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Multiparameter Numerical Medium for
Seismic Modeling, Planning,
Imaging & Interpretation QC
Worldwide

Installation of Tesseral Products

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1. Tesseral Products

Tesseral Technologies Inc. with latest development of its products and planned next releases will present now available *Tesseral-2D* and *Tesseral-Pro* packages as a part of:

Tesseral suite of interactive modeling solutions for seismic survey planning, data processing and interpretation.

Different levels-editions (variants) of **Tesseral workplace for Windows**:

- *Tesseral Intro* (Standard) edition of *Tesseral*
- *Tesseral Pro* (Professional) edition of *Tesseral*
- **Tesseral 2D** package will be supported and upgraded as a separate *Tesseral* product.

Each of above products has graphical user interface allowing building the model, run modeling, view and interpret results, etc.

To the end of 2011 **Tesseral Pro is supplied with Tesseral 2D package** as a necessary part for using of its some key functionalities.

Each of above products can run in **Single-user** or **Windows network** variants (of licensing).

It is planned that from 2012 users of *Tesseral-2D* will have a possibility to replace **Tesseral-2D** package with its close equivalent **Tesseral-Intro (Standard)** based on new programming architecture now available in *Tesseral-Pro*. *Tesseral-Intro* will have all functionalities of the previous *Tesseral-2D* package. **Tesseral-Pro (Professional)** from this planned date will also include all key functionalities now provided with *Tesseral-2D* package.

With new advances of multiple processors in PC hardware each of (above mentioned) editions of Tesserall is also allowing to **run parallel computations on local Windows computer** (Tesserall-Local engine for parallel computations on local multicore PC). Tesserall license also includes number of parallel processors which can be used for such speeding up of massive modeling and seismic imaging computations.

As a Windows network variant of speeding up massive modeling and seismic imaging computations is provided:

- **Tesserall Farm** engine *for parallel computations in Windows network and on Windows clusters*, which have all 2D modeling and processing capabilities. As option (additionally licensed) it provides 3D-3C modeling with support of 3D anisotropy and fracturing basing on 2D medium model (2.5D modeling). *Tesserall-Farm* is licensed separately (with alpha-digital or local hardware key).
- As a Linux variant of speeding up massive modeling and seismic imaging computations is provided:
- **Tesserall LC** engine *for parallel computations on Linux clusters*, which has all 2D modeling and processing capabilities. As option (additionally licensed) it provides 3D-3C modeling with support of 3D anisotropy and fracturing basing on 2D medium model (2.5D modeling). *Tesserall-Linux* is licensed separately (with alpha-digital key).

To find more detailed description of **available selection of Tesserall products**, please, see advertizing document [...Products of Tesserall Technologies.pdf](#).

2. Installation

- ✓ **Installing from supplied CD** : Insert CD-ROM into your CD-ROM drive and look for *Setup* (or executable with similar name) file or such file(s) in the *SetUp/* folder.
- ✓ **Installing from downloaded file**: launch **setup.exe** (or executable with other similar name).
- ✓ During the installation of the **Tesserall** package, a few short questions will appear on the screen that the user must answer for the installation to continue.
- ✓ It is recommended to **use uninstall previous versions of the same variant** before installation of a new one. **Installing to the same directory structure** as a previous version without erasing the directories **is not recommended** you may encounter problems due to old configuration files. Latest installation of particular package variant requires uninstall previous corresponding versions. To uninstall package, you must activate icon **Control Panel | Add/Remove Programs**, choose item **Tesserall-<variant>** from the list and press button **Add/Remove**, **after delete corresponding shortcuts (Desktop and Tesserall Program folder) and the program files itself (Tesserall Program Folder)**.
- ✓ Uninstalling previous version (of a variant) does not destruct licensing permissions for corresponding versions with the same licensing period and level.
- ✓ Installation of the **Tesserall** package makes available for use Windows workplace product, and, if applicable, corresponding computational modules on the PC units in the network or on the cluster. For more details about installing **Tesserall** package variants and utilities installation please refer to supplied User Documentation.

- ✓ **After installation is successfully done**, by using menu *Start/ All Programs/ Tesseral* you can access the **Tesseral** package executable (.exe). You can create its shortcut on your desktop.
- ✓ Installation CD also contains folders */Documentation* and */Tesseral Data*.
- ✓ You are advised to copy folder */Documentation* in the programs folder (usually *<c>:/ Tesseral Technologies*) and create shortcut on your desktop of its index file "**_ Index of Tesseral 2-D User Documents_.pdf**" containing links to all User Documentation.
- ✓ Folder **/Tesseral Data** is a Tesseral database and contains a set of prebuilt models, which can be useful at initial learning and working with the package.
- ✓ The first time launched program is initially producing **the Registration dialog**. Using of the package requires obtaining license from the *Tesseral Technologies Inc. Licensing for evaluation period* usually is done with alpha-digital key.
- ✓ For more details relating to licensing and registration please, see [...Licensing of Tesseral Products.pdf](#).
- ✓ From company's website www.tesseral-geo.com page */Downloads* you can obtain latest (by date) versions of the Tesseral products.

✓ **SQL Server Installation (Important!)**

SQL Server is a standard program component provided by Microsoft for database services. There are different variants of SQL Server. **Tesseral-Pro** requires SQL Server 2005 Express Edition (or higher) which is included in the installation package. Also SQL Server 2005 Express on **Windows Vista** must be installed under user that is a member of **Administrators** Group Account.

However, there are other prerequisites that may be required on some operation systems. Provided with this installation is a freeware variant. If installation of SQL Server cannot find it in Windows system, only in this case it is proposing to install one provided as a part of this installation. In some cases missing component must be downloaded from company's website. In this case please, read corresponding message appearing during installation:

- Microsoft Native Client - is a core of "general" interfaces for databases, in this case - an addition to SQL server. It is not a standard component of Windows, but frequently may already be installed for other programs.
- .NET (DotNet) - is a system program core utility interpreting low level macro commands for working with own (logical) objects and OLE-objects. .NET is a part of latest versions of Windows.

For downloads of above components and more information you can use company's website:

1. .NET 2 (redistributable) package (for 32-bit or 64-bit systems);
2. Microsoft Native Client (for 32-bit or 64-bit systems).

[For more details, please refer to specific User Documentation.](#)

3. The Single-User licensing variant

is installed and registered on one computer (Single-user) and after that it is working on one computer only.

4. The Network licensing variant

is installed and registered on one computer (server) and after that it is working on a network and is used (without additional registration) by the several other computers (clients) connected to a network. The maximum number of simultaneously working clients is limited at registration (it is coded in a key).

4.1. Technical features

- ✓ The Server computer must be really a server, i.e. work under control of OS Windows XP/Vista/7 and later. It is connected with realization of system of registration in the form of service and caused by requirements of uniqueness (if there it was a simple program, it would be possible to establish on one server computer in different folders of 100 packages and to use each folder for the separate client). The note: it is not obligatory to use on a server variant of Windows with suffix "Server". "Workstation" and "Professional" also would work. The Tesseral -CS- can run also on the PC functioning in this installation as server.
 - ✓ Number of clients incorporated in the licensing key - from 1 up to 64.
 - ✓ Please install the program under an administrator's account. The installation runs server, shares its folder and writes to registry. Register the program under an administrator's account as well.
 - ✓ ***It is strongly recommended not to install the program in "Program Files"*** and avoid system disk (C:) if possible. Windows specially defends system areas and sharing folders there can cause writing errors messages.
 - ✓ After its installation on the PC selected as a "server" run "Registration" (see [...Licensing of Tesseral Products.pdf](#)).
1. After the program installation and registration you can run Tesseral.exe from either the server PC or other "client" PCs of the server's local network as previously. But now you need to set up each the client.
 2. Find Tesseral.exe installed on the server and create a shortcut/link to the program from either desktop or program menu of the client PC. In some cases (e.g. for Windows Vista) automatical folder sharing is completely disabled. If you can't access the program file via the network return to the server and share the program folder manually.
 3. Install VS 2005 redistributable pack (see [SQL Server Installation](#)).
 4. Run the program. At first run it will propose you to select a local folder for the client stuff.

4.2. Details of realization

- ✓ Folder in which is installed *Tesseral* -<variant> must have sharing attributes: *a) share this folder on the network, b) allow network users to change files in this folder*. At installation (if are used default installation program folder options) those attributes are set automatically. If the system requires – *indicate computers allowed to share this folder*. Sharing attributes are installed using the folder "Properties" dialog "Sharing" page.
- ✓ Without this service, network licensing does not work.

4.3. Principle of work

The program (*Tesseral* <variant>) on a regular basis updates the code and checks the reciprocal key

received from service (the code is made time-dependent). If this change does not occur during some period, service releases the channel. Start of the new client is possible only at presence of the free channel.

4.4. Troubleshooting

- To manually uninstall CS service use “Run” start menu item, go to the program folder (command string prompt is showing current directory) and run
KeySvr.exe -u
- To manually install service (it is normally installed automatically in the end of the Tesseral 2-D – CS- installation) run
KeySvr.exe -i
- ✓ You can also reach the Support Service by support@tetrale.com.

5. Installation of Tesseral-Farm Windows Computation Engine

Tesseral Farm Parallel Computation Engine allows to implement clusters for high-performance parallel full-wave modeling on Windows XP/Vista/7 and later computers. Compared to numerous Unix-based analogs, clusters organized with *Tesseral Farm* require significantly less preparation efforts, flexible connection topology, and unmatched scalability. After connecting computers (*Nodes*) to a local network and defining some (or all) computers’ cluster membership, you can run models against *Tesseral Farm* to distribute the workload between cluster members, control calculations on individual *Tesseral Node* computer, and collect the result.

For details, please see [...Tesseral Farm Windows Parallel Computationspdf](#).

6. Installation of Tesseral LC Linux Cluster Computation Engine

Tesseral LC Linux Parallel Computation Engine is designed to run on a 32-bit or 64-bit Cluster architecture, running a number of Linux versions. It allows to implement clusters for high-performance parallel full-wave modeling on Linux Clusters.

For details, please see [...Tesseral LC Linux Parallel Computationspdf](#).