



# gvSIG Mobile Pilot (BN275)

## Installation manual. Version 0.3





**Conselleria de Infraestructuras y Transporte**

C/ Blasco Ibáñez N° 50 ,

46010 VALENCIA

E-Mail : [gvsig@gva.es](mailto:gvsig@gva.es)

Web: [www.cit.gva.es](http://www.cit.gva.es)

Project Web: <http://www.gvsig.gva.es>

All names of programs, operating systems, computer hardware etc. .., that appear in this manual are trademarks of their respective companies or organizations.

© 2007 Conselleria de Infraestructuras y Transporte  
This manual is distributed under license GNU GPL2.



## Table of contents

- Introduction
- Application download
- Quick gvSIG Mobile install
- The IBM J9 virtual machine
- The PhoneMe virtual machine
- Installing PhoneMe virtual machine
- installing the export extension on gvSIG Desktop



## Introduction

**gvSIG Mobile** is a software developed in Java to display and manage geographic information in mobile devices (hereafter PDA). This document presents the installation process of gvSIG Mobile and a gvSIG Desktop extension to export projects to gvSIG Mobile.

gvSIG will be named *gvSIG Desktop* in this document in order to differentiate with gvSIG for mobile devices.



## Application Download

To download gvSIG Mobile Installer, please go to the **gvSIG** web site.

<http://www.gvsig.gva.es/index.php>

Next is a picture about how the site looks like.



gvSIG Web site.

Next step is to access **gvSIG Mobile** section, and to look for the installer (see next point).



gvSIG - Conselleria de Infraestructuras y Transporte

miércoles, 15 de octubre de 2008

Correo | Contacto | Mapa web | Valencià | English | 中文

gvSIG > gvSIG Mobile > Todas las versiones > Descarga > Piloto gvSIG (BN44) > Descarga

**gvSIG**

- Saludo del conseller
- ¿Qué es gvSIG?
- Conoce el proyecto
- gvSIG Desktop
- gvSIG Mobile**
- Descargas
- Documentación
- Espacio de comunicación
- FAQ's - Preguntas más frecuentes
- Boletín de noticias
- Enlaces de interés
- Glosario
- gvPONTIS: Proyecto de Migración a Software Abierto

**gvSIG Mobile**

- Información general
  - Descripción
  - Créditos
- Última versión estable
  - Piloto gvSIG Mobile (BN44)
- Todas las versiones
  - Notas de versión
  - Descarga**

**Piloto gvSIG (BN44)**

- Notas de versión
- Instrucciones de instalación / desinstalación
- Requerimientos del sistema
- Requisitos previos
- Descarga**

**DESCARGA**

Ejecutables		Manual
	Binarios	
gvSIG Mobile BN44	<b>gvSIG_Mobile-BN44-Arm.CAB</b> (3.75 MB)	Manual usuario: PDF (1.33 MB) Manual instal.: PDF (0.7 MB) PDF (0.7 MB) PDF (0.9 MB)

Para intercambiar datos entre gvSIG Mobile y gvSIG Desktop es necesario instalar sobre éste último la extensión de sincronización con gvSIG Mobile.

**SERVICIOS**

- Ponencias
- Colaboraciones
- Descarga de gvSIG
- gvSIG Mobile
- Manuales
- Notas de versión
- Cursos y tutoriales
- Hoja de ruta

**UNIÓN EUROPEA**  
FONDO EUROPEO DE DESARROLLO REGIONAL  
"Una manera de hacer Europa"

Número de accesos:  
16876649  
(des de 3/8/2004)

gvPONTIS  
Conselleria de Infraestructuras y Transporte  
4<sup>as</sup> Jornadas Internacionales SIG  
OSGeo

### Downloading application manuals and installer.

It's also recommended to download the application manuals (even this one). There are download links in the same web site.

### Selecting the installer

On the download website, can see several installers. You must select one of them in accordance with your device.

Next, you can see the installer names:

gvSIGMobile-0.2b-build\_213-WM2003-Arm-withPhoneMe.CAB where:

- *0.2a* means the software version.
- *build 213* it's the build number.
- *WM2003-Arm* Tell us which Operating System is it made for.
- *withPhoneMe* If the PhoneMe JVM is included with the installer.

gvSIG Mobile runs on Java J2ME CDC Personal Profile JVM. It have been tested



using IBM WEME (J9) and PhoneMe Advanced.

### Note:

PhoneMe advanced is under development, It is NOT recommended use it on production systems because it has stability problems.

### Note:

IBM WEME (J9) it's a Java Virtual Machine licensed by IBM , if you are interested on use it, you must get in contact with IBM.

Those are the present available alpha version 0.2 (pilot 2) installers:

- gvSIGMobile-0.2a-build\_261-WM2003-Arm-withPhoneMe.CAB
- gvSIGMobile-0.2a-build\_261-WM5-Arm-withPhoneMe.CAB
- gvSIGMobile-0.2a-build\_261-WMX-forJ9.CAB
- gvSIGMobile-0.2a-build\_261.zip

Next, each installer content are explained, if after read it you have any doubts about which one choose, please install gvSIGMobile-0.2a-build\_261-WM2003-Arm-withPhoneMe.CAB.

### ***gvSIGMobile-0.2a-build\_261-WM2003-Arm-withPhoneMe.CAB***

Installs gvSIG Mobile and the PhoneME Advanced JVM on Windows Mobile 2003 based devices. It includes the Java Virtual Machine, and you don't need another software to use gvSIG Mobile.

### ***gvSIGMobile-0.2a-build\_261-WM5-Arm-withPhoneMe.CAB***

Installs gvSIG Mobile and the PhoneME Advanced JVM on Windows Mobile 5 and Windows Mobile 6 based devices. It includes the Java Virtual Machine, and you don't need another software to use gvSIG Mobile.

### ***gvSIGMobile-0.2a-build\_261-WMX-forPhoneMe.CAB***

Installs gvSIG Mobile on Windows Mobile based devices. This file includes a executable file which look for the PhoneME Advanced Jave Virtual Machine on the root PDA device path and on the root path on the memory card to get easier the application launcher. To use this installer you must to have installed the PhoneME Advanced JVM on the device previously.

### ***gvSIGMobile-0.2a-build\_261-WMX-forJ9.CAB***

Installs gvSIG Mobile on Windows Mobile based devices. This file includes a



## gvSIG Mobile

---

executable file which look for the J9 Java Virtual Machine on the root PDA device path and on the root path from memory card to get easier the application launcher. To use this installer you must to have installed J9 JVM on the device previously.

### ***gvSIGMobile-0.2a-build\_261.zip***

Includes the gvSIG Mobile files without installer only. This version is to use gvSIG Mobile under other Operating Systems or with another JVM. To run the application you have to be able call his own JVM, passing the right parameters. It's only expert user's recommended.





## Quick gvSIG Mobile Install

The present chapter explains how to install gvSIG Mobile.

gvSIG Mobile Requires a Java Virtual Machine (VM) to run. gvSIG Mobile have been tested on IBM's J9 and SUN's PhoneME Advanced.

There are three different installers:

- gvSIG Mobile with PhoneMe included. Includes gvSIG Mobile and PhoneME VM. It's the easiest and quickest option.
- gvSIG Mobile J9 compatible. gvSIG Mobile version for J9 VM.
- gvSIG Mobile PhoneMe compatible. gvSIG Mobile version for PhoneME VM.

If you want to use an installer without included VM, you will have to install it separately.

### NOTE:

- If installed VM and gvSIG Mobile installer don't match, strange behaviours may happen.

## ***gvSIG Mobile with included SUN PhoneMe Java Virtual Machine Quick Install***

### **First Step: Copy installer to the PDA Device**

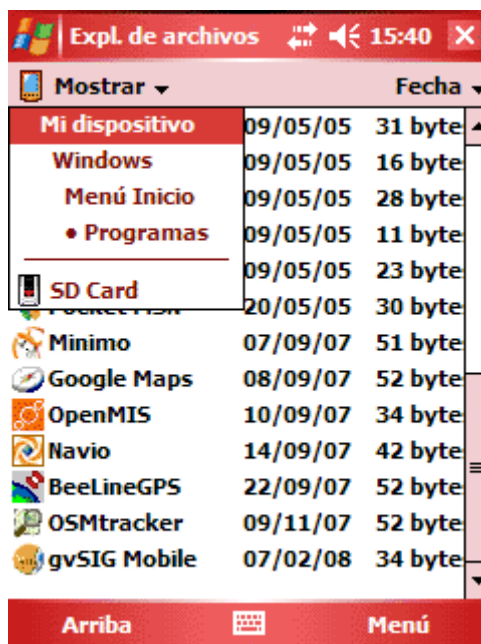
Next, the new downloaded installer must be copied to the PDA memory. There is different ways to do that depending on the OS. On the following pictures the installation it's done from *Windows XP with ActiveSync 4.5* and *WM 5*.

### **Second Step: Install gvSIG Mobile into PDA**

To start the installation, use the PDA File Explorer and navigate to the place where the **gvSIG\_Mobile\_with\_PhoneMe.BNxx.Arm.CAB** installer was copied. Now click on it.

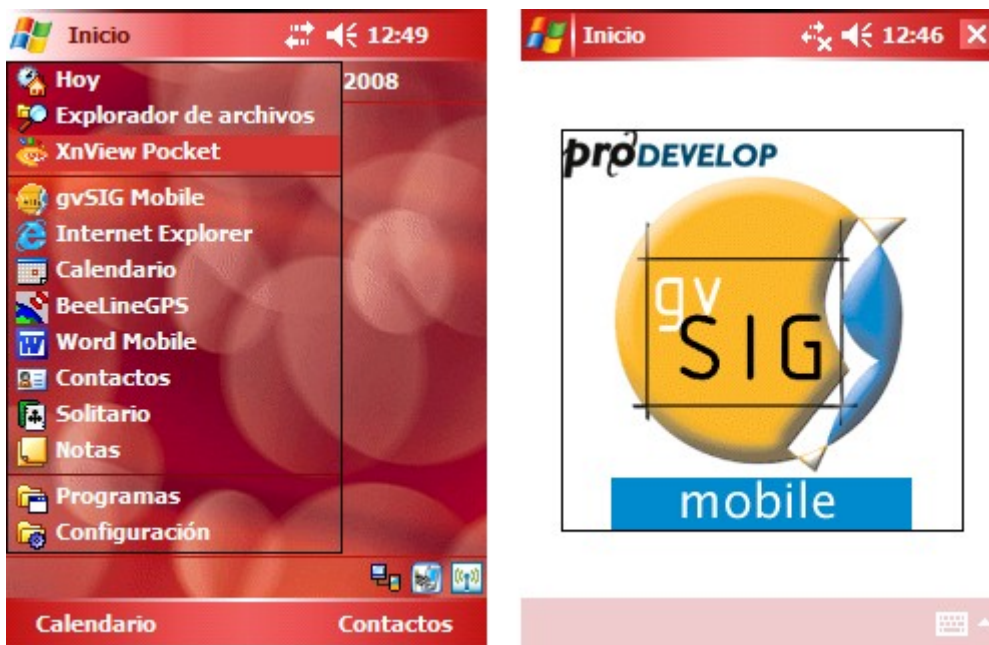
In there is a secondary storage (SD expansion memory, etc.), the installation process ask if we want to install it on the Device, or the secondary memory. You can choose both but installation on the PDA root is recommended.

gvSIG Mobile and PhoneMe will be installed and a new **gvSIG Mobile** link will be created on the programs menu.



gvSIG Mobile Init.

Now just tab on **gvSIG Mobile.exe** to run the application



Start gvSIG Mobile.

There is a **log file** that logs the launch process and shows the potential errors. This file is in the installation folder and is named **gvsig\_mobile\_launch.log**.



## The IBM J9 virtual machine



Currently, *gvSIG Mobile* run correctly on **J9 virtual machine** developed by **IBM**. Previous *gvSIG Mobile* pilot version, which runs only with this virtual machine exclusively, was be able to download the JVM from the IBM web. Unfortunately, the download link isn't available anymore, thought the compatibility with the IBM JVM is maintained, isn't possible shows a installation process to follow in this manual. If you've got an installation of this JVM, you don't need download and install anyone, even if you are thinking about get this IBM JVM, gvSIG Mobile is compatible.

Once JVM IBM J9 is installed on the device, following the next steps to finish the installation of gvSIG Mobile IBM J9 version.

Download from the gvSIG web, if it wasn't done before, in the previous step, the gvSIG installer IBM J9 compatible.

- *gvSIG\_Mobile\_to\_J9.BNxx.Arm.CAB* **Download it to obtain the right behavior to J9**

To conclude the gvSIG Mobile install, follow the **Second** and **Third** previous chapter steps.



## The PhoneMe virtual machine



Nowadays, the **PhoneMe Advanced** project is the new **Sun** JVM for mobile devices in developing process. This JVM is developed by *Hinkmond Wong y Davy Preuveneers*. In the *gvSIG Mobile* project, it have been working closer with *Davy Preuveneers*, who develop the JVM *CDC with Personal Profile*.

Unlike of **J9**, the **IBM** JVM, **PhoneMe** has GPL license and it's free distributed. This new JVM, can be installed separately from *gvSIG Mobile*, although it's distributed one *gvSIG Mobile* installer which includes the **PhoneMe** virtual machine.

The separately installation option, allows update the JVM as new versions are coming out, without having to uninstall *gvSIG Mobile*.

On the other hand, the *gvSIG Mobile* with the included **PhoneMe** JVM installation, guarantees the installation of the JVM version tested by the *gvSIG Mobile* developers.

The *gvSIG Mobile* application uses *PhoneMe CDC with Personal Profile*, it's possible uses this JVM on PDA's and SmartPhones with *Windows Mobile* Operating Systems (henceforth OS).

### NOTE:

- The *gvSIG Mobile* compatibility with the several *Windows Mobile* (henceforth *WM*) versions starts from *WM 5*.
- For *WM 6* versions the correct software working depends on the JVM developing for the SO to a great extent.
- The SO *WM CE* and *WM 2003* versions, now older and limited, have some unavailable capabilities, some others couldn't be 100% correct performance, so it isn't assured, the compatibility to these SO.
- New compatibilities with another SO will be added, like *Android* from **Google** compatibility for instance, and also more limited



versions for *CLDC* in common mobile devices.

## Installing PhoneMe virtual machine

If it's made the decision of install the **PhoneMe** JVM separately from *gvSIG Mobile* installation, next there are some details about the steps to download and install on the device.

### First Step: Download the JVM

PhoneMe has a web to download the **CAB** file installers for *Windows Mobile*. The web offers several JVM supporting different Operating Systems and performances. Have to select the correct installer for the device OS where the application will be installed. For *gvSIG Mobile* are allowed the JVM since the *WM2003* generated for.

Furthermore, there are differences between several JVM, based on the device and performance. To be able to execute *gvSIG Mobile* is needed the *PhoneMe CDC with Personal Profile* JVM, one of the most performance to mobile devices.

Select the correct JVM and download it.

Go to Davy's Web site to do that:

<http://www.cs.kuleuven.be/~davy/phoneme/downloads.htm>

The web looks like the next picture showed.



## phoneME for Windows CE, PocketPC and Windows Mobile

The open source Java ME application platform for your windows mobile phone

[Home](#) | [Sources](#) | [phoneME Feature](#) | [phoneME Advanced](#) | [Screenshots](#) | [Other](#) | [Downloads](#) |

For those of you who do not feel like compiling the software yourself, I have provided development builds of the different profiles for Windows Mobile and Windows CE. Note that a typical Windows CE image is customized by the hardware manufactures to only include the software components they need. It is possible that the builds below do not work if the DLL requirements cannot be fulfilled. These builds typically need at least `AYGSHELL.DLL` and `GX.DLL`.

Other issues are described at the following wiki page: <http://wiki.java.net/bin/view/Mobileandembedded/PhoneMEAdvancedWindowsMobile>

### Windows Mobile 6 and higher

For now, use the Windows Mobile 5 builds.

### Windows Mobile 5

- phoneME Feature - CLDC rev14328 (zip) (cab)
- phoneME Feature - MIDP rev14328 (zip) (cab)
- phoneME Advanced - CDC b91 (zip) (cab)
- phoneME Advanced - Foundation b91 (zip) (cab)
- phoneME Advanced - Personal Profile b91 (zip) (cab) ← **Download!!!**
- phoneME Advanced Dual Stack - Foundation b91 (with MIDP support) (zip) (cab)

Note that for the pMEA PP build, the AWT will not work reliably whenever one of the unimplemented stubs is used.

### Windows Mobile 2003

PhoneMe download website.

## Second Step: Synchronize with PDA Device

Next, the new downloaded installer must be copied to the PDA memory. There is a manner to do that from PC through the PDA depending on the used OS. On the following pictures the installation it's done from *Windows XP with ActiveSync 4.5* to *WM 5*.

## Third Step: Install JVM on the PDA

To Begin the installation, search on the PDA File Explorer, the place where the **CAB** installer was copied, and run it.

In the case of some memory extern device is available (SD expansion memory, etc..), the installation process ask us about if is wanted to install on the Device, or the secondary memory instead of it, to save device main memory.

Automatically, the JVM is installed at the device, making a new folder named



*phoneme* and now allows running the JVM.

Once JVM SUN PhoneMe is installed on the device, following the next steps to finish the installation of gvSIG Mobile PhoneMe version.

Download from the gvSIG web, if it wasn't done before, in the previous step, the gvSIG installer PhoneMe compatible.

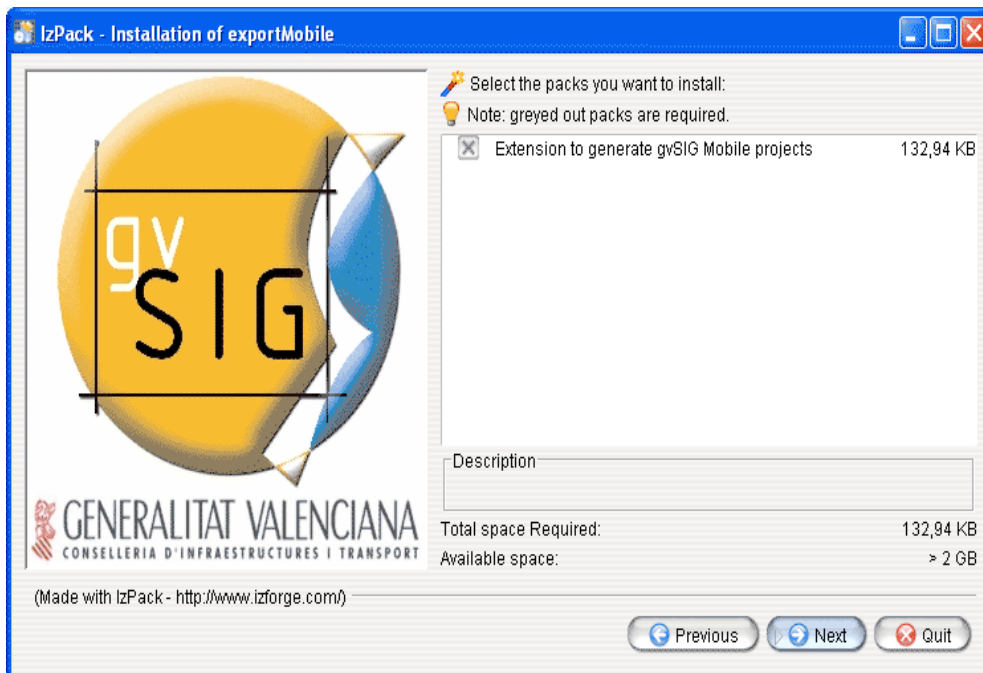
- *gvSIG\_Mobile\_to\_PhoneMe.BNxx.Arm.CAB* **Download it to obtain the right behavior to PhoneMe**

To conclude the gvSIG Mobile install, follow the **Second** and **Third** steps from the **Quick gvSIG Mobile Install** chapter.



## Installing the export extension on gvSIG Desktop

The pilot is complemented with an extension to gvSIG Desktop which allows the user to export vector and raster data from a gvSIG Desktop view into a folder, ready to be sent to the PDA.

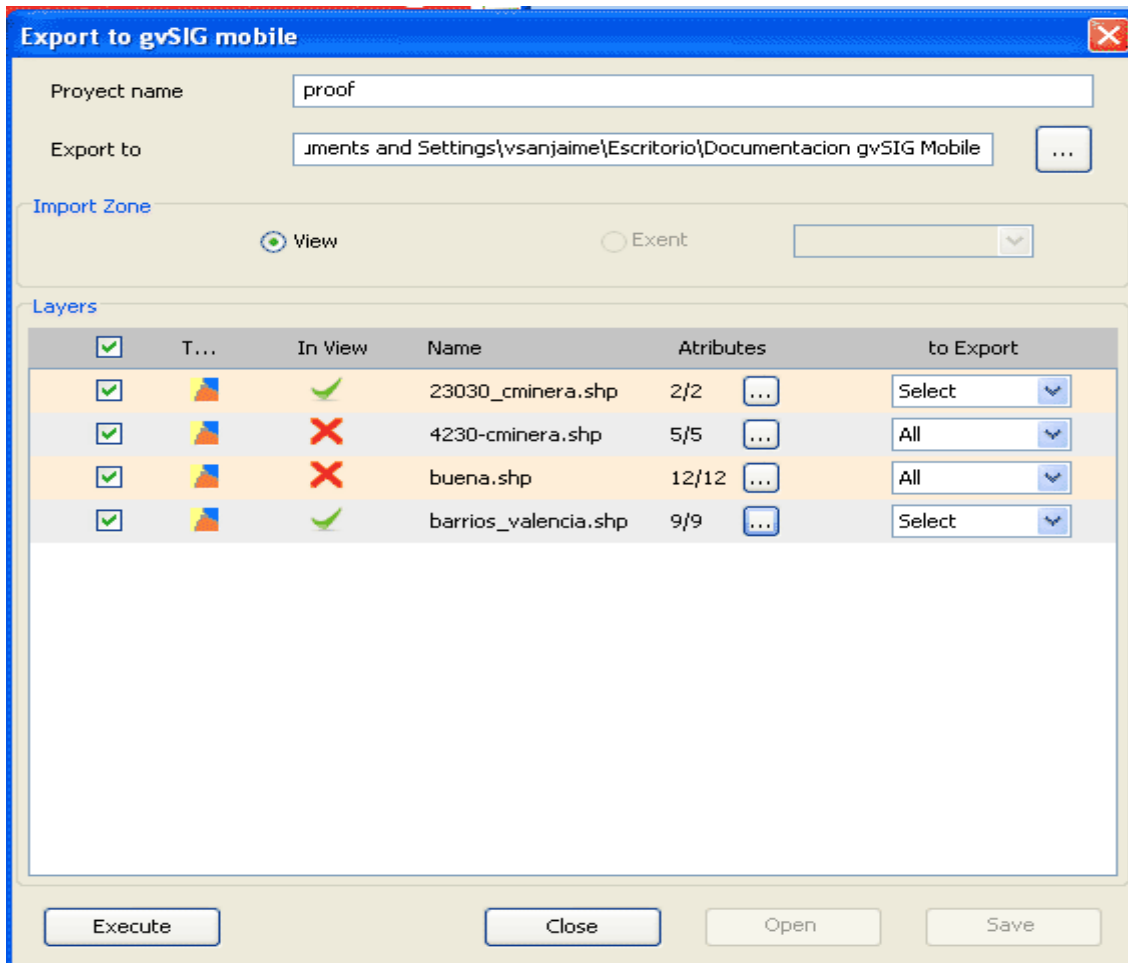


Installer extension.

The installation process is similar to any other extension of gvSIG Desktop. Using an easy multiplatform installer, the extension is added to an installation of gvSIG Desktop.

This extension is compatible with gvSIG **1.1** and later revisions.





Main window exporter.



GNU GENERAL PUBLIC LICENSE  
Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.,  
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA  
Everyone is permitted to copy and distribute verbatim copies  
of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the



program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

### GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
- c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a



notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

- a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a



special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.



It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

### NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE



PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

### How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>
```

```
This program is free software; you can redistribute it and/or modify  
it under the terms of the GNU General Public License as published by  
the Free Software Foundation; either version 2 of the License, or  
(at your option) any later version.
```

```
This program is distributed in the hope that it will be useful,  
but WITHOUT ANY WARRANTY; without even the implied warranty of  
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the  
GNU General Public License for more details.
```

```
You should have received a copy of the GNU General Public License along  
with this program; if not, write to the Free Software Foundation, Inc.,  
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.
```

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) year name of author  
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.  
This is free software, and you are welcome to redistribute it  
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate



## gvSIG Mobile

---

parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program
`Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.