

# **GFM**

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**GraphicsFlowMark**

User's and System's Guide

Version 1

## GraphicFlowMarkUser'sAndSystem'sGuide

Version1

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# SECTION 1

## INTRODUCTION

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This document describes the basics of the Graphics Flow Mark environment, or the GFM-system. There are instructions how to install and administer your GFM-system and how to use the **GFMModuleInstaller** and the **GFMModuleConfigurationTool**. There are also some technical notes about the GFM-system included in the document.

## Overview

The GFM environment is a module based software package developed for the graphics and newspaper market. It is installed under Microsoft Windows NT and runs on standard Intel platforms. It is an open system based on Microsoft's software component standard DCOM (Distributed Component Object Model) and SUN's JAVA technology.

The GFM environment is based on the GFMscript language. These scripts can be created by an application or manually written by a person. Developers that want to write GFMscripts can purchase the *GFM SDK* GFMScript Developer Kit.

### The GFMScript Language

The GFMscript language has a lot of powerful functions for image file manipulation, PostScript file manipulation, PDF access and database access. It is also a more ordinary programming language in the sense that you can define variables and functions, process numbers and strings, manage files and directories and soon. This makes the GFMscript language both powerful and flexible. It is for example very easy to change color modes on images, to rename, move or copy a file or access a database like an IFRATRack database. All GFMscripts are saved as ANSI files which makes them easy to open and read in any text editor or word processor. To have more information about the GFMscript language see the *GFM Programmer's Guide* and the *GFM Language Reference Guide*.

### The GFMEngine

The GFMscript language is the 'bottom part' of the GFM environment. The software that interprets the GFMscript is a DCOM component called the GFMEngine. There are GFM Applications that will connect to the GFMEngine and send a GFMstream, or a stream of GFM commands, to the GFMEngine. The GFMEngine can in its turn connect to different GFM Modules.

### Modules

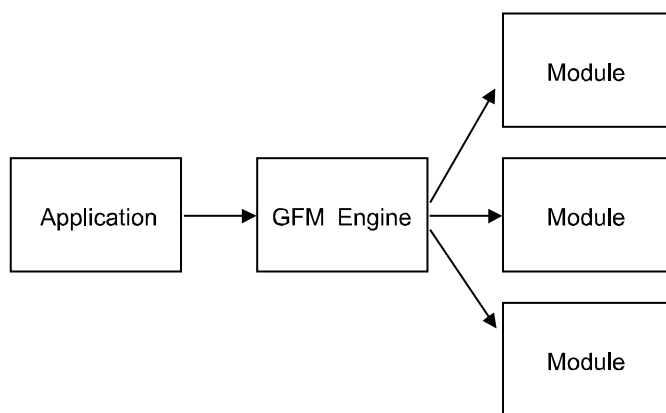
The GFMEngine can use other DCOM components to add functions and flexibility to the GFM environment. These DCOM components are called *GFM Modules*. An example of a GFM Module is the **GFMEPSAssemblerModule** that can mount any number of EPS files on a final

page and save the final page as a Postscript file for further processing. This modular architecture with the use of GFM modules makes the GFM-system very flexible and you can optimize your system exactly with the functions you want to add. And of course you will only pay for the functions that you need.

## Applications

As mentioned above is the GFM environment a modular system where each GFM Module will perform different tasks. Also are there GFM Applications. An application will use the GFM Engine as an DCOM server and send a GFM data stream to the GFM Engine. In this case can the GFM Engine become both a client and a server at the same time. An example of an application is GFM Queue Manager. GFM Queue Manager scans one or more directories and sends the file name together with a GFM script to the GFM Engine. The GFM Engine can then use different GFM modules when running the script.

The following figure illustrates how the applications and modules interact with the GFM Engine:



**Figure** How the applications and modules interact with the GFM Engine.

## Three Editions

The GFM Engine is available in three levels, or editions. *LITE*, *STANDARD* and *ADVANCED*. The software component is always the same but when you purchase a GFM Engine you will also receive a password that will enable the edition you have purchased. This means that if you want to upgrade to a higher edition you will receive a new password and the new edition will be enabled. With the password it is also possible to set a lifetime of the GFM Engine. This means that you for example can test the GFM Engine until a specific date and if you want to have a permanent password you will receive a new password that will change the lifetime of the GFM Engine.

### LITE Edition

The LITE edition is the first and lowest edition. The LITE edition can work with files and directories, change file names, copy files, delete files and directories and so on. It has also the possibility to create variables and functions to give you a great flexibility. The LITE version cannot use GFM modules or access databases or Postscript documents.

### STANDARD Edition

The second edition is the STANDARD edition. The STANDARD edition can use GFM Modules, access databases and work with Postscript documents. It can also work with image files that the LITE version can't.

## ADVANCED Edition

The top edition is the ADVANCED Edition. This edition can also do color conversions as converting an RGB image to CMYK or convert an CMYK image into a grayscale image.

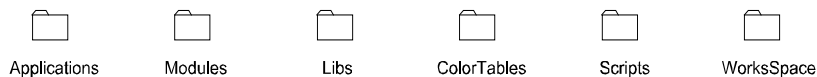
## Directory Structure

The GFM environment has a pre-defined directory structure that will be created by the installation program. During the installation you have to enter the GFM main directory. The default value is C:\GFM. The directory structure is created in the GFM main directory.

### GFM Main Directory

In the GFM Main Directory will the actual GFM Engine be installed. Also will the **GFM Module Installer** and the **GFM Module Configuration Tool** be in this directory. There will also be a number of configuration files in the directory. Some of these files will be discussed later in this document.

The following figure illustrates the structure after the installation of the GFM Engine. All directories will be in the GFM Main directory, usually C:\GFM, after the installation. When installing new modules and applications there may be additional directories created.



**Figure** The directory structure after the installation of the GFM Engine.

### Applications Directory

Each GFM application will be installed in its own directory under the Applications directory. For example the **GFM Queue Manager** application will be installed in the directory **Applications\QMan**. You don't have to create these directories since each application will have its own setup program and the setup program will do this automatically.

### Modules Directory

The same is for the modules. Each module will be installed in its own directory under the Modules directory. For example the **GFM Composite Converter Module** will be installed in the directory **Modules\CCM**. What directory the module will be installed under is determined by the installation script that is supplied with the module.

### Libs Directory

All libraries shall be in this directory. The STANDARD.LIB library will be in this directory after the installation.

### Color Tables Directory

All color tables shall be in this directory. After the installation will three default tables be in this directory.

### Scripts Directory

All your scripts shall be in this directory. After the installation will this directory be empty.

### WorkSpace Directory

The WorkSpace directory is a temporary directory used by many modules. Normally will this directory be empty.

## ConfigDirectory

All your configuration files for modules shall be located in this directory. After the installation will this directory be empty.

## RegistrySettings

When you have completed the installation of the GFM Engine will there have been a number of registry settings created. Many of these settings will change when you start to install modules and applications. There are one setting although that not will be changed and that is the GFM Main directory. The GFM Main directory shall never be changed. Details about these settings are documented in *Appendix C Technical Notes* .

As you install new modules and applications these may add items to the registry.

## AdditionalFiles

After the installation will there be a number of text and configuration files created. These files will be discussed in *Appendix C Technical Notes* . Note however that these files should not be removed if you don't know exactly what you are doing. If you are in doubt don't touch or remove any files. Also, some modules and applications may create their own files in the GFM Main directory. The details about that is covered in the appropriate documents.

# SECTION 2

## INSTALLATION

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The installation of the GFM Engine and its components is divided into two parts. The first part is to run a setup program that will copy all needed files to your hard disk. After the installation program you will start a program called INSTALL.EXE that has been installed by the setup program. During the execution of this program the directory structure will be created, necessary registry items will be created and a number of additional files will also be created. Also you will have to enter your password for the GFM Engine during this part.

## Before You Run Setup

Before you install the GFM Engine, you must make sure that your computer meets the minimum requirements prior to the installation. Also read the README.TXT file in the installation directory on the CD since it can contain changes done since this document was created.

### Requirements

The following hardware and software is required for the GFM Engine:

- Microsoft Windows NT version 4.0. The GFM-system has only been tested on English version.
- 80486 or higher microprocessor. Recommended is Pentium II 450 Mhz or better.
- A hard disk with a minimum of 50 MB available space.
- VGA or higher-resolution screen supported by Microsoft Windows
- 24 MB RAM. This is minimum for the application to start. Recommended is 128 MB or more.
- A mouse or other suitable pointing device.
- The GFM Engine password that was supplied with your GFM Engine package.

### The GFM Engine Package

The GFM Engine Package consists of the following items:

- The GFM Software. This software is supplied on a CD-ROM.
- The GFM User's Guide and System's Guide.
- The GFM Password Sheet.



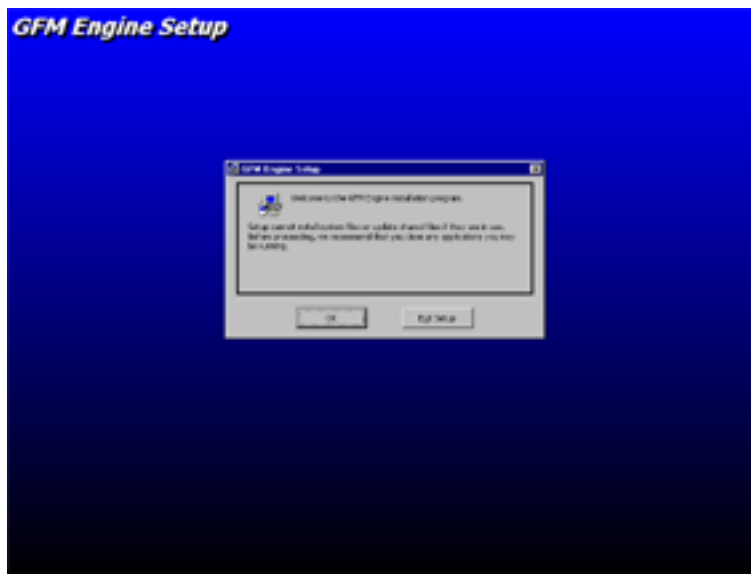
Once you are certain that you can meet all these requirements and that you have the GFM Engine Package you can start the installation.

## Part 1: The Setup Program

To install the GFM Engine and its components you shall use a setup program located in the directory \GFM\SYSTEM on the *GFM Server CD*.

To run the setup program to install the GFM Engine follow these instructions:

1. End all running applications
2. Insert the GFM Server CD into your CD-ROM and navigate to the \GFM\SYSTEM directory and start the setup program. After a few seconds the following menu will appear on your screen.



3. To abandon the setup click on **Exit Setup**. To continue the setup of the GFM Engine click on **OK** and the following menu will appear:

To install the GFM Engine click this button.



Click this button to change the directory where to install the GFM-Engine

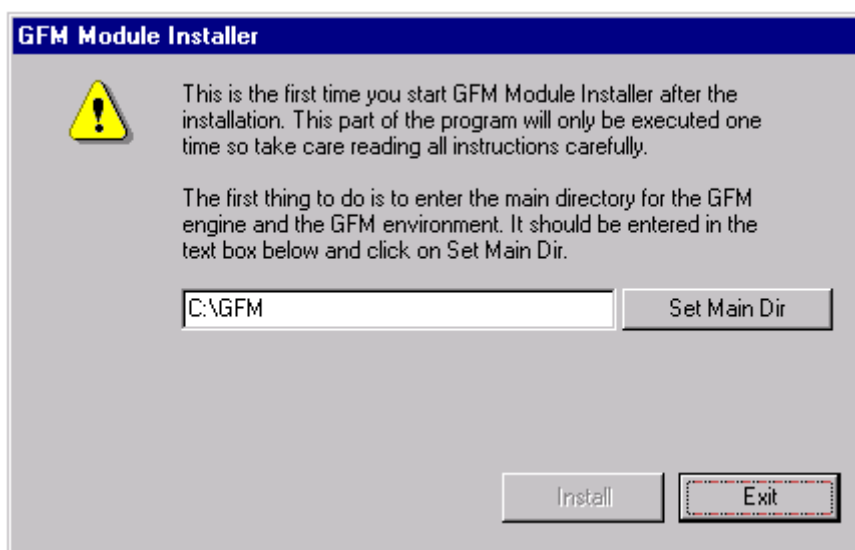
4. To accept the default destination directory, C:\GFM, click the button at the upper left corner. If you want to change the default directory click the **Change Directory** button (if you are changing the default directory). To abandon the installation click **Exit Setup**.

All files needed for the GFM-system will now be installed on your hard disk. After the first part you will now have to look on part 2 of the installation.

## Part 2: Run INSTALL

When the setup program has finished will there be a new directory, the one you entered as your destination directory in the setup program, on your hard disk. The default name is C:\GFM. In this directory there will be a program called INSTALL.EXE, or the GFM Module Installer, that you must run before doing anything else. The first time you start the INSTALL.EXE file in the GFM Main directory will the following menu appear:

1. Enter the GFM Main Directory exactly as you entered it in the setup program. The default directory is C:\GFM. Then click on **Set Main Dir** button and the following menu will appear:



2. Enter your password that you have received with your GFM Engine package in the text box and click on the **Set Password** button. The password is 20 character string that must be entered without any spaces exactly as it is written at your GFM Engine Password Sheet.



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**Note!** There is no check at this point that the password you have entered is the correct password. This check is done the first time you try to start the GFM Engine. If the password is incorrect and you must change it at a later time see the *GFM Systems Guide* Section 3 Registry Settings.

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3. Click on the **Install** button and the installer will create all necessary directories and files needed for the GFM Engine and its components. Also will there be a number of registry settings created. To abandon the installation click the **Exit** button.

### Entering the Serial Number

After the installation program has finished there is one more thing to do before you can use the GFM Engine and its components. You must give the GFM system its serial number as it is written on your *GFM Engine Password Sheet*. To do this follow these instructions.

1. Start the Registry Editor.
2. Navigate to the HKEY\_CURRENT\_USER\Software\VBAndVBAProgram Settings\GFM\Profile
3. Select Edit->Add Value
4. Set Value Name to **SerialNumber**
5. Set Data Type to REG\_SZ (the default value)
6. Click OK and in the String enter the serial number from your *GFM Engine Password Sheet*. The serial number is a six character string with no spaces.
7. Exit the Registry Editor

Now is the GFM Engine installed!

## SECTION 3

### GFMMODULE INSTALLER

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The GFMModuleInstaller is a program that you should use when installing GFM modules or if you want to update or remove a currently installed module. The GFMModuleInstaller is always located in the GFMMainDirectory (where the GFM Engine itself is located) as the file INSTALL.EXE. This program is installed during the installation process as described in the previous section.

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**Note!** Never try to copy a module directly from the diskette or CD-ROM. Since all modules are DCOM components they need to be registered before they can be used. The GFMModuleInstaller does this automatically during the installation.

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All modules will be installed in separate directories under the Modules directory. For example, the BitmapConverterModule will be installed in the directory Modules\BCM. You don't have to create or set this directory since it is defined in the *installationscript* for the module.

#### The Installation Script

Each module has an installation script that will be read by the GFMModuleInstaller. The installation script will tell the installer the module names, where to install, the connect name etc. The installation script must be placed in the same directory as the module and is always named as INSTALL.GFM. The format and structure of the installation script is documented in the *Writing Modules For GFM* document. The installation script will also update the file MODULES.GFM that is located in the GFMMain directory.

#### MODULES.GFM

The file MODULES.GFM contains information about all installed modules. The file is read by the GFMModuleInstaller when the program is started. Also, the file will be updated when you install a new module, update an existing module or remove an installed module. Details about this file are also documented in the *Writing Modules For GFM* document.

## Starting The GFM Module Installer

To start the GFM Module Installer double click on the file INSTALL.EXE in the GFM main directory. The following menu will then appear:



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**Note!** The module names can differ from the ones in the menu above depending on which modules you have installed.

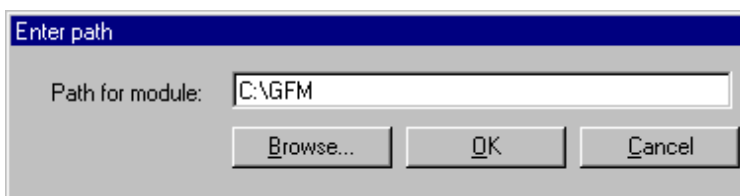
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## Installing A New Module

To install a new module follow these instructions

1. Select the **New Module** option in the list box.
2. Click on **Install**.

The following menu will appear:



3. Either enter the path in the text box or click **Browse** to select the directory where the module is located. Since most modules are saved on the *GFM Server CD* you will have to navigate to the directory where the module resides. To have more information about this see the documentation that is delivered with the module. When you have the correct path in the text box, click on **OK**.

Amenulike this one will be displayed, telling you what module that will be installed.



4. To install the module click on **Install**. To exit the installation click on **Exit**.

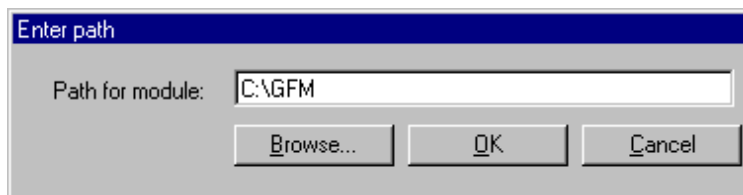
The installation script will now be read and executed by the GFM Engine. When it is done will the GFM Module Installer appear on the screen and the new modules shall be in the list box over installed modules.

### Updating An Existing Module

To update an existing module follow these instructions:

1. Select the module you want to update in the list box.
2. Click on **Update**.

The following menu will appear:



3. Either enter the path in the text box or click **Browse** to select the directory where the module is located. Since most updates are delivered on diskettes will the path be A:\. When you have the correct path in the text box, click on **OK**.

Amenulike this one will be displayed, telling you what module that will be updated.



4. To update the module click on **Install**. To exit the installation click on **Exit**.

The installation script will now be read and executed by the GFM Engine. When it is done will the GFM Module Installer appear on the screen and the updated modules shall be in the list box over installed modules.

### **Remove A Module**

To remove an existing module follow these instructions

1. Select the module you want to remove in the list box.
2. Click on **Remove**.
3. You will have a question if you are certain that you want to remove the selected menu. Select **Yes** to remove the module or **No** to cancel the removal of the module.

## SECTION 4

### GFMMODULE CONFIGURATION TOOL

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This section describes how to use the GFMModule Configuration Tool supplied as a separate program when installing the GFM Engine.

## Overview

Most GFM modules can be configured. This is done by setting the **SourceFileName** property to the configuration filename and the **Action** property to 5. The module will then load the configuration file. The module is responsible for the reading and parsing of the file. To see if a module can be configured or not read the **AllowConfigure** property. If the property contains the value 1 can the module be configured, if the value reads 0 can the module not be configured.

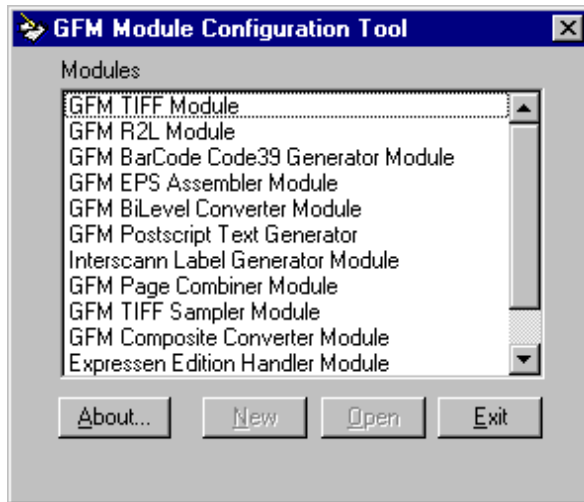
If a module can be configured must also have a configuration menu. The configuration menu is called by setting the **Action** property to 1. Before doing this you must set the **SourceFileName** to the configuration filename. The module will then load this file and set the menu according to the settings in the configuration file. To create a new configuration you shall set the **SourceFileName** to *NewFile* and the **DestinationFileName** to the new configuration filename. The menu shall then be set to contain its default values. When clicking OK shall the new configuration file be created.

With the GFMModule Configuration Tool you can configure all your configurable modules. The program will read the MODULES.GFM file in the GFMMain Directory and view all modules in a list box. You can then select a module and choose to load an existing file or to create a new configuration file. If the module can't be configured will the program tell you this. Later in your script can you load the files you have created.



## Starting The GFM Module Configuration Tool

To start the GFM Module Configuration Tool double click on the file CONFIG.EXE in the GFM main directory. The following menu will appear on your screen.



## Create A New Configuration

To create a new configuration follow these instructions:

1. Select the module you want to configure in the list. If the module can be configured will the **New** and **Open** buttons be enabled. If the module can't be configured will the buttons remain gray.
2. Select the **New** button and you will be able to enter the name and location of the new configuration file with standard menus. It is recommended that you save all configuration files in the CONFIG directory under the GFM main directory.
3. Select how you want to configure the module and click the **OK** button to save the configuration otherwise select **Cancel**. How to configure the module is documented in the manual that shipped with the module.

## Edit An Existing Configuration

1. Select the module you want to configure in the list. If the module can be configured will the **New** and **Open** buttons be enabled. If the module can't be configured will the buttons remain gray.
2. Select the **Open** button and you will be able to find the name and location of the existing configuration file with standard window techniques.
3. Select how you want to configure the module and click the **OK** button to save the configuration otherwise select **Cancel**.

# APPENDIX A

## ERROR MESSAGES

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This appendix is a list of overall errors generated by the GFM Engine.

### ErrorListForGFMEngine

Error	Description
0	Noerror. The standard value of the error condition.
1	Error: stack underflow.
2	Error: typecheck. Command: 'command'
3	Error: no module connected. Command: 'command'
4	Error: no current database. Command: 'command'
5	Error: command error!. Command: cmd
6	Error: module already connected. Command: 'command'
7	Error: cannot create connection to module. Command: connect module
8	Error: unknown error. Command: create directory
9	Error: field name not found in table. Command: db get field
10	Error: table not found. Command: 'command'
11	Error: unknown error. Command: db set table
12	Error: the record already exists. Command: db update
13	Error: No valid key. Command: def
14	Error: File: 'filename' not found. Command: delete file
15	Error: File: 'filename' is write protected. Command: delete file
16	Error: Unknown parameter. Command: init
17	Error: Library/File not found. Command: run
18	Error: String too short. Command: mid string
19	Error: file not found. Command: move file
20	Error: file already exists. Command: move file
21	Error: not a valid resolution. Command: new resolution
22	Error: database error!. Command: open db Error number: 'ErrorNumber' 'ErrorText'
23	Error: No files specified. Command: open image file
24	Error: no PostScript file opened!. Command: 'command'
25	Error: postscript error!. Command: ps open file
26	Error: invalid interpolation method. Command: set interpolation method
27	Error: invalid parameter. Command: set max black ink
28	Error: Not a valid parameter. Command: show progress bar
29	Error: invalid parameter. Command: verbosity
30	Error: Unknown command: 'command'
31	Error: invalid command window style. Command: set cmd window style
32	Error: interrupt. Command: user request.
33	Error: invalid overwrite on move mode. Command: set overwrite on move
34	Error: invalid access. Command: file

35	Error:filenotfound.Command:file
40	Error:\$syserrorCommand:movefile
255	Endjobcommanddetected.ThiswillnotputtheGFMEngineinError

# APPENDIX C

## TECHNICAL INFORMATION

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This appendix coverstechnicalinformationabouttheGFM-systemandtheGFMEnginein particular.