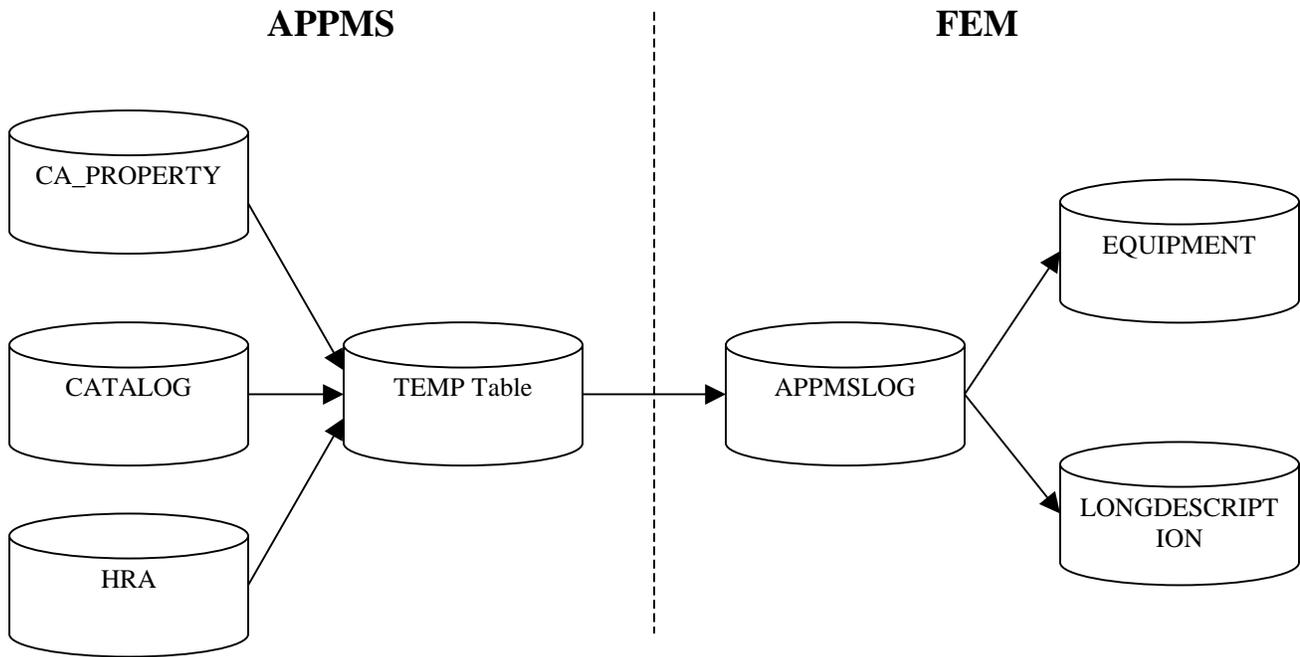
FOA	Name	IP Address Domain Name	Oracle SID
M3	Galveston District	CPC25.USACE.ARMY.MIL	M3 CEFMP1
M4	Little Rock District	CPC25.USACE.ARMY.MIL	M4 CEFMP1
M5	Tulsa District	CPC25.USACE.ARMY.MIL	SWT_CEFM S
N0	Transatlantic Programs Center	CPC26.USACE.ARMY.MIL	N0 CEFMP1
Q0	Water Resources Support Center	CPC25.USACE.ARMY.MIL	Q0 CEFMP1
S0	HQ USACE	CPC25.USACE.ARMY.MIL	S0 CEFMP1
T0	USACE Finance Center	CPC25.USACE.ARMY.MIL	T0 CEFMP1
U1	Topographic Engineering Center CNS WITH U4	N/A	N/A
U2	Cold Regions Research & Engineering Lab CNS WITH U4	N/A	N/A
U3	Construction Engineering Research Lab CNS WITH U4	N/A	N/A
U4	Waterways Experiment Station Engineer Research and Development Center	CPC26.USACE.ARMY.MIL	U4 CEFMP1 U4CEFMT1
W2	Humphreys Engineering Center Support Activity	CPC25.USACE.ARMY.MIL	W2 CEFMP1
W3	Prime Power School	CPC25.USACE.ARMY.MIL	W3CEFMP1

4. Interface Details

APPMS will utilize Oracle's TNSNAMES file to define the database links to the appropriate FEM database. FEM will utilize a log table to serve as a transaction history and process control mechanism. Data being sent to FEM will be first placed in a log table by APPMS. FEM will process the log table to update the appropriate FEM tables.

4.1 Personal Property Records

APPMS sends personal property records to FEM if maintenance needs to be tracked. APPMS also sends updates to Personal property records if they have been flagged for maintenance. APPMS will establish a database link with the appropriate East /West FEM database, based on which FEM processing center the FOA_CODE is assigned.



The table below describes where APPMS will get the data to put into the FEM log table used for incoming APPMS data.

APPMS Table	SENDING SYSTEM			RECEIVING SYSTEM			
	APPMS Column Name	Format	Size	FEM Table/	FEM Column Name	Format	Size
				APPMSLOG	KEYNUM	VARCHAR2	8
CA_PROPERTY	PROP_ID	VARCHAR2	5	APPMSLOG	BARCODE	VARCHAR2	5
CA_PROPERTY	FOA_CODE	VARCHAR2	2	APPMSLOG	FOA	VARCHAR2	2
CA_PROPERTY	AUTH_ID	VARCHAR2	15	APPMSLOG	CHANGEBY	VARCHAR2	15
CA_PROPERTY	CATALOG_ID	VARCHAR2	13	APPMSLOG	NSN	VARCHAR2	13
CA_PROPERTY	HRA_ID	VARCHAR2	3	APPMSLOG	HRHNUM	VARCHAR2	2
CA_PROPERTY	PROP_ACQUISITION_DATE	DATE		APPMSLOG	ACQDATE	DATE	
CA_PROPERTY	PROP_ACQUISITION_COST	NUMBER	11,2	APPMSLOG	ACQCOST	NUMBER	11,2
CA_PROPERTY	PROP_DISPOSITION_CODE	VARCHAR2	2	APPMSLOG	DISPOSITIONCODE	VARCHAR2	2

APPMS Table	SENDING SYSTEM			RECEIVING SYSTEM			
	APPMS Column Name	Format	Size	FEM Table/	FEM Column Name	Format	Size
CA_PROPERTY	PROP_SERIAL_NO	VARCHAR2	20	APPMSLOG	SERIALNUM	VARCHAR2	20
CA_PROPERTY	PROP_LOC	VARCHAR2	15	APPMSLOG	LOCATION	VARCHAR2	15
CA_PROPERTY	PROP_ROOM-NO	VARCHAR2	8	APPMSLOG	ROOMNUM	VARCHAR2	8
CA_PROPERTY	PROP_PURCHASE_REQ_NO	VARCHAR2	20	APPMSLOG	PRNUM	VARCHAR2	20
CA_PROPERTY	PROP_VENDOR_NAME	VARCHAR2	15	APPMSLOG	VENDOR	VARCHAR2	15
CA_PROPERTY	PROP_PART_NO	VARCHAR2	15	APPMSLOG	PARTNUM	VARCHAR2	15
CA_PROPERTY	PROP_MFGR	VARCHAR2	15	APPMSLOG	MANUFACTURER	VARCHAR2	15
CA_PROPERTY	PROP_MODEL_NO	VARCHAR2	10	APPMSLOG	MODELNUM	VARCHAR2	10
CA_PROPERTY	PROP_UPDATE_DATE	DATE		APPMSLOG	CHANGEDATE	DATE	
CATALOG	CATALOG_ECC_CODE	VARCHAR2	1	APPMSLOG	ECC	VARCHAR2	1
CATALOG	CATALOG_NOM ENCLATURE	VARCHAR2	50	APPMSLOG	DESCRIPTION	VARCHAR2	50
HRA	HRA_NAME	VARCHAR2	25	APPMSLOG	HRHNAME	VARCHAR2	25
???	???			APPMSLOG	EIC	VARCHAR2	3
???	???			APPMSLOG	EUMPCODE	VARCHAR2	4

4.2 Business Rules

Element Name	Business Rules, Comments, Etc.
APPMSLOG.KEYNUM	APPMS must generate this value using FEM's auto seed number (AUTOKEY.SEED +1 where AUTOKEY.TBNAME = APPMSIN) for the APPMSIN table. The auto seed number (AUTOKEY.SEED) must be incremented by one for each record inserted into the APPMSIN table.
CA_PROPERTY_CATALOG_ID	This field will be used to join the CA_PROPERTY and CATALOG tables.
CA_PROPERTY_HRA_ID	This field will be used to join the CA_PROPERTY and HRA tables.

FEM will either insert a new Equipment record or update the corresponding equipment record (EQUIPMENT.ASSETNUM = APPMSLOG.BARCODE and first to digits of EQUIPMENT.EQ9 = APPMSLOG.FOA) for each record inserted into the APPMSIN table. The following mapping and rules will be followed when updating or inserting in the Equipment table.

APPMSIN TABLE	EQUIPMENT TABLE	Comments
Column Name	Column Name (Alias)	
BARCODE	ASSETNUM (PROPERTYID)	Used to join the Equipment and APPMS tables.
	EQNUM	Prefix EQNUM with FOA code to ensure uniqueness when inserting a new record.

APPM SIN TABLE	EQUIPMENT TABLE	
Column Name	Column Name (Alias)	Comments
DESCRIPTION	DESCRIPTION	Only use when inserting new equipment record. Do not change on update.
FOA	EQ9 (ORGCODE)	
CHANGEBY	CHANGEBY	
NSN	EQ3 (NSN)	
HRHNUM	EQ19 (HRHNUM)	
ACQDATE	INSTALLCOST	
ACQCOST	PURCHASEPRICE	
	REPLACECOST	
DISPOSITIONCODE	EQ16 (DISPOSITIONCODE)	
SERIALNUM	SERIALNUM	
LOCATION	EQ5 (PHYSICALLOCATION)	Concatenate LOCATION and ROOMNUM. Prefix LOCATIONS with 'LOCATION: '. Prefix ROOMNUM with 'ROOM: '. Only use when inserting new equipment. Do not change on update.
ROOMNUM		
PRNUM	EQ12 (PURCHASINGDOC)	
VENDOR		Add to long description for equipment's description. Prefix with 'VENDOR: '. Only use on insert of new equipment..
PARTNUM	EQ17 (PARTNUM)	
MANUFACTURER		Add to long description for equipment's description. Prefix with 'MFGR: '. Only use on insert of new equipment.
MODELNUM	EQ1 (MODELNUM)	
CHANGEDATE	CHANGEDATE	
ECC	EQ6 (ECC)	
HRHNAME	EQ21 (HRHNAME)	
EIC	EQ8 (EIC)	
EUMPCODE	EQ15 (EUMPCODE)	
Default Values for New Equipment Records Only (DO NOT CHANGE ON UPDATES)		
	AVGMETERUNIT	Default to 0.
	AVGMETERUNIT2	Default to 0.
	BUDGETCOST	Default to 0.
	CHILDREN	Default to 'N'.
	DISABLED	Default to 'N'.
	EQ14 (ONLOAN)	Default to 'N'.
	EQ15 (EUMP)	Default to 'NE'.
	EQ4 (PROPERTYTYPE)	Default to 'P'.
	IMPORTDELTAMETER1	Default to 'N'.
	IMPORTDELTAMETER2	Default to 'N'.
	INHERITMETER1CHANG	Default to 'N'.
	INHERITMETER2CHANG	Default to 'N'.

APPMSIN TABLE	EQUIPMENT TABLE	
Column Name	Column Name (Alias)	Comments
	INVCOST	Default to 0.
	LOCATION	Default to District location based on FOA code.
	METER1WEIGHTPRCNT	Default to 0.
	METER2WEIGHTPRCNT	Default to 0.
	METERREADING	Default to 0.
	METERREADING2	Default to 0.
	TOTALCOST	Default to 0.
	TOTDOWNTIME	Default to 0.
	TOTUNCHARGEDCOST	Default to 0.
	UNCHARGEDCOST	Default to 0.
	YTDCOST	Default to 0.

4.3 Error Handling

Links to the FEM databases will be established on a regular cycle. If there is a problem establishing a link, APPMS will process the record on the next cycle. APPMS will develop a mechanism for informing their system administrators if there is a recurring problem establishing the database links.

All data will be checked for proper format as the data is inserted into the APPMSLOG table and errors will be reported over the database link to APPMS. Since the format of the data elements in the APPMSLOG table is the same as the format in the EQUIPMENT table, there should be no problems when inserting the record into the EQUIPMENT table.