

# 1.0 Overview

The Federal Emergency Management Information System (FEMIS<sup>®</sup>)<sup>(a)</sup> is an emergency management planning and response tool that was developed by the Pacific Northwest National Laboratory<sup>(b)</sup> (PNNL) under the direction of the US Army Soldier and Biological Chemical Command (SBCCOM). The *Installation Guide for FEMIS Version 1.5* provides instructions for installing the FEMIS software package as well as the Commercial-Off-The-Shelf (COTS) software applications that are necessary for FEMIS to operate.

## 1.1 Point of Contact

We encourage you to contact us with suggestions or to ask questions. You can contact us by mail, telephone, fax, or E-mail:

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## 1.2 Document Organization

This document is organized into three sections and two appendices, which include details on the installation and configuration of FEMIS.

- Section 1.0 – Overview – describes the point of contact, acknowledgment, document organization, software products, installation environment and storage requirements, and FEMIS directory structures.
- Section 2.0 – FEMIS UNIX Installation – describes installing the UNIX operating system, the UNIX-based COTS software, installing the FEMIS UNIX software, and creating the FEMIS database.
- Section 3.0 – FEMIS GIS Migration and Configuration – discusses the installation and configuration for upgrading the FEMIS GIS from v1.4.7.2 to v1.5.
- Section 4.0 – FEMIS PC Installation – discusses the installation, configuration, and validation of the FEMIS application on client PCs.

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(a) FEMIS software was copyrighted in 1995 by Battelle Memorial Institute.

(b) Pacific Northwest National Laboratory is operated for the US Department of Energy by Battelle Memorial Institute under Contract DE-AC06-76RLO 1830.

- Section 5.0 – Remote Evacuee Registration and Point-to-Point Protocol – discusses the Remote Evacuee Registration feature and establishing and setting up the Point-to-Point (PPP)
- Section 6.0 – Stand-Alone Installation of FEMIS v1.5 – discusses the installation configuration, and validation of the FEMIS Stand-Alone application.

## 1.3 Software Products

FEMIS integrates the following COTS software products.

Software Application	Software Company
ArcView GIS	Environmental Systems Research Institute, Inc. (ESRI)
Microsoft Windows 2000 Service Pack 2 or Microsoft Windows NT 4.0 Service Pack 6	Microsoft Corporation
Oracle, Net8, TCP/IP Adapter, and ODBC Driver	Oracle Corporation
Samba	Samba Team (open source project)
Solaris	Sun Microsystems, Inc.

FEMIS integrates the following government-furnished software products.

D2PC (February 2000)	US Army Soldier and Biological Chemical Command (SBCCOM)
PARDOS v3.1 (May 1997)	US Army SBCCOM
Evacuation SIMulation Model (ESIM v2.1f13)	Oak Ridge National Laboratory

## 1.4 Installation

This section discusses the FEMIS environment and storage requirements.

### 1.4.1 Environment

For FEMIS to operate correctly, the first step is to install all of the COTS software, including Oracle Release v8.1.6 on your UNIX system. FEMIS will not operate correctly if versions of the COTS software other than those specified in the *Bill of Materials (BOM) for FEMIS Version 1.5* are installed.

FEMIS uses Samba as its Network File System for PC network communications. Samba has been tested by PNNL and is compatible with FEMIS requirements. Although other vendors may claim to offer a fully standard NFS, or Service Message Block (SMB) emulation, PNNL has not verified and tested any other NFS/SMB configurations for PCs, and thus, cannot endorse such installations.

## 1.4.2 Storage Requirements

The FEMIS application requires disk space on both the client and server machines. PNNL has estimated the disk space requirements for each.

### 1.4.2.1 FEMIS Server

Disk space on the FEMIS server is used for:

- Server software (such as, the RDBMS [relational database management system] and the evacuation model).
- FEMIS application.
- FEMIS server utilities (notification, database monitor, replication).
- EOC databases (including archived and historic data).
- Storage of the FEMIS COTS software and the original GIS maps.

The above items can require 15+ GB of storage to properly support FEMIS.

There are two sources of disk space associated with a FEMIS server as defined by the ***Bill of Materials (BOM) for FEMIS Version 1.5:***

1. System disk(s) resident in the Sun Server.
2. Sun SPARCstorage Array connected to the Sun Server.

As stated in the ***Bill of Materials (BOM) for FEMIS Version 1.5***, PNNL recommends that the FEMIS storage requirement be fulfilled by using arrayed storage disks (StorEdge Array, or an array-like cage system) to ensure that speed and reliability are provided to the FEMIS operational system. PNNL expects the FEMIS application to be placed in its entirety on the arrayed storage disks, which will enable the System Administrators (and PNNL) to better manage the FEMIS product and the EOC databases. PNNL expects the Sun SPARCstorage Array to be reserved solely for FEMIS use.

The system disks are not directly used by FEMIS. The disks are used for the operating system and the supporting applications. PNNL estimates that approximately 2 GB of system disk space will be used for the operating system and swap space. Additional system disk space should be used at the System Administrator's discretion.

### 1.4.2.2 FEMIS PC

Disk space on the client PC is required for the following:

- COTS software needed for FEMIS (Windows 2000 or NT 4.0, ArcView GIS, Oracle Net8, and other supporting applications).
- FEMIS application.
- Site specific GIS maps.

The amount of space required by the FEMIS application and supporting software will vary depending on the size of the GIS the user chooses to install. A FEMIS with a medium size GIS installation requires approximately 900 MB of disk space, COTS included.

### 1.4.3 Pre-installation Issues

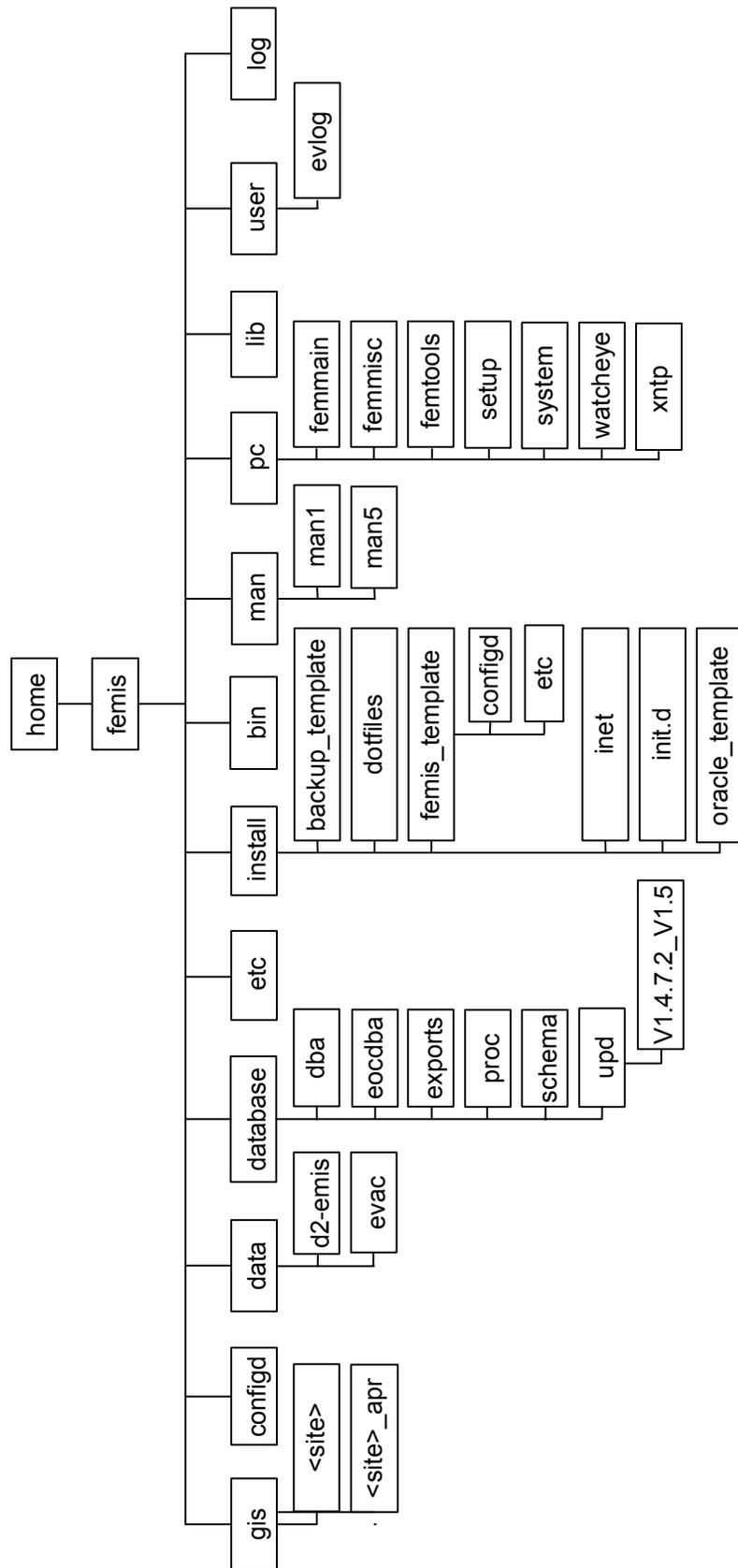
Before you proceed with the installation of FEMIS v1.5, the following are pre-installation issues that should be addressed.

- Remove obsolete data such as unneeded exercises and obsolete user accounts.
- Remove obsolete D2PC archive cases.
- Clean up any obsolete server data such as obsolete versions FEMIS packages.
- Make sure your system has been backed up.

## 1.5 FEMIS Directory Structures

The following figures illustrate the FEMIS directory structure on the UNIX server and the directory structure for an emergency management PC workstation.

## UNIX Server FEMIS Directory Structure



# Emergency Management Workstation

