Engineer's Data Model (EDM) 5000.1 Release Notes

Landmark

Contents

HALLIBURTON

Introduction

This document contains important information and last minute changes related to Engineer's Data Model (EDM) 5000.1 that are not documented elsewhere. An electronic version is included on the Landmark Software Manager and is installed with the application.

(For information regarding the Drilling products, see the *Engineer's Desktop 5000.1 Drilling Summary Level Release Notes*.)

System Requirements

Hardware Requirements

The minimum and recommended system requirements follow.

Network Clients or Standalone Systems

Recommended for Windows XP Platform	**Minimum for Windows XP Platform**
• Windows® XP Professional, SP 2	• Windows® XP Professional, SP 2
• 2 GHz processor	• 1 GHz processor
• 1 GB RAM or greater	• 512 MB RAM or greater (will work with 256 MB RAM, but 512 is preferred)
• SVGA Color Monitor	• SVGA Color Monitor
• 106-key Windows-ready integrated keyboard	• 106-key Windows-ready integrated keyboard
• MS-compatible mouse or pointing device	• MS-compatible mouse or pointing device
• TCP/IP-based network connection 100 Mbps, • or • FLEXid dongle (bitlock), FLEXnet Publisher version 11.2 (for licensing)	• TCP/IP based network connection 100 Mbps, • or • FLEXid dongle (bitlock), FLEXnet Publisher version 11.2 (for licensing)
• 3 GB or greater disk space	• 2.1GB disk space (with everything installed)
• CD-ROM drive (not required if installing from a network location)	• CD-ROM drive (not required if installing from a network location)
• For Standalone systems, should have a parallel port or USB port if dongle/bitlock license is used	• For Standalone systems, should have a parallel port or USB port if dongle/bitlock license is used

Recommended for Windows Vista Platform	**Minimum for Windows Vista Platform**
• Windows® Vista Enterprise	• Windows® Vista Enterprise
• 2 GHz processor	• 1 GHz processor
• 1 GB RAM or greater	• 512 MB RAM or greater (will work with 256 MB RAM, but 512 is preferred)
• SVGA Color Monitor	• SVGA Color Monitor
• 106-key Windows-ready integrated keyboard	• 106-key Windows-ready integrated keyboard
• MS-compatible mouse or pointing device	• MS-compatible mouse or pointing device

Recommended for Windows Vista Platform	**Minimum for Windows Vista Platform**
• TCP/IP-based network connection 100 Mbps, or	• TCP/IP based network connection 100 Mbps, or
• FLEXid dongle (bitlock), FLEXnet Publisher version 11.4 (for licensing)	• FLEXid dongle (bitlock), FLEXnet Publisher version 11.4 (for licensing)
• 3 GB or greater disk space	• 2.1GB disk space (with everything installed)
• CD-ROM drive (not required if installing from a network location)	• CD-ROM drive (not required if installing from a network location)
• For Standalone systems, should have a parallel port or USB port if dongle/bitlock license is used	• For Standalone systems, should have a parallel port or USB port if dongle/bitlock license is used

Servers

Recommended for Windows Server 2003 Platform	**Minimum for Windows Server 2003 Platform**
• Windows® 2003 Server, SP 2	• Windows® 2003 Server, SP 2
• 2 GHz processor or higher	• 1.5 GHz processor
• 2 GB RAM or greater	• 1 GB RAM or greater
• VGA Color Monitor	• VGA Color Monitor
• 106-key Windows-ready integrated keyboard	• 106-key Windows-ready integrated keyboard
• MS-compatible mouse or pointing device	• MS-compatible mouse or pointing device
• TCP/IP-based network connection 100 Mbps	• TCP/IP based network connection 10 Mbps
• 2-4 GB or better disk space	• 2 GB disk space
• CD-ROM drive (not required if installing from a network location)	• CD-ROM drive (not required if installing from a network location)

> **Note: Windows Vista servers are not supported. Only standalone Vista systems are supported.**

Citrix

The 5000.1.0 Engineer's Desktop applications have been certified in a Citrix thin-client environment. The test environment consisted of three server-class PCs:

Server 1 (Database server, SAM server)

Operating System:	• Windows Server 2003 Enterprise Edition, SP 2
Services:	• Oracle 10g (10.2.00.3) • EDM database • (SAM) Simultaneous Access Monitor (Note that the SAM server *should not* be on the same server with Citrix and the published applications)

Server 2 (Citrix and Applications)

Operating System:	• Windows Server 2003 Enterprise Edition, SP 2
Services:	• Citrix Presentation Server 4.0.1, with Citrix Hotfix PSE400WK3R01 (refer to the Citrix support page for details on this hotfix: http://support.citrix.com/kb/entry.jspa?externalID=CTX107504) • Citrix Resource Manager • Citrix License Server components

Server 3 (Citrix and Applications)

Operating System:	• Windows Server 2003 Enterprise Edition, SP 2
Services:	• Citrix Presentation Server 4.0.1, with Citrix Hotfix PSE400WK3R01 (refer to the Citrix support page for details on this hotfix: http://support.citrix.com/kb/entry.jspa?externalID=CTX107504 • Citrix Resource Manager

Citrix Servers (Tested Configuration)

- Windows® Server 2003 Enterprise Edition, SP 2

- 2 x 933 MHz Intel Pentium III processors

- 2 GB RAM

- TCP/IP-based network connection 100 Mbps (both NICs)

- 18 GB disk space

> **Note: Citrix can be configured in several different ways. Landmark has only certified the configuration outlined above.**

When Drive C: is not present on the system, Microsoft® Windows® Installer (MSI) requires you to run the installation from a command line, with a switch. The syntax is:

    setup.exe /v"DIRPROPERTY5=[DRIVE]:\\"

where [DRIVE] denotes the destination drive letter.

For example, if your drive is M:

    setup.exe /v"DIRPROPERTY5=M:\\"

For more details on Citrix installations, refer to the *EDT Citrix Guide* (EDT_Citrix.pdf).

The following table lists ODBC Drivers and their corresponding version numbers used by Landmark during testing of the Engineer's Desktop 5000.1 release. This table describes which ODBC drivers that our test labs have certified and the drivers Landmark supports for use with EDM applications.

ODBS Driver Name	Version	Supported
Microsoft SQL Server 2005 and SQL Server 2005 Express	Depends on the operating system: • Windows XP: 2000.85.1117.00 • Windows 2003 Server: 2000.86.3959.00 • Windows Vista: 6.00.6000.16386	Supported (replaces MSDE, which is no longer supported)
Microsoft SQL Native Client Driver (same on all versions of SQL Server)	2005.90.3042.00	Supported
Oracle 10g ODBC Driver	10.02.00.03	Supported

Note: Oracle 9i, Microsoft MSDE, Microsoft SQL Server 2000, Windows 2000 are not supported for the 5000.1 release.

Configuration Combinations For Engineer's Desktop, DecisionSpace, and OpenWorks

	Applications			
	Engineer's Desktop 5000.1.0 on Oracle 10g	**DecisionSpace 5000.0.0 on Oracle 10g**	**Engineer's Desktop 5000.0.0 on SQL Server 2005 Express**	**DecisionSpace 5000.0.0/ OpenWorks 5000.0.0 on Oracle 10g**
Windows Vista Enterprise	yes	yes	yes	yes
Windows XP Professional	yes	yes	yes	yes
Windows 2003 Server	yes	untested	yes	untested

(Leftmost spanning column label, rotated: Operating System)

Third-Party Applications

Several third-party applications must be installed prior to installing EDM or the Drilling & Completions applications. Failure to install these applications prior to running the EDM Database and applications will cause problems when using the database, applications, and tools.

The third-party installation is available in the Engineer's Desktop EDM download. To run the installation, navigate to <Installdir>\ThirdParty, then double-click **Setup.exe** and follow the prompts.

Once the third-party install has completed, a reboot *is necessary* to launch the installation of Microsoft Visual J# .NET Redistribution Package 2.0. This tool *is necessary* to run EDM Publishing Service and Report Manager. Click **Yes** to install Microsoft Visual J# .NET Redistribution Package 2.0 and follows the prompts.

The major third-party applications are discussed below.

Microsoft Data Access Components 2.8 (MDAC)

MDAC supplies the database drivers that are certified for use with the Engineer's Desktop. Landmark does not support the use of any other driver versions.

Crystal Reports 11.5

Crystal Reports 11.5 is the runtime component that is used by the Engineer's Desktop Output Reporting engine. This component is required by OpenWells, PROFILE, WELLPLAN, COMPASS, Well Cost, EDM Publishing Service, and iWellFile.

Microsoft .NET Framework 2.0

The .NET Framework provides an execution environment for various Engineer's Desktop applications and services (e.g., EDM Services Controller, EDM Publishing Service, and each of the EDM Services).

Landmark LAM 5000

Landmark's License Application Manager (LAM) is based on Macrovision's FLEXnet Publisher licensing server package. LAM installation files are included in the third-party installation. Information on installing LAM is located in the *LAM 5000.0.0 Guide—UNIX and Windows* manual. This manual is included with the Release 5000.1 download.

Release 5000.1 requires LAM 11.4. LAM 11.4 server and license files incorporate new security enhancements used by Release 5000.1. As a result, Release 5000.1 applications will not work on earlier LAM versions.

IMPORTANT! The 5000 LAM will not co-exist on the same machine as earlier versions of LAM. You must uninstall any previous LAM versions before installing 5000.1.

If you are using a FLEXnet Publisher 5000.0.0 dongle (bitlock), you must install LAM 11.4 on the standalone/client machine.

Bitlocks and OpenWorks

Bitlocks are not supported by OpenWorks. Clients who want to connect to OpenWorks must use regular network licenses, and not USB bitlocks.

Therefore, clients using OpenWire, EDM to OpenWorks, and COMPASS Live Link must use Network licences.

New starting in the 5000.1 release is the Mobile Checkout feature, which allows you to "borrow" a license for use at remote sites, on the road, etc., for a specified period of time. Refer to the LAM Guide for details.

Microsoft Visual J# .NET Redistribution Package 2.0

The Visual J# .NET Redistribution Package is used to run Visual J# .NET applications. Without this package, EDM Publishing Service fails to run properly.

Complete List of Third-Party Software For Release 5000.1

Landmark uses various third-party applications in the development of its software.

Landmark acknowledges that certain third-party code has been bundled with, or embedded in, Landmark's software. The licensors of this third-party code, and the terms and conditions of their respective licenses, may be found at the following location:

[Installdir]\Documentation\Third_Party.pdf

The following table describes the third-party applications that are installed by Release 5000.1.0.

Table 3: Products that are Embedded in or Installed by Release 5000.1.0

Installed Product/Package	Windows® Vista	Windows® XP Professional and Microsoft ® Windows Server 2003
Apache/XML Xerces	1.4.x	1.4.x
Blue Marble Geographic Calculator	6.3	6.3
Commons BeanUtils	1.4.1	1.4.1
Commons Collections	2.0	2.0
Commons Logging	1.0.2	1.0.2
ComponentOne LLC Chart™	7.0	7.0
Crystal Reports™ (note that one Crystal Reports™ Developer license per site is required to customize reports)	11.5	11.5
Decisioneering®, Inc. Crystal Ball®	Crystal Ball® 2000 Standard	Crystal Ball® 2000 Standard
DEX	2003.14.3.70	2003.14.3.70
FarPoint Technologies Inc., Spread	7.0	7.0
Hewlett-Packard Development Company, L.P., Compaq Visual Fortran	6.1a; 6,5 (ARIES only)	6.1a; 6.5 (ARIES only)
Infragistics Corp., Active Threed™ Plus	3.0.1.10	3.0.1.10
Infragistics Corp., Active Toolbars™	1.0.0.35	1.0.0.35
Infragistics Corp., Active ListBar™	1.0.0.24	1.0.0.24
Infragistics Corp., Active TreeView™	1.0.2.8	1.0.2.8
Infragistics Corp., Calendar Widgets™	1.1	1.1
Infragistics Corp., NetAdvantage™	2004, Vol. 3	2004, Vol. 3
INT	3.4	3.4

Table 3: Products that are Embedded in or Installed by Release 5000.1.0

Installed Product/Package	Windows® Vista	Windows® XP Professional and Microsoft ® Windows Server 2003
Macrovision™ Corporation FLEXnet Publisher™	11.4	11.4
Macrovision™ InstallShield Admin Studio™	6.0	6.0
Microsoft® Data Access Components (MDAC)	2.8 SP1	2.8 SP1
Microsoft® J# FrameWork	1.1	1.1
Microsoft® SQL Server 2005 Express Edition (replaces MSDE)	SP2	SP2
Microsoft® .NET Framework 2.0	2.0	2.0
PaTENT MPI Dev Kit	4.0.15	4.0.15
PaTENT MPI Runtime	4.0.15	4.0.15
Rawtech List Collection – LC3	3.0	3.0
Rogue Wave	6.0.4	6.0.4
Rogue Wave™ Software, Inc., Stingray Studio – Objective Grid PRO	8.11	8.11
Rogue Wave™ Software, Inc., Stingray Studio – Objective Grid Standard	8.03	8.03
Rogue Wave™ Software, Inc., Stingray Studio – Objective Toolkit Standard	8.03	8.03
SCGrid.com, SCGrid Active X grid Control	4.5.0.3	4.5.0.3
SDI	5.3	----
Silicon Graphics®, Inc. OpenGL®	1.2	1.2
Softel vdm, Inc., Sft Tree/DLL	4.5	4.5
sysFire LLC, GreenLeaf Software ArchiveLib™	2.13	2.13
TCL Library (Tclib)	8.2.3	8.2.3

The following table describes *prerequisite* applications (these are not included in the release 5000.1.0 installation). Some are required for all features, such as operating system, Adobe Acrobat, Microsoft® Internet Explorer, and some are required only for certain applications or to enable specific features.

Table 4: Prerequisite Products (not installed by Release 5000.1.0)

Prerequisite Product/Package	Required for All	Windows® Vista	Windows® XP Professional and Microsoft ® Windows Server 2003
Certified operating system	yes	Windows® Vista Enterprise	Windows® XP Professional, SP 2; Windows® 2003 Server, SP2
Adobe® Systems Inc., Adobe® Reader®	yes	7.0.9 or later	7.0.9 or later
Adobe® Systems Inc., Adobe® Acrobat®		7.0 (TOW/cs only)	7.0 (TOW/cs only)
Hummingbird® Ltd., Exceed®/Exceed 3D		7.0 (VIP™ Desktop 2003) 7.1 (VIP™ Desktop 2003)	----
Microsoft® Internet Explorer	yes	7.0	7.0
Microsoft® Office 2003		SP1	SP1
Microsoft® Office 2000 (Microsoft Access®, Microsoft® Excel)		SP2	SP1
Microsoft® XP Professional (Microsoft Access®, Microsoft® Excel)		----	SP2
Microsoft® SQL Server 2005		SP2	SP2
MKS Inc., NuTCRACKER®™		4.2a	4.2a
Oracle Corporation, ORACLE® Client		10g	10g
Oracle Corporation, ORACLE® Server		10g	10g
Sun Microsystems™ Inc., Java ™ 2 Runtime Environment, Standard Edition		1.6.1	1.6.1

Space Requirements for Individual Applications and Tools

The table below shows the minimum disk space requirements for various installation combinations (this includes space needed for Installation temporary files):

Applications	Approximate Disk Space Needed to Install
Engineer's Data Model (EDM) • Administration Utility (required) • SQL Server Utility (required) • Drilling Data Migration • Database Upgrade Utilities	780 MB (Required support files are copied into the Windows installation directory. The installation of EDM and SQL Server 2005 support and temporary installation files requires 400 MB of disk space)
Drilling & Completions: Engineering • COMPASS • CasingSeat • StressCheck • Well Cost • WELLPLAN	280 MB
Drilling & Completions: Well Data Management • OpenWells • PROFILE • Data Analyzer • Real-Time View	250 MB
TOTAL: Everything	~2.0 GB

Screen Resolutions/Video

Recommended	Minimum
• 1024 x 768 or higher	• 1024 x 768

If you experience display problems when running PROFILE, PROFILE Symbol Manager, or graphs in WELLPLAN Critical Speed module, upgrade your video driver to the latest version.

When using PROFILE, the following are required:

- For the 1D and 2D schematics, any NVIDIA or ATI card from the past two years is recommended (e.g., NVIDIA GeForce 3, NVIDIA Quadro FX Go700, or ATI Radeon 7500 onwards).

- For full 3D visualization, the latest graphic card from NVIDIA or ATI would be recommended along with 1.5Ghz+ processor with the above specification for the 1D or 2D as the minimum.

Miscellaneous

- Applications require you to install a current Landmark LAM or a FLEXnet Publisher dongle (bitlock) for licensing purposes. Landmark does not distribute FLEX dongle bitlocks for use on application servers.

- Applications require Microsoft Data Access Components (MDAC) version 2.8 or higher. The Setup Program automatically installs MDAC 2.8, if necessary.

- Windows XP and Vista users must install all Critical and Recommended Windows Updates.

- Drilling and Completions Oracle users must use Oracle 10g. Oracle 9i is no longer supported.

- You need Internet Explorer 7.0 for a successful installation.

EDM Installshield and Microsoft SQL Server 2005 Express Install Requirements

The Engineer's Desktop installation always copies required support files into the Windows installation directory. This is in addition to disk space required for the EDM program files, which go into a separate directory. The installation of EDM and Microsoft SQL Server 2005 Express support files requires approximately 30 MB of disk space for files, as well as an additional 50 MB for temporary files created by the installation.

Microsoft SQL Server Express 2005 Install Behavior with SQL Server 2005 Client/ SQL Server 2005

Microsoft SQL Server Express 2005 (Microsoft's replacement for MSDE) is the standalone database provided with the Engineer's Desktop 5000.1 release. Microsoft SQL Server Express 2005 is a technology that provides local data storage that is compatible with Microsoft SQL Server 2005. It is designed and optimized for use on smaller computer systems, including a single-user computer or small workgroup server.

Microsoft SQL Server Express 2005 installation issues impacting PCs with SQL Server installed are listed in "Microsoft SQL Server Express 2005 Installation Issues" in the *EDM Installation Guide*.

Upgrading the EDM Database

This installation is NOT an upgrade from a previous version of the Engineer's Data Model. The EDM Installation is meant for new users of the Engineer's Data Model. If you are currently using a pre-2003.14 version of the EDM database, you must upgrade your EDM database to at least 2003.14 prior to running the Multi-Version Database Upgrade Utility (EDMPatchDB.exe) to upgrade to the 5000.1 release.

Note that once the EDM database has been upgraded to 5000.1, you will no longer be able to access it using the earlier applications. Consequently, if you intend to run both older and 5000.1 applications, you should make a copy of your older database and upgrade the copy to 5000.1. This leaves your older database accessible by the older applications.

For information on upgrading the Engineer's Data Model, or migrating data to the 5000.1.0 version of EDM, refer to *Planning the EDT Installation* (EDT_PlanningInstall.pdf), and the *EDM Drilling Database Guide* (EDM_Drilling_Database.pdf).

Installing With Previous Versions

EDT 5000.1 can co-exist with previous versions of EDT on the same machine. However, LAM 5000 *will not* co-exist with previous versions of LAM on the same machine. Previous versions of LAM *must be uninstalled* before you install the 5000.1 release.

To run EDT 5000.1 and a previous version of the EDT applications on the same machine, you must point one or both versions of EDT to a LAM server located on a remote machine, since only one version of LAM can run locally. Make sure that you uninstall any 2003 or older versions of LAM before installing the 5000.1 release.

Before you can upgrade your existing EDM version, the database must first be upgraded to at least 2003.14.

Microsoft Security Warnings When Installing

A security warning may appear when installing software, due to security restrictions imposed by recent Microsoft security updates:

   "Security Warning: Do you want to run this software?"

If you encounter this message, click **Run** to proceed with the EDM installation.

Install Is Now Fully Compliant with Microsoft® Windows® Installer

The installation is now fully compliant with Microsoft® Windows® Installer (MSI). Windows Installer enables better corporate deployment, and provides a standard format for component management.

Online Help Viewing Problems Due To Microsoft Security Updates

Some Microsoft security updates cause problems for the following online Help files:

- WebHelp, which is comprised of uncompiled HTML files (Windows XP SP 2 and Windows Vista)

- HTMLHelp (.chm) files accessed from a server machine (all platforms).

    These issues are discussed in detail below.

Windows XP SP2 and Windows Vista Default Security Settings Block Some Online Help (WebHelp)

Windows XP SP2 and Windows Vista include improvements to Internet Explorer security that are intended to help most users by stopping local web pages that contain "active content" from accessing your computer maliciously. "Active content" includes Java Script, Java applets, and ActiveX controls. Even very innocuous Java Script such as that found in online help is deemed by Microsoft to be active content, and will trigger this security setting. OpenWells and EDM Administration Utility use WebHelp files of this type.

When you try to open the help file in either of these two applications, Internet Explorer displays a light-yellow information bar, warning you that it is blocking active content. (Note that this behavior only occurs in Internet Explorer, *not* in other browsers, such as NetScape or Mozilla). The following graphic illustrates the behavior.

Internet Explorer pops up this information bar and blocks the content.

Temporary Solution

To view the help file, click the bar and select **Allow Blocked Content** from the drop-down menu. A warning dialog appears. Click **Yes**. Now you are able to view the help page. This occurs each time you access the help.

Permanent Solution

You may choose to permanently allow Internet Explorer to view Active Content on local files. This prevents the warning from appearing again. The permanent solution is to turn off the security check for active content in the Internet Explorer.

To turn off the active content security check in the Internet Explorer for the local machine:

1. From the Tools menu in Internet Explorer, select Internet Options.

2. Navigate to the Advanced tab in the Internet Options dialog and scroll down to the Security section.

3. Enable the checkbox labeled "Allow active content to run in files on My Compute.r"

Please note that this may allow malicious active content in files on your local computer to cause problems, so you should only do this if you feel confident in your computer's security measures.

Cannot Open Help Files Located On A Server After You Install Security Update 896358 Or Security Update 840315

For Windows XP and Windows Server 2003, installing recent Microsoft security updates (896354 and 840315) mean that .chm files (HTMLHelp) may not display correctly under some circumstances. The problems do not occur if the help files are on a local drive (rather than a mapped drive).

After installing these Microsoft security updates on a server machine—where .chms (HTML Help files) are stored for viewing and downloading— opening a .chm file sitting on that server, causes an "Action Cancelled" error on the .Help file's viewer frame. The TOC and Index display normally. No matter which topic you try to view using the TOC or Index, an "Unable to open this web page" message appears in the .Help file's viewer frame. This problem does not occur if the help files are on a local drive (rather than a server or mapped drive).

The reason for this is that the Microsoft security updates disable all Internet Security zones except the Local Machine zone.

If the help files reside on a server or mapped drive, you can apply the fixes suggested in one or more of the following Microsoft knowledgebase articles in to access the help:

- KB902225 if the help file does not open at all
  (http://support.microsoft.com/kb/902225)

- KB896054 if the help file opens, and displays the index but no contents
  (http://support.microsoft.com/kb/896054)

IMPORTANT! The Microsoft Knowledge Base fixes (KB896054 and KB902225) require adjusting the registry on the server machine.

Be aware that you cannot solve this problem by adjusting the Security Zones feature in Internet Options in Internet Explorer. It MUST be done via the server's registry. There is no other workaround other than moving the Help files to the local machine.

International Trade Compliance

This application is manufactured or designed using U.S. origin technology and is therefore subject to the export control laws of the United States. Any use or further disposition of such items is subject to U.S. law. Exports from the United States and any re-export thereafter may require a formal export license authorization from the government. If there are doubts about the requirements of the applicable law, it is recommended that the buyer obtain qualified legal advice. These items cannot be used in the design, production, use, or storage of chemical, biological, or nuclear weapons, or missiles of any kind.

The ECCN's provided in Release Notes represent Landmark Graphics' opinion of the correct classification for the product today (based on the original software and/or original hardware). Classifications are subject to change. If you have any questions or need assistance please contact us at **FHOUEXP@halliburton.com**
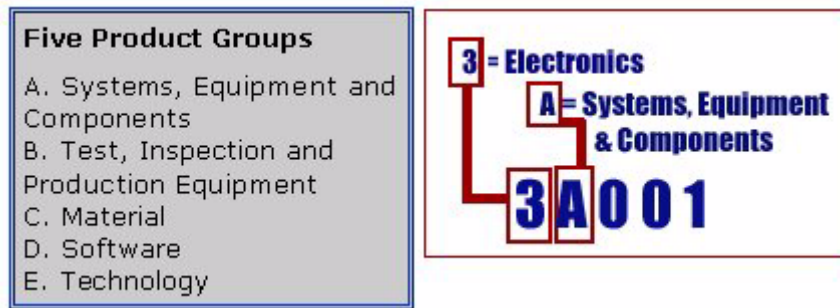
Under the U.S. Export Administration Regulations (EAR), the U.S. Government assigns your organization or client, as exporter/importer of record, responsibility for determining the correct authorization for the item at the time of export/import. Restrictions may apply to shipments based on the products, the customer, or the country of destination, and an export license may be required by the Department of Commerce prior to shipment. The U.S. Bureau of Industry and Security provides a website to assist you with determining the need for a license and with information regarding where to obtain help.

The URL is: **http://www.bis.doc.gov**

Definitions

CCATS (Commodity Classification Automated Tracking System) - the tracking number assigned by the U.S. Bureau of Industry and Security (BIS) to products formally reviewed and classified by the government. The CCATS provides information concerning export/re-export authorizations, available exceptions, and conditions.

ECCN (Export Control Classification Number) -The ECCN is an alpha-numeric code, e.g., 3A001, that describes a particular item or type of item, and shows the controls placed on that item. The CCL (Commerce Control List) is divided into ten broad categories, and each category is further subdivided into five product groups. The CCL is available on the **EAR Website**.

The ECCN Number, License Type, and the CCATS Numbers for this product are included in the table below. Also included is the date the table was last updated.

Product/Component/R5000	ECCN Number	License	CCATS Number	Last Date Updated
Engineer's Data Model (EDM)	5D002	ENC	G060075	2/11/2008
Engineer's Data Model Software Development Kit (EDM SDK)	5D002	ENC	G060075	2/11/2008

Before You Install

> **ATTENTION: For the 5000.1 release, the installation has been broken up into three separate installs, which should be run in this order:**
>
> • Third-party components
>
> • EDM
>
> • Drilling and Completions applications
>
> Uninstall versions of LAM older than 5000.0.0 before you begin. Then run the Third-party Components install. When it completes, run the EDM install. After it completes, install Drilling and Completions applications.
>
> For an outline of various installation scenarios, see *Planning the EDT Installation* (EDT_PlanningInstall.pdf). For complete installation details, see the following online guides, which can be found in the same folder:
>
> *EDM Installation Guide* (EDM_Install.pdf), and *EDT Drilling Installation Guide* (EDT_Drilling_Install.pdf).
>
> For quick and easy instructions, refer to "Quick Start—The Installation Process in a Nutshell" in the *Planning the EDT Installation* guide.

Before installing Engineer's Desktop 5000.1, review these release notes *entirely.* The release notes provide you with necessary information about:

• the applications in Engineer's Desktop 5000.1

• the hardware and operating systems on which you can run Engineer's Desktop 5000.1

• product dependencies

These release notes do *not* note all of the new features or known problems for individual products. For this information, consult the release notes of the individual products that you use.

Installation Checklist

The applications found in Engineer's Desktop 5000.1 require a certain order of installation. The following checklist outlines the phases of the installation process.

Co-existing Versions:

EDT 5000.1can co-exist with previous versions of EDT on the same machine. However, LAM 5000 **will not** co-exist with previous versions of LAM on the same machine. Versions of LAM older than 5000 must be uninstalled if you intend to run LAM 5000 locally.

To run EDT 5000.1 and a previous version of the EDT applications on the same machine, you must point one or both versions of EDT to a LAM server located on a remote machine, since only one version of LAM can run locally.

---

1. Once the database has been upgraded to 5000.1, you will no longer be able to access it using the 2003.21 EDT applications. Consequently, if you want to be able to run both the 2003.21 and 5000.1 applications, make a copy of your 2003.21 database and upgrade the copy to 5000.1. (Note that you will have to point either your 2003.21 applications or your 5000.1 applications to the appropriate LAM server on a different machine.)

2. Upgrade the Operating System, if necessary. For Windows XP, SP2 must be installed for use with FLEXnet Publisher LAM Client/Server. For Windows Vista, no Service Pack is needed. For Windows 2003 Server, SP2 must be installed.

3. Install Oracle client. For Oracle 10g, you need the 10.02.00.03 version.

4. Before installing products you must have Adobe Acrobat Reader (you can download the latest Reader from Adobe's website: http://www.adobe.com/products/acrobat/readstep2.html.) to read the available documentation.

5. Uninstall versions of LAM older than 5000 (using Add/Remove Programs in the Control Panel)

6. Run the Third-Party Components install to ensure that you have required third-party components, such as .NET 2.0, etc. You are asked to install LAM (License Applications Manager) 5000—either Utility (client) or Server—during the Third-Party Components installation.

7. Install EDM.

8. Install desired individual Drilling & Completions products.

9. Obtain product licenses. See the *LAM Guide—Linux, Solaris, and Windows* (LAM.pdf), downloadable from the Tools branch of the Landmark Software Manager, for details.

10. Upgrade existing EDM databases to 5000.1. See the *EDM Drilling Database Guide (*EDM_Drilling_Database.pdf*)* for details.

11. If you don't have an existing EDM database and want to create one on Oracle, see the *EDM Drilling Database Guide (*EDM_Drilling_Database.pdf*)* for details.

12. You need to upgrade existing databases to 5000.1.

   • **Automatic Upgrade**—New for this release, the Multi-Version Database Upgrade Utility will upgrade your database automatically. The utility can upgrade your database from 2003.14 or higher to 5000.1.

   > **IMPORTANT: If you have *ever* upgraded from a 2003.11 *Oracle* database...**
   >
   > then you cannot run the upgrade utility to upgrade to 5000.1 (due to a significant 2003.14 tablespace definitions change). In this case, refer to the *EDM Drilling Database Guide* for details.

   • **Manual Upgrade**—If you prefer to do the upgrades manually, you must migrate any existing pre-2003.11 databases to 2003.11; then upgrade sequentially from 2003.11 to 2003.14 to 2003.16 to 2003.21 to 5000.1. The version of EDM you are currently on determines the upgrade path you must take. Refer to the *EDM Drilling Database Guide* for details.

Before attempting to run PROFILE, if you will be exporting PROFILE WallPlot Composer schematics to JPG file format, Windows color depth should be adjusted to a resolution higher than 256-bit.

Official 5000.1.0.0 Database Version

The official 5000.1.0.0 release database version is 09.00.00.085.

Microsoft SQL Server 2005 Express Install Behavior with SQL Server 2005 Client/SQL Server 2005

Microsoft SQL Server 2005 Express is the standalone database provided with the Engineer's Desktop 5000.1.0 release, replacing MSDE. Microsoft SQL Server 2005 Express provides local data storage compatible with Microsoft SQL Server 2005. It is designed and optimized for use on smaller computer systems, such as a single-user computer or a very small workgroup server (five users or less).

Microsoft's utility for installing Microsoft SQL Server 2005 Express is included within the Landmark Engineer's Desktop 5000.1 installation program. The behavior of the Microsoft SQL Server 2005 Express install on a PC is different if the PC already has Microsoft SQL Server 2005 Client installed or SQL Server 2005 itself. Landmark has no control over this Microsoft SQL Server 2005 Express install behavior, as these are Microsoft's own installation tools. Complete documentation of this behavior and recommended installation procedures are provided in the installation guide. These instructions enable a client to successfully install Engineer's Desktop and Microsoft SQL Server 2005 Express without affecting existing SQL Server 2005 Client applications. It is important that clients using Microsoft SQL Server 2005 Client or SQL Server 2005 review the installation instructions thoroughly before attempting to install Engineer's Desktop 5000.1.

Contents of the Engineer's Desktop 5000.1.0 Release Download

Engineer's Desktop 5000.1 download contains:

- Third-Party Components software

- Engineer's Data Model (EDM) software

- Drilling & Completions software

- A .ZIP file containing pertinent Engineer's Desktop documentation (PDFs)

The Engineer's Desktop 5000.1 release includes the following applications and tools:

Acrobat Reader

Acrobat Reader is needed to view the release notes and other documentation in .PDF format. If you already have version 7.0.9 or later of the Reader installed, you do not need to re-install it. You can download the latest Reader from Adobe's website: http://www.adobe.com/products/acrobat/readstep2.html.

EDM 5000.1.0 Release Notes

(This document). The EDM 5000.1 Release Notes contains important information about EDM that is not documented elsewhere.

Installation

The Engineer's Desktop software is delivered via Electronic Delivery System using the Landmark Software Manager tool. You can install all of the Engineer's Desktop Drilling applications and third-party components using the three EDT installation programs:

• Third-Party Components Installation

• EDM Installation

• Drilling & Completions Installation

For an overview of various installing scenarios, please refer to *Planning the EDT Installation* (EDT_PlanningInstall.pdf), which is located in the EDT_Documentation.zip file provided with the Drilling & Completions download. See also these specific installation guides:

• EDT_ThirdParty_Install.pdf (*EDT Third-Party Components Installation Guide*)

• EDM_Install.pdf (*EDM Installation Guide*)

• EDT_Drilling_Install.pdf (*EDT Drilling Installation Guide*)

To get going quickly, refer to "Quick Start—The Installation Process in a Nutshell" in the *Planning the EDT Installation* guide.

Troubleshooting the Installation

Remember to reboot your computer before attempting to use the Engineer's Desktop. If you run into problems, please refer to the "Installation Troubleshooting" section of the *EDM Installation Guide* or the *EDT Drilling Installation Guide*.

IMPORTANT:

• EDT 5000.1 is a new product. If you are currently using an EDM database version that is 2003.14 - 5000.0.0, you must install 5000.1, then upgrade your database using the new Multi-Version Database Upgrade Utility (EDMPatchDB.exe).

• EDT 5000.1 can co-exist with previous versions of EDT on the same machine. However, LAM 5000 **will not** co-exist with previous versions of LAM (FLEXlm license server) on the same machine. Previous versions of LAM **must be uninstalled** before you install the 5000.1 release. To run EDT 5000.1 and a previous version of the EDT applications on the same machine, you must point one or both versions of EDT to a LAM server located on a remote machine, since only one LAM server can run locally.

Refer to the 'Installation' section of the *Engineer's Desktop 5000.1 Drilling Summary Level Release Notes* or *EDM Drilling Database Guide* for details.

Site Configuration File Import Required Post-Install

Site configuration files are installed in the file system for speed, and also stored in the database for portability. Site configuration files include printed reports and various files required for EDM configuration.

If you are upgrading from a previous version of the database, Oracle and Microsoft SQL Server 2005 Express (replacement for MSDE) users will have the latest configuration files imported automatically.

For new installations:

- Oracle users must import site configuration files after building a new database. Site configuration files are imported using the EDM Administration Utility (refer to the "Import Site Config" section in the *EDM Drilling Database Guide*).

- Microsoft SQL Server 2005 Express users who install the reference SQL Server 2005 Express database will also need to import site configuration files after installing, to overwrite a few files with their latest versions (refer to the "Import Site Config" section in the *EDM Drilling Database Guide* as indicated above.)

Licensing

Landmark's Application Manager (LAM) is the license system used to control access to Landmark applications. LAM is based on Macrovision's FLEXnet Publisher. A new LAM version is required for the 5000.1 release. You cannot have both Release 2003 and Release 5000.x license files running on the same machine.

> **IMPORTANT! If you have a 2003 version of LAM, YOU MUST UNINSTALL IT before installing LAM 5000.**
>
> Failure to uninstall all previous versions of LAM before installing LAM 5000 will result in a duplicate FLEXnet Publisher service that replicates itself until it crashes Windows.
>
> The procedures for uninstalling LAM are detailed in the section "LAM Uninstall" in the LAM Guide—Linux, Solaris, and Windows (LAM.pdf).
>
> To run EDT 5000.1 and a previous version of the EDT applications on the same machine, you must point one or both versions of EDT to a LAM server located on a remote machine, since only one version of LAM can run locally.

FLEXnet Publisher licensing is available for networked application and standalone application use. FLEXnet Publisher standalone licensing may be used in conjunction with a network card or through a FLEXnet Publisher dongle (bitlock) where no PC network identification is possible.

Netsecure, Sentinel bitlocks and Crypkey have been discontinued by Landmark and are not supported by Release 5000.1 products.

LAM 5000.1 for Windows now includes a utility called Mobile Checkout, which allows you to "Borrow" (temporarily check out) a network license to use when a computer, such as a laptop, is disconnected from the network. Performing a Borrow writes encrypted information on your laptop which preserves a mobile license for the user when disconnected from the network. The license can then be used on an individual computer for a time specified when the user checks out the license. The license is returned to the server licenses when either the user uses the early return procedure or the specified time limit is reached. When a license is checked out the number of available licenses on the server is reduced by one. All Drilling applications except OpenWire can utilize the "Borrow" feature in the Mobile Checkout utility. For more information, refer to the *LAM Guide— Linux, Solaris, and Windows*.

For the Engineer's Desktop applications to run, EDM 5000.1 applications require that an "EDM" license feature is available from the customer's licensing server. The EDM license is handled as a Group Checkout for each application user on a particular PC. Only one EDM license is checked out for all Engineer's Desktop applications run by a user on a single machine. Therefore, clients will need to acquire a set of EDM licenses based on their expected concurrent user level. Please contact your local Landmark representative for EDM licensing.

You must obtain new licenses for all Release 5000.1 products.

To re-license, customers must contact their local Landmark representative. Refer to the *LAM Guide—Linux, Solaris, and Windows* (LAM.pdf) for details. (Remember to uninstall previous versions of LAM before installing the 5000.1 release.)

Licensing Drilling & Completions applications via TSORDERS

When licensing Landmark applications via the Halliburton "Halworld" site, TSORDERS, it is important to ensure that when the Drilling Applications option is chosen from the Drilling section, the EDM option is also chosen from the IMI section. This is because the Drilling Applications option does not include an EDM licence and thus none of the newly licensed applications will work when you try to run them unless an EDM licence has previously been added to the license file.

Basics of Installing a License File

You can install LAM on either a client machine, or install LAM as a license server. Refer to the *LAM Guide—Linux, Solaris, and Windows* (LAM.pdf) for complete details, but the basics are outlined below.

LAM Client

1. When you are installing Engineer's Desktop, select **Utility** (client) when prompted for the type of LAM install. Continue installing Engineer's Desktop. The install embeds the client executables for LAM on the machine.

2. Obtain a license file from Landmark. By default the license should be named *License.dat*.

3. Place the license in a directory pointed to by the environment variable LM_LICENSE_FILE.

4. Test the operation of the client by starting one of the Drilling applications. If a license checkout error occurs, run *lmdiag* to help diagnose the problem.

5. Client LAM is now set up.

LAM Server

1. When you are installing Engineer's Desktop, select **Server** when prompted for the type of LAM install. Continue installing Engineer's Desktop. The install embeds the server executables for LAM on the machine.

2. Obtain a license file from Landmark. By default the license should be named *License.dat*.

3. Place the license in a directory pointed to by the environment variable LM_LICENSE_FILE.

    Note: When using this environment variable to point to LAM servers on different machines, make sure that the 2003 LAM server is listed first.)

4. Test the operation of the client by starting one of the Drilling applications on a client machine. If a license checkout error occurs, run *lmdiag* to help diagnose the problem.

5. LAM Server is now set up.

Bitlock Licensing

IMPORTANT! If you are using a FLEXnet Publisher 5000 dongle (bitlock), you must install 5000 LAM (FLEXnet Publisher 11.4) on the standalone/client machine.

Install Bitlock Licensing on Windows XP, Windows 2003 Server, or Windows Vista

To install FLEXnet Publisher 11.4 for USB bitlocks on Windows Vista:

1. Insert the USB bitlock dongle into a USB port on your system.

2. Go to your installed **\LAM\FLEXID** folder, and run **FLEXId_Dongle_Driver_Installer.exe** to install the bitlock driver.

3. In the *Welcome to the InstallShield Wizard for Macrovision FLEXid Drivers* screen, click **Next**.

4. In the *Select Features* screen, select **FLEXid 6/7, 8, and 9** (all 3) and click **Next**.

5. In the *Ready to Install the Program* screen, click **Install**.

6. In the *InstallShield Wizard Complete* screen, click **Yes** to restart your computer, then click **Finish**.

7. To request a bitlock license, make sure your USB bitlock dongle is inserted into a USB port on your system, and run **Start > Programs > LAM 5000 >lmtools**. Select **System Settings** tab; provide the value you see in the **FLEXID** field.

Integrated Workflows

There has been no change to the Integrated EDM Workflows from the 5000.1 release. You can view the workflows by selecting **Start > Landmark Engineer's Desktop 5000.1 > Integrated EDM Workflows**.

Database Upgrade (SQL Server 2005, SQL Server 2005 Express, and Oracle)

Refer to the "Upgrading the Database" section of the *Engineer's Desktop 5000.1 Drilling Summary Level Release Notes* for information on upgrading your EDM database to the 5000.1 version.

> **You must upgrade your existing EDM database(s) BEFORE using the 5000.1 Applications**
>
> You must upgrade versions of your database(s) created with earlier versions of the software before running the 5000.1 applications.

Enhancements and New Functionality

The 5000.1 release of EDM supports Microsoft Vista, has new LAM (FLEXnet Publisher) licensing, and contains some critical bug fixes.

Other enhancements include the following.

- Ongoing maintenance and support issues

- Data model changes

- Ability to import/export supported WITSML 1.3.1 objects

- Password Expiration: Administrator can set expiration on user password, forcing the user to change their passwords at regular intervals.

- Added EDM Security > Users node > Sort Users right-click menu command to the EDM Administration Utility. EDM Administrators can now sort users by User Name or Full Name.

- Multi-Version Database Upgrade Utility (EDMPatchDB.exe), allows you to upgrade from a 2003.14 or higher EDM database to a 5000.1 database

SQL Server Utility

The SQL Server Utility supports SQL Server 2005 Express installation. (SQL Server 2005 Express replaces MSDE.)

EDM To OpenWorks Link

EDM-OpenWorks Link is a tool that enables you to map wells in the selected EDM database to projects in the selected OpenWorks database. This association between databases is called "mapping". For the EDT 5000.1 release, EDM to OpenWorks Link supports OpenWorks version 5000.0.1.

EDM Data Model Changes for Release 5000.1

Several changes have been made in the EDM tables for the 5000.1 release. The following is a list of the types of changes.

- New tables and views
- New columns added to existing tables or views
- Columns with new max length
- Columns with new data types
- Columns with new nullable attributes

New Tables and Views

Table or View	Table or View Name
View	EDMOCV_CASING_COMP_TYPE
View	EDMOCV_CASING_GRADE
View	EDMOCV_COILED_TUBING_GRADE
View	EDMOCV_DRILL_COLLAR_GRADE
Table	MD_SYS_BENGAL_EDM_MAP
Table	MD_SYS_BENGAL_EDM_SUPP_MAP
Table	MD_SYS_BENGAL_EDM_Table_MAP
Table	VC_ALLOCATION_ERROR

New Columns Added to Existing Tables or Views

The following columns were added to existing tables or views.

Table or View	Table or View Name	Column Name
Table	CD_MATERIAL	specific_heat_capacity
Table	DM_RUSHMORE_SUBMISSION	submission_type
Table	DM_RUSHMORE_SUBMISSION	submission_version
View	TU_CUSTOM_LOAD_PR	load_id
Table	TU_CUSTOM_LOAD_PROFILE_T	load_id
Table	VC_DAILY_COMPR	VOL_ORIGIN
Table	VC_DAILY_ENGINE	VOL_ORIGIN
Table	VC_DAILY_GEN	VOL_ORIGIN
Table	VC_FLUID_LEVELS	user_a1
Table	VC_FLUID_LEVELS	user_a2
Table	VC_FLUID_LEVELS	user_n1
Table	VC_FLUID_LEVELS	user_n2
Table	VC_FLUID_LEVELS	user_n3

Table or View	Table or View Name	Column Name
Table	VC_FLUID_LEVELS	user_n4
Table	VC_FLUID_LEVELS	user_n5
Table	VC_FLUID_LEVELS	user_n6
Table	VC_FLUID_LEVELS	user_n7
Table	VC_FLUID_LEVELS	user_n8
Table	VC_LQ_VOL	user_a1
Table	VC_LQ_VOL	user_a2
Table	VC_LQ_VOL	user_n1
Table	VC_LQ_VOL	user_n2
Table	VC_LQ_VOL	user_n3
Table	VC_LQ_VOL	user_n4
Table	VC_LQ_VOL	user_n5
Table	VC_LQ_VOL	user_n6
Table	VC_LQ_VOL	user_n7
Table	VC_LQ_VOL	user_n8
Table	VC_LQVOLSTK	NET_CALC_IND
Table	VC_LQVOLSTK	user_a1
Table	VC_LQVOLSTK	user_a2
Table	VC_LQVOLSTK	user_n1
Table	VC_LQVOLSTK	user_n2
Table	VC_LQVOLSTK	user_n3
Table	VC_LQVOLSTK	user_n4
Table	VC_LQVOLSTK	user_n5
Table	VC_LQVOLSTK	user_n6
Table	VC_LQVOLSTK	user_n7
Table	VC_LQVOLSTK	user_n8
Table	VC_PROD_ANALYSIS	user_a1
Table	VC_PROD_ANALYSIS	user_a2
Table	VC_PROD_ANALYSIS	user_n1
Table	VC_PROD_ANALYSIS	user_n2

Table or View	Table or View Name	Column Name
Table	VC_PROD_ANALYSIS	user_n3
Table	VC_PROD_ANALYSIS	user_n4
Table	VC_PROD_ANALYSIS	user_n5
Table	VC_PROD_ANALYSIS	user_n6
Table	VC_PROD_ANALYSIS	user_n7
Table	VC_PROD_ANALYSIS	user_n8
Table	VC_PUMPER_STOP	user_a1
Table	VC_PUMPER_STOP	user_a2
Table	VC_PUMPER_STOP	user_n1
Table	VC_PUMPER_STOP	user_n2
Table	VC_PUMPER_STOP	user_n3
Table	VC_PUMPER_STOP	user_n4
Table	VC_PUMPER_STOP	user_n5
Table	VC_PUMPER_STOP	user_n6
Table	VC_PUMPER_STOP	user_n7
Table	VC_PUMPER_STOP	user_n8
Table	VC_REG_EQ_XREF	oper_fac_name_loc
Table	VC_REG_RPT_DTL	oper_fac_name_loc
Table	VC_ROUTE	user_a1
Table	VC_ROUTE	user_a2
Table	VC_ROUTE	user_n1
Table	VC_ROUTE	user_n2
Table	VC_ROUTE	user_n3
Table	VC_ROUTE	user_n4
Table	VC_ROUTE	user_n5
Table	VC_ROUTE	user_n6
Table	VC_ROUTE	user_n7
Table	VC_ROUTE	user_n8
View	WC_COST_ITEM	item_cost_deterministic
View	WC_COST_ITEM	item_cost_probabilistic

Table or View	Table or View Name	Column Name
Table	WC_COST_ITEM_T	item_cost_deterministic
Table	WC_COST_ITEM_T	item_cost_probabilistic

All New Columns (Including those added to existing tables or views)

The following columns were added; some were added to existing tables or views.

Table or View	Table or View Name	Column Name
Table	CD_MATERIAL	specific_heat_capacity
Table	DM_RUSHMORE_SUBMISSION	submission_type
Table	DM_RUSHMORE_SUBMISSION	submission_version
View	EDMOCV_CASING_COMP_TYPE	COMP_TYPE_CODE
View	EDMOCV_CASING_COMP_TYPE	DESCRIPTION
View	EDMOCV_CASING_COMP_TYPE	IS_HIDDEN
View	EDMOCV_CASING_COMP_TYPE	IS_USER_DEFINED
View	EDMOCV_CASING_COMP_TYPE	SECT_TYPE_CODE
View	EDMOCV_CASING_GRADE	COST_FACTOR
View	EDMOCV_CASING_GRADE	CREATE_APP_ID
View	EDMOCV_CASING_GRADE	CREATE_DATE
View	EDMOCV_CASING_GRADE	CREATE_USER_ID
View	EDMOCV_CASING_GRADE	FATIGUE_ENDURANCE_LIMIT
View	EDMOCV_CASING_GRADE	GRADE
View	EDMOCV_CASING_GRADE	GRADE_ID
View	EDMOCV_CASING_GRADE	IS_API
View	EDMOCV_CASING_GRADE	MATERIAL_ID
View	EDMOCV_CASING_GRADE	MIN_YIELD_STRESS
View	EDMOCV_CASING_GRADE	ULTIMATE_TENSILE_STRENGTH
View	EDMOCV_CASING_GRADE	UPDATE_APP_ID
View	EDMOCV_CASING_GRADE	UPDATE_DATE
View	EDMOCV_CASING_GRADE	UPDATE_USER_ID

Table or View	Table or View Name	Column Name
View	EDMOCV_COILED_TUBING_GRADE	COST_FACTOR
View	EDMOCV_COILED_TUBING_GRADE	CREATE_APP_ID
View	EDMOCV_COILED_TUBING_GRADE	CREATE_DATE
View	EDMOCV_COILED_TUBING_GRADE	CREATE_USER_ID
View	EDMOCV_COILED_TUBING_GRADE	FATIGUE_ENDURANCE_LIMIT
View	EDMOCV_COILED_TUBING_GRADE	GRADE
View	EDMOCV_COILED_TUBING_GRADE	GRADE_ID
View	EDMOCV_COILED_TUBING_GRADE	IS_API
View	EDMOCV_COILED_TUBING_GRADE	MATERIAL_ID
View	EDMOCV_COILED_TUBING_GRADE	MIN_YIELD_STRESS
View	EDMOCV_COILED_TUBING_GRADE	ULTIMATE_TENSILE_STRENGTH
View	EDMOCV_COILED_TUBING_GRADE	UPDATE_APP_ID
View	EDMOCV_COILED_TUBING_GRADE	UPDATE_DATE
View	EDMOCV_COILED_TUBING_GRADE	UPDATE_USER_ID
View	EDMOCV_DRILL_COLLAR_GRADE	COST_FACTOR
View	EDMOCV_DRILL_COLLAR_GRADE	CREATE_APP_ID
View	EDMOCV_DRILL_COLLAR_GRADE	CREATE_DATE
View	EDMOCV_DRILL_COLLAR_GRADE	CREATE_USER_ID
View	EDMOCV_DRILL_COLLAR_GRADE	FATIGUE_ENDURANCE_LIMIT
View	EDMOCV_DRILL_COLLAR_GRADE	GRADE
View	EDMOCV_DRILL_COLLAR_GRADE	GRADE_ID
View	EDMOCV_DRILL_COLLAR_GRADE	IS_API
View	EDMOCV_DRILL_COLLAR_GRADE	MATERIAL_ID
View	EDMOCV_DRILL_COLLAR_GRADE	MIN_YIELD_STRESS
View	EDMOCV_DRILL_COLLAR_GRADE	ULTIMATE_TENSILE_STRENGTH
View	EDMOCV_DRILL_COLLAR_GRADE	UPDATE_APP_ID
View	EDMOCV_DRILL_COLLAR_GRADE	UPDATE_DATE
View	EDMOCV_DRILL_COLLAR_GRADE	UPDATE_USER_ID
Table	MD_SYS_BENGAL_EDM_MAP	bengal_afe_id
Table	MD_SYS_BENGAL_EDM_MAP	bengal_afe_supp_id

Table or View	Table or View Name	Column Name
Table	MD_SYS_BENGAL_EDM_MAP	bengal_flagas
Table	MD_SYS_BENGAL_EDM_MAP	edm_afe_id
Table	MD_SYS_BENGAL_EDM_MAP	edm_afe_supp_id
Table	MD_SYS_BENGAL_EDM_MAP	edm_event_code
Table	MD_SYS_BENGAL_EDM_MAP	edm_event_id
Table	MD_SYS_BENGAL_EDM_MAP	edm_flags
Table	MD_SYS_BENGAL_EDM_MAP	edm_report_journal_id
Table	MD_SYS_BENGAL_EDM_MAP	edm_well_id
Table	MD_SYS_BENGAL_EDM_MAP	edm_wellbore_id
Table	MD_SYS_BENGAL_EDM_MAP	map_id
Table	MD_SYS_BENGAL_EDM_MAP	name
Table	MD_SYS_BENGAL_EDM_SUPP_MAP	bengal_afe_id
Table	MD_SYS_BENGAL_EDM_SUPP_MAP	bengal_afe_supp_id
Table	MD_SYS_BENGAL_EDM_SUPP_MAP	edm_afe_id
Table	MD_SYS_BENGAL_EDM_SUPP_MAP	edm_afe_supp_id
Table	MD_SYS_BENGAL_EDM_SUPP_MAP	key_id
Table	MD_SYS_BENGAL_EDM_Table_MAP	bengal_field_name
Table	MD_SYS_BENGAL_EDM_Table_MAP	bengal_table_name
Table	MD_SYS_BENGAL_EDM_Table_MAP	edm_field_name
Table	MD_SYS_BENGAL_EDM_Table_MAP	edm_table_name
Table	MD_SYS_BENGAL_EDM_Table_MAP	flags
Table	MD_SYS_BENGAL_EDM_Table_MAP	key_id
View	TU_CUSTOM_LOAD_PROFILE	load_id
Table	TU_CUSTOM_LOAD_PROFILE_T	load_id
Table	VC_ALLOCATION_ERROR	DB_OWN_SK
Table	VC_ALLOCATION_ERROR	ENTITY_SK
Table	VC_ALLOCATION_ERROR	ENTITY_TYPE
Table	VC_ALLOCATION_ERROR	ERR_DT
Table	VC_ALLOCATION_ERROR	ERR_SOURCE_SK
Table	VC_ALLOCATION_ERROR	ERR_SOURCE_SK_TYPE

Table or View	Table or View Name	Column Name
Table	VC_ALLOCATION_ERROR	JOB_ID
Table	VC_ALLOCATION_ERROR	MONTHLY_DAILY_IND
Table	VC_ALLOCATION_ERROR	SEVERITY_IND
Table	VC_ALLOCATION_ERROR	SYS_MSG_CD
Table	VC_DAILY_COMPR	VOL_ORIGIN
Table	VC_DAILY_ENGINE	VOL_ORIGIN
Table	VC_DAILY_GEN	VOL_ORIGIN
Table	VC_FLUID_LEVELS	user_a1
Table	VC_FLUID_LEVELS	user_a2
Table	VC_FLUID_LEVELS	user_n1
Table	VC_FLUID_LEVELS	user_n2
Table	VC_FLUID_LEVELS	user_n3
Table	VC_FLUID_LEVELS	user_n4
Table	VC_FLUID_LEVELS	user_n5
Table	VC_FLUID_LEVELS	user_n6
Table	VC_FLUID_LEVELS	user_n7
Table	VC_FLUID_LEVELS	user_n8
Table	VC_LQ_VOL	user_a1
Table	VC_LQ_VOL	user_a2
Table	VC_LQ_VOL	user_n1
Table	VC_LQ_VOL	user_n2
Table	VC_LQ_VOL	user_n3
Table	VC_LQ_VOL	user_n4
Table	VC_LQ_VOL	user_n5
Table	VC_LQ_VOL	user_n6
Table	VC_LQ_VOL	user_n7
Table	VC_LQ_VOL	user_n8
Table	VC_LQVOLSTK	NET_CALC_IND
Table	VC_LQVOLSTK	user_a1
Table	VC_LQVOLSTK	user_a2

Table or View	Table or View Name	Column Name
Table	VC_LQVOLSTK	user_n1
Table	VC_LQVOLSTK	user_n2
Table	VC_LQVOLSTK	user_n3
Table	VC_LQVOLSTK	user_n4
Table	VC_LQVOLSTK	user_n5
Table	VC_LQVOLSTK	user_n6
Table	VC_LQVOLSTK	user_n7
Table	VC_LQVOLSTK	user_n8
Table	VC_PROD_ANALYSIS	user_a1
Table	VC_PROD_ANALYSIS	user_a2
Table	VC_PROD_ANALYSIS	user_n1
Table	VC_PROD_ANALYSIS	user_n2
Table	VC_PROD_ANALYSIS	user_n3
Table	VC_PROD_ANALYSIS	user_n4
Table	VC_PROD_ANALYSIS	user_n5
Table	VC_PROD_ANALYSIS	user_n6
Table	VC_PROD_ANALYSIS	user_n7
Table	VC_PROD_ANALYSIS	user_n8
Table	VC_PUMPER_STOP	user_a1
Table	VC_PUMPER_STOP	user_a2
Table	VC_PUMPER_STOP	user_n1
Table	VC_PUMPER_STOP	user_n2
Table	VC_PUMPER_STOP	user_n3
Table	VC_PUMPER_STOP	user_n4
Table	VC_PUMPER_STOP	user_n5
Table	VC_PUMPER_STOP	user_n6
Table	VC_PUMPER_STOP	user_n7
Table	VC_PUMPER_STOP	user_n8
Table	VC_REG_EQ_XREF	oper_fac_name_loc
Table	VC_REG_RPT_DTL	oper_fac_name_loc

Table or View	Table or View Name	Column Name
Table	VC_ROUTE	user_a1
Table	VC_ROUTE	user_a2
Table	VC_ROUTE	user_n1
Table	VC_ROUTE	user_n2
Table	VC_ROUTE	user_n3
Table	VC_ROUTE	user_n4
Table	VC_ROUTE	user_n5
Table	VC_ROUTE	user_n6
Table	VC_ROUTE	user_n7
Table	VC_ROUTE	user_n8
View	WC_COST_ITEM	item_cost_deterministic
View	WC_COST_ITEM	item_cost_probabilistic
Table	WC_COST_ITEM_T	item_cost_deterministic
Table	WC_COST_ITEM_T	item_cost_probabilistic

Columns with New Max Length

Where the old length is shown as "*," the data type was changed from text(*) to varchar(2000) or varchar(4000).

Table or View Name	Column Name	Old Max Length	New Max Length
CD_ASSEMBLY_COMP	connection_grade	16	60
CD_ASSEMBLY_COMP	grade	16	60
CD_ASSEMBLY_COMP_T	connection_grade	16	60
CD_ASSEMBLY_COMP_T	grade	16	60
CD_GRADE	grade	16	60
CD_HOLE_SECT_GROUP	grade	16	60
CD_HOLE_SECT_GROUP_T	grade	16	60
CD_WELLHEAD_COMP	grade	16	60
CD_WELLHEAD_COMP_T	grade	16	60

Table or View Name	Column Name	Old Max Length	New Max Length
CD_WEQP_ROD	aisi_steel_grade	16	60
CD_WEQP_ROD	api_grade	16	60
CD_WEQP_ROD_T	aisi_steel_grade	16	60
CD_WEQP_ROD_T	api_grade	16	60
DM_FAILURE_CASING_STRING	grade	16	60
DM_FAILURE_CASING_STRING_T	grade	16	60
DM_FAILURE_ROD	grade	16	60
DM_FAILURE_ROD_T	grade	16	60
DM_FAILURE_TUBING_STRING	grade	16	60
DM_FAILURE_TUBING_STRING_T	grade	16	60
DM_PCP	casing_grade	8	60
DM_PCP_T	casing_grade	8	60
DM_PIPE_DATA	grade	16	60
DM_PIPE_DATA_T	grade	16	60
DM_RISER	grade	16	60
MD_SECT_TYPE	grade_name	50	60
PK_WHCOMP_LOCATION	location	5	50
PK_WHCOMP_LOCATION	location_code	1	2
TU_MMS_APD_DETAIL	casing_grade	16	60
TU_MMS_APD_DETAIL_T	casing_grade	16	60
VC_SELECT_SQL WHERE_CLAUSE		*	4000
VC_SYS_MSG ACTION_DS		*	2000
VC_SYS_MSG EXT_MSG_DS		*	2000
VC_SYS_SQL SQL_SYNTX1		*	2000
WP_CASE_CEM_JOB_DATA	grade_inner_string	16	60
WP_CASE_CEM_JOB_DATA_T	grade_inner_string	16	60

Columns with New Data Types

Table or View Name	Column Name	Old Data Type	New Data Type
PEM_PTA_QM_DATA	GAUGE_ID	char	nvarchar
VC_SELECT_SQL	WHERE_CLAUSE	text	varchar
VC_SYS_MSG	ACTION_DS	text	varchar
VC_SYS_MSG	EXT_MSG_DS	text	varchar
VC_SYS_SQL	SQL_SYNTX1	text	varchar

Columns with New Nullable Attributes

Table or View Name	Column Name	Nullable in 2003.x	Nullable in 5000.1.0
PEM_PTA_QM_DATA	GAUGE_ID	NO	YES
VC_SELECT_SQL	WHERE_CLAUSE	NO	YES
VC_SYS_MSG	ACTION_DS	NO	YES
VC_SYS_MSG	EXT_MSG_DS	NO	YES
VC_SYS_SQL	SQL_SYNTX1	NO	YES

Fixed Problems

The following problems were fixed for the 5000.1 release.

- 738209: Users Full name should be shown in list of users.

- 748640: Need additional units added to Volume and Density Unit Class.

- 749650: Wrong label in CD_DATUM.well_name.

- 751815: WITSML Import/Export need support for Barite field.

- 754455: Group properties update performance is very poor when custom DEF's are used extensively.

- 754566: In EDM User Security, Application Tokens Section, the Column Headers for Application Tokens should not scroll; they should be a fixed row.

- 755612: Wellbore equipment component spreadsheet and properties capturing and displaying different fields for component Min ID.

- 759742: Drop CD_ASSEMBLY_COMP.min_id field from 5000.1 onwards.

- 760984: Weight per Unit in Mud Inventory should be unitless.

- 761671: Need to include Mudbase Type for WITSML import.

- 761801: WITSML Fluid import issues (Testing from Shell Group).

- 762833: A DEX file from the Summit application has fields in the unit lbm. However, the Field Mapping option in EDM Administration under Stimulation specifies that the unit is ton (FPS) for these fields which caused the fields to be multiplied by 2 which is incorrect.

- 765063: CD_GRADE records that have no relevant data to them are affecting the performance of casing catalogs.

- 766202: The current association of Grade material and temperature deration in EDM requires you to create multiple material pseudo names to handle multiple temperature deration schedules (for the same grade).

- 766392: Landed Weight & Weight in Slips fields should be associated to Large Force unit class, not Force.

- 768779: Redundant <TOPLEVEL> XML Export/Import Issue around XML Catalogs.

- 768780: Use only the Grade, Class, Materials, Temp Deration/Lithologies tables that are a part of the Entity being exported via XML Export.

- 769205: Import Export Config Dialog title bar is confusing: the title bar says error even after a successful import or export. Change the title bar to "Status."

- 769677: Changes in Grade_Material_Temp Deration dependency.

- 770922: Clone of 759603-Database upgrade: load CD_ASSEMBLY_COMP.min_id to id_min instead.

- 771157: CD_STRAT_UNIT, CD_ZONE & CD_RESERVOIR data in <TOPLEVEL> data set of EDM Transfer files should be included in the body of the data set being exported.

- 771454: Need 5000.1 database update wrapper called EDM_5000_1_0_0_DB_Update.exe.

- 772458: Data Services - Need to create new pipe name : Scab Liner pipe VIT pipe.

- 772537: Need two new fields in CD_LOCATION_CONGRESS to record quarter/quarter.

- 772629: Missing 2 lithology types: Avg. Permafrost and Silty Sand.

- 773489: Add a new field to CD_RIG.

- 773881: Create all iWellFile Tokens for iWellFile R5000.1.

- 773960: UNIT CLASS = Create a new unit class "Gas Production rate (Large)" unit.

- 774020: Request Operator and Reporting Time fields in the Event Properties.

- 774021: NPT Title in NPT dialog is a memo, but in Time Summary spreadsheet it is 255 only.

- 774023: Need 'Formation Gradient' field to support alternate MASICP workflow.

- 774025: Need to change some default labels in stimulation form.

- 774026: Gas Concentration (class_id=186).

- 774028: No place to record Off Bottom Circulating Pressure.

- 774029: 'Actives Stages' should be labelled 'Active Stages'.

- 774031: Require Communication Y/N and Communication Remarks field in Stages section.

- 774189: Unit of measure MEASURE_Mft3_d has issues.

- 774811: User needs creation of 6 new units in EDM (GL/L, L/ SK 100LB, KVA).

- 775375: Some fields in CD_ASSEMBLY_COMP need to have labels updated.

- 776307: String Fluids Export should only export relevant data just like Catalogs - In <TOP LEVEL> as well as in the body.

- 776716: New location code for US ROCKIES for MD_PK_LOCATION_TYPE_CODE.

- 777251: DM_EVENT.event_no needs to be increased from 20 characters to 30 characters.

- 777279: Clone of 777235, In oracle materials exp. coeff. are incorrect for non-steel materials.

- 777497: Additional tokens needed for Definitive Survey Locking support.

- 778798: Table linkage between DM_OPER_EQUIP_FAIL and DM_ACTIVITY is wrong.

- 779358: Copy/Paste needs to handle COMPASS link tables.

- 779885: New displayed units for EDM.

- 780365: - Support new RPG field in Bit Operations(DM_BIT_OP.rpg - double (rev/volume e.g. rev/gal).

- 780791: Need "Sampling Depth Interval" added to the following tables CD_WELLBORE->rt_samp_depth_interval - CLASS_DEPTH.

- 782048: Change the class_id from Flow Rate (Cement) to Flow Rate (Mud).

Known Problems

The Engineer's Desktop release has been a significant development effort intended to realize the primary strategy of supplying integrated applications to the client that enable engineering workflows. For each product, changing the application to support a new data model was a significant challenge.

Engineer's Desktop 5000.1 is being released with some outstanding issues that are known, but not thought to prevent users from achieving the efficiency gains provided by these applications. The following list of issues enables clients to compare observed application behavior against issues known to Landmark at the time of release. These issues will be addressed in future releases of EDM together with any additional issues reported by clients.

762579   On the Field/Office Transfer process, EDM Data Receiver is not working as expected in it that it does not check the directory AND its subdirectories for new transfer files but only the root directory.

761665   WITSML import does not import certain mud check data into OpenWells such as time of mud check, and mud check depths.

767436   Footage Depths are .01 to .03 different from v2003.16 to Release 5000.1.0.The default US Survey Feet is not correct, its Depth, Distances, Heights has unit selected to standard feet not US survey feet.

754529   Customizing OpenWells Test data entry form layout may result in fields to be hidden so that only one sub-sections is left.

761801   WITSML Fluid import may have issues with daily operations report in EDM.

754965   Exporting/Importing picklists does not work correctly when numeric fields are being set to Integer format, and when non values are not being set regardless of original format.

765990   Catalogue export files contain may data which should not be present in this type of transfer file.

751252   One Chinese character is handled as two Latin characters in OpenWells.

1. Launch OpenWells.
2. Go to Lesson Properties > Input 128 Chinese characters in Summary/Comments and click Apply.

There is an Exception generated in the log file. However, highlight Summary/ Comments in Properties page >Press F7 > Check the field length is 255. It means 255 Chinese characters should be input normally.

631277   ImportTightGroup system setting description inadequate

635520   Problem formatting BINARY_DATA (attachments) in EDM Data Transfer File leads to Import Validation Error

699865   Duplicate Company names allowed via import

717189   Rename select MD_SITE entities that store system metadata that customers are
          changing

719171   The well reference point has to be added at well level

720091   A second pipe catalog with same Properties as the API Casing/Tubing catalog does
          not appear as expected in the Import from Catalog dialog.

720297   Uncaught Java Exception when attempting database back-up in Compass

721230   Creating new folder in WITSML file export dialog does not retain focus

721417   EDM Data Services not deleting BHA Operations and Bit Operations records when
          Drillstring deleted

729872   WITSML Wellbore level Import/Export. Fields not getting imported

733293   Can not copy/paste site level

740882   Documentation - Database - dbUpdate - SQL Server - Unable to run update from
          Client. The workaround for this problem is as follows: If the user selects 'Run
          Manually', the resulting script requires the following filled in:

          - username, password, ODBC data source name, and server name.

          If the server name is filled in correctly, these tables will be loaded correctly.

766372   SQL Server Utility throws Run-time error 75 (Path/file access error) at launch. Non-
          Administrator windows users do not have rights to create an ODBC Data Source. This
          is a Windows restriction.

777277   If you install full SQL Server 2005 with an instance NOT named EDM5000, database
          will fail to attach because it is expecting an instance named EDM5000. To prevent
          this error, please create an EDM5000 instance.

784122   EDM Installation: EDM Database "Restore" functionality does not work for
          edmadmin user, because *edmadmin* does not have the proper rights (dbcreator)
          assigned by default. WORKAROUND: Before attemptingto do an EDM database
          Restore, either login as Database Administrator or grant dbcreator rights to the
          edmadmin user.

- EDM Table Extensions are currently implemented to support upcoming ARIES functionality and is restricted to selected ARIES tables only at this time. To create ARIES table extensions you must be logged in as the schema owner, EDMADMIN.

  Other EDM applications will not recognize the extension columns for update or display.

- Windows Authentication on Oracle: If you have Oracle Wallet (Used by the OpenWorks client in conjunction with the EDM to OpenWorks Link utility) installed on a client, Windows Authentication for Oracle will not work.

Contacting Support

Landmark operates Technical Assistance Centers (TACs) in Australia, the United Kingdom, and the United States. Additional support is also provided through local support offices around the world. Local support office information is listed below. If problems cannot be resolved at the district level, our escalation team is called to resolve your incidents quickly.

Support information is always available on the Landmark Graphics Support internet page located at: http://css.lgc.com/CustomerSupport/CustomerSupportHome.jsp.

Technical Assistance Centers

North America
7:30 am - 5:30 pm Central Standard Time
Monday - Friday, excluding holidays

713-839-2200 (Houston, TX, USA)
Toll Free 1-877-435-7542
(1-877-HELP-LGC)
Fax: 713-839-2168 (Houston, TX)
Fax: 907-275-2655 (Anchorage, AK)
Fax: 303-796-0807 (Denver, CO)
Fax: 403-262-1929 (Calgary, Canada)

Email: support@lgc.com

Latin America
(Spanish, Portuguese, English)
7:00 am - 5:00 pm Central Standard Time
Local normal business hours

1-713-839-3405 (Houston,TX,USA)
Fax: 713-839-3646
Email: soporte@lgc.com

Toll Free from:
Argentina: 0800-800-5263
Brazil: 0800-891-0837
Chile: 800-201-898
Colombia: 01800-915-4743
Mexico: 001-888-438-1296
Peru: 0800-51634
Trinidad: 1-888-438-1296
Venezuela: 0-800-526-3627

Toll Free from local area:
Ecuador (Quito) (02)226-1908

Europe, Africa, Middle East
8:00 am - 5:30 pm Local Time
Monday - Friday, excluding holidays

44-1372-868686 (Leatherhead, UK)
Fax: 44-1372-868601 (Leatherhead, UK)
Fax: 44-1224-723260 (Aberdeen, UK)
Email:
eame_helpdesk@lgc.com
ssasupport@lgc.com (Southern Africa)

Asia, Pacific
8:00 am - 5:00 pm Local Time
Monday-Friday, excluding holidays

61-8-9481-4488 (Perth, Australia)
Toll-free 1-800-448-488
Fax: 61-8-9481-1580
Email:
apsupport@lgc.com
FSU_support@lgc.com

Toll-Free from:
China: 10-800-6100-253
Indonesia: 001-803-61284
Japan: 00531-61-0021
Malaysia   1800-803-687
New Zealand   0800-400-555
Philippines   1800-1611-0207
South Korea   00308-61-0046
Taiwan   0080-161-1350
Thailand   001-800-611-2784

Toll Free from local area:
Vietnam: 84-8-9191901

District Support Offices

Algeria (Algiers)
8:30 am - 4:30 pm Local Time
Saturday - Wednesday excluding holidays

213 21 37 72 39
Email: eame_helpdesk@lgc.com

Angola (Luanda)
8:00 am - 5:00 pm Local Time
Monday - Friday, excluding holidays

1-817-493-5900
Fax: 1-817-493-560
Email: eame_helpdesk@lgc.com

Argentina (Buenos Aires)
9:00 am - 6:00 pm
Local time

54-11-4312-8411
Toll Free 0800-800-5263
Fax: 54-11-4311-9566
Email: soporte@lgc.com

Australia (Perth)
8:00 am - 5:00 pm Local Time
Monday - Friday, excluding holidays

61-8-9481-4488
Toll Free 1800-448-488
Fax: 61-8-9481-1580
Email: apsupport@lgc.com

Brazil (Rio de Janeiro)
8:00 am - 5:30 pm
Local Time

55-21-3974-4000 or
Toll Free 0800-891-0837
Fax: 55-21-3974-4002
Email: soporte@lgc.com

Brunei (Bandar Seri Bagawan)
8:30 am - 5:30 pm Local Time
Monday - Friday, excluding holidays

67-3-233-5319
Email: apsupport@lgc.com

Canada (Calgary)
7:30 am - 5:30 pm Central Standard Time
Monday-Friday, excluding holidays

Toll Free 1-877-435-7542
(1-877-HELP-LGC)
Fax: 403-262-1929 (Calgary, Canada)
Fax: 713-830-2168 (Houston, TX)
Email: support@lgc.com

Chile (TAO TAC, Houston, Texas)
Local normal business hours

Toll Free 800-201-898
Fax: 1-713-839-3646
Email: soporte@lgc.com

Colombia (Bogota)
8:00 am - 5:00 pm
Local Time

57-1-326-4000
57-1-326-6710
Toll Free 01800-915-4743
Fax: 57-1-326-6717
Email: soporte@lgc.com

Ecuador (Quito)
8:00 am - 5:00 pm
Local Time

59-32-226-1844
Toll Free from Quito (02)226-1908
Fax: 59-32-226-2590
Email: soporte@lgc.com

Egypt (Cairo)
8:00 am - 4:00 pm Local Time
Saturday - Wednesday, excluding holidays

20-2-759-1717
(ask for Landmark Technical Support)
Email: eame_helpdesk@lgc.com

India (New Delhi)
9:00 am - 5:30 pm Local Time
Local Business Days, excluding holidays

91-11-622-1885
(c/o Samit Enterprises)
Fax: 91-11-647-9246
Email: apsupport@lgc.com

Indonesia (Jakarta)
7:30 am - 4:30 pm Local Time
Monday - Friday, excluding holidays

62-21-3003-9039 or
Toll Free 001-803-61284
Fax: 62-21-3003-9088
Email: apsupport@lgc.com

Japan
8:00 am - 5:00 pm Local Time
Monday - Friday, excluding holidays

Toll Free 00531-61-0021
Email: apsupport@lgc.com

Malaysia (Kuala Lumpur)
8:30 am - 5:30 pm Local Time
Monday - Friday, excluding holidays

603-2164-1121 or
Toll Free 1-800-803-687
Fax: 603-2164-1135
Email: apsupport@lgc.com

Mexico (Reynosa)
8:00 am - 6:00 pm
Local Time

52-555-208-3533
52-555-208-3868
Toll Free 001-888-438-1296
Local Office Fax: 52-555-514-7646
Support Fax: 1-713-839-3646
Email: soporte@lgc.com

New Zealand (New Plymouth)
8:00 am - 5:00 pm Local Time
Monday - Friday, excluding holidays

61-6-755-2318
Toll Free 0800-400-555
Fax: 64-6-755-2407
Email: apsupport@lgc.com

Nigeria (Lagos)
8:00 am - 5:00 pm Local Time
Monday - Friday, excluding holidays

234-1-461-0780
(ask for Landmark Technical Support)
Fax: 234-1-262-0769
Email: eame_helpdesk@lgc.com

People's Republic of China (Beijing)
9:00 am - 5:30 pm Local Time
Monday - Friday, excluding holidays

86-10-8486-4501
Toll Free 10-800-6100-253 or
10-800-810-0209
Fax: 86-10-8486-4819
Email bjsupport@lgc.com
or apsupport@lgc.com

Peru (Lima)
Local normal business hours

Toll Free 0800-51634
Fax: 001-713-839-9646
Email: soporte@lgc.com

Russia (Moscow)
7:00 am - 5:00 pm Local Time
Local Business Days, excluding holidays

7-095-960-2926
7-095-960-2927
(ask for Landmark Technical Support)
Fax: 7-095-755-8301
Email: eame_helpdesk@lgc.com

South Korea
8:00 am - 5:00 pm Local Time
Monday - Friday, excluding holidays

Toll Free 00308-61-0046
Email: apsupport@lgc.com

Taiwan
8:30 am - 5:30 pm Local Time
Monday-Friday, excluding holidays

Toll Free 00801-61-1350
Email: apsupport@lgc.com

Thailand (Bangkok)
8:00 am - 5:00pm Local Time
Monday - Friday, excluding holidays

66-2-278-8100
Toll Free 001-800-611-2784
Fax: 66-2-278-8199
Email: apsupport@lgc.com

Trinidad & Tobago (TAO TAC, Houston, TX)
7:00 am - 5:00 pm Central Standard Time
(Houston, TX)
Local normal business hours

Toll Free: 1-888-438-1296
Fax: 1-713-839-3646
Email: soporte@lgc.com

United Arab Emirates (Dubai)
7:00 am - 5:00 pm Local Time
Local Business Days, excluding holidays

+971-4-3036446
(ask for Landmark Technical Support)
Fax: +971-4-3315837
Email:
gulf_support@lgc.com
eame_helpdesk@lgc.com

United Kingdom
8:00 am - 5:30 pm Local Time
Monday - Friday, excluding holidays

44-1372-868686 (Leatherhead)
Fax: 44-1372-868601 (Leatherhead)
Fax 44-1224-723260 (Aberdeen)
Email: eame_helpdesk@lgc.com

United States (Anchorage)
7:30 am - 5:30 pm Central Standard Time
Monday - Friday, excluding holidays

Toll Free 1-877-435-7542
(1-877-HELP-LGC)
Fax: 907-275-2655
Email: support@lgc.com

United States (Denver)
7:30 am - 5:30 pm Central Standard Time
Monday - Friday, excluding holidays

Toll Free 1-877-435-7542
(1-877-HELP-LGC)
Fax: 303-796-0807
Email: support@lgc.com

United States (Houston)
7:30 am - 5:30 pm Central Standard Time
Monday - Friday, excluding holidays

713-839-2200
Toll Free 1-877-435-7542
(1-877-HELP-LGC)
Fax: 713-839-2168
Email: support@lgc.com

Venezuela (Caracas)
8:00 am - 5:00 pm
Local Time

58-212-953-0774
Toll Free 0-800-526-3627
Fax: 58-212-952-3845
Email: soporte@lgc.com

Vietnam (Ho Chi Minh City)
8:00 am - 5:00 pm Local Time
Monday - Friday, excluding holidays

84-8-910-1901
Toll Free 84-8-9191901
Fax: 84-8-910-1902
Email: apsupport@lgc.com

Helpful internet links are shown below.

Name	Website Address
Landmark Graphics home page	http://www.lgc.com
Landmark Graphics Support Website	http://css.lgc.com/CustomerSupport/ CustomerSupportHome.jsp

Name	Website Address
Oracle home page	http://www.oracle.com
FLEXlm license management software home page	http://www.macrovision.com/support/by_category/Software_Licensing.shtml
Microsoft SQL Server home page	http://www.microsoft.com/sql/default.asp
Acrobat Reader	http://www.adobe.com
Microsoft MSDE	http://www.microsoft.com/sql/default.asp

Trademarks

3D Drill View, 3D Drill View KM, 3DFS, 3D Surveillance, 3DView, Active Field Surveillance, Active Reservoir Surveillance, ADC, Advanced Data Transfer, ARIES, ARIES DecisionSuite, AssetConnect, Asset Decision Solutions, Asset Development Center, AssetDirector, Asset Journal, AssetLink, AssetLink Advisor, AssetLink Director, AssetLink Observer, AssetObserver, AssetObserver Advisor, Asset Performance, AssetPlanner, AssetSolver, AssetSolver Online, AssetView, BLITZPAK, CasingLife, CasingSeat, COMPASS, Corporate Data Archiver, Corporate Data Store, Data Analyzer, DataManager, DataStar, DBPlot, Decision Management System, DecisionSpace, DecisionsSpace 3D Drill View KM, DecisionSpace AssetLink, DecisionSpace AssetPlanner, DecisionSpace AssetSolver, DecisionSpace AssetView 2D, DecisionSpace AssetView 3D, DecisionSpace Atomic Meshing, DecisionSpace Decision Management Systems(DMS), DecisionSpace for Production, DecisionSpace Infrastructure, DecisionSpace Nexus, DecisionSpace PowerModel, DecisionSpace PrecisionTarget, DecisionSpace Reservoir*,* DecisionSpace TracPlanner, DecisionSpace Well Seismic Fusion, DecisionSpace WellSolver, DecisionSuite, DepthTeam, Depth Team, DepthTeam Explorer, Depth Team Explorer, DepthTeam Express, Depth Team Express, DepthTeam Extreme, Depth Team Extreme, DepthTeam Interpreter, Depth Team Interpreter, Desktop Navigator, DESKTOP-PVT, DESKTOP-VIP, DEX, DIMS, Discovery, Discovery Asset, Discovery FrameBuilder, DMS, Drillability Suite, Drilling Desktop, DrillModel, Drill-to-the-Earth Model, DSS, Dynamic Reservoir Management, Dynamic Surveillance System, EarthCube, EDM, EDT, eLandmark, Engineer's Data Model, Engineer's Desktop, Engineer's Link, ESP, Event Similarity Prediction, ezFault, ezModel, ezSurface, ezTracker, FastTrack, FG+, FieldPlan, Field Scenario Planner, FZAP!, GeoAtlas, GeoDataLoad, GeoGraphix, GeoGraphix Exploration System, GeoLink, GeoProbe GF DataServer, GES, GES97, GESXplorer, GMAplus, GMI Imager, GRIDGENR, Handheld Field Operator, HHFO, I^2 Enterprise, iDIMS, IsoMap, iWellFile, i Wellfile, KnowledgeSource, Landmark, Landmark Decision Center, Landmark & Design, Landmark Logo and Design, Landscape, Lattix, LeaseMap, LMK Resources, LogEdit, LogM, LogPrep, Make Great Decisions, MathPack, MIMIC, MIMIC+, Model Builder, MyLandmark, Nexus, Object MP**,** OpenBooks, OpenJournal, OpenSGM, OpenVision, OpenWells, OpenWire, OpenWorks, OpenWorks Development Kit, OpenWorks Well File, OpenWorks Production, PAL, Parallel-VIP, PetroBank, PetroBank Explorer, PetroBank Master Data Store, PetroWorks, PetroWorks Asset, PetroWorks Pro, PetroWorks ULTRA, PlotView, Point Gridding Plus, Pointing Dispatcher, PostStack, PostStack ESP, PostStack Family, PowerCalculator, PowerExplorer, PowerExplorer Connect, PowerGrid, PowerHub, Power Interpretation, PowerModel, PowerView, PrecisionTarget, Presgraf, PRIZM, Production Asset Manager, Production, PROFILE, Project Administrator, ProMAGIC, ProMAGIC Connect, ProMAGIC Server, ProMAX, ProMAX 2D, ProMAX 3D, ProMAX 3DPSDM, ProMAX 4D, ProMAX Family, ProMAX MVA, ProMAX VSP, pSTAx, Query Builder, Quick, Quick+, QUICKDIF, QuickWell, QuickWell+, QUIKRAY, QUIKSHOT, QUIKVSP, RAVE, RAYMAP, RAYMAP+, Real Freedom, Real Time Asset Management Center, Real Time Decision Center, Real Time Operations Center, Real Time Production Surveillance, Real Time Surveillance, Real-Time View, Reference Data Manager, Reservoir Framework Builder, RESev, ResMap, RightTime, RTOC, SCAN, SeisCube, SeisMap, SeisModel, SeisSpace, SeisVision, SeisWell, SeisWorks, SeisWorks 2D, SeisWorks 3D, SeisWorks PowerCalculator, SeisWorks PowerJournal, SeisWorks PowerSection, SeisWorks PowerView, SeisXchange, Semblance Computation and Analysis, Sierra Family, SigmaView, SimConnect, SimConvert, SimDataStudio, SimResults, SimResults+, SimResults+3D, SIVA+, SLAM, smartSECTION, Spatializer, SpecDecomp, StrataAmp, StrataMap, StrataModel, StrataSim, StrataWorks, StratWorks, StratWorks 3D, StreamCalc, StressCheck, STRUCT, Structure Cube, Surf & Connect, SynTool, SystemStart, SystemStart for Clients, SystemStart for Servers, System Start for Servers, SystemStart for Storage, Tanks & Tubes, TDQ, Team Workspace, TERAS, The Engineer's Desktop, Total Drilling Performance, TOW/cs, TOW/cs Revenue Interface, TracPlanner, TracPlanner Xpress, Trend Form Gridding, Turbo Synthetics, VESPA, VESPA+, VIP, VIP-COMP, VIP-CORE, VIPDataStudio, VIP-DUAL, VIP-ENCORE, VIP-EXECUTIVE, VIP-Local Grid Refinement, VIP-THERM, WavX, Web Editor, Wellbase, Wellbore Planner, Wellbore Planner Connect, WELLCAT, Well Cost, WELLPLAN, Well Seismic Fusion, WellSolver, WellXchange, WOW, Xsection, You're in Control. Experience the difference, ZAP!, and Z-MAP Plus are trademarks, registered trademarks or service marks of Landmark Graphics Corporation.

All other trademarks, service marks and product or service names are the trademarks or names of their respective owners.

Note

The information contained in this document is subject to change without notice and should not be construed as a commitment by Landmark Graphics Corporation. Landmark Graphics Corporation assumes no responsibility for any error that may appear in this manual. Some states or jurisdictions do not allow disclaimer of expressed or implied warranties in certain transactions; therefore, this statement may not apply to you.

Landmark acknowledges that certain third party code has been bundled with, or embedded in, Landmark's software. The licensors of this third party code, and the terms and conditions of their respective licenses, may be found at the following location:

[Installdir]\Documentation\Third_Party.pdf