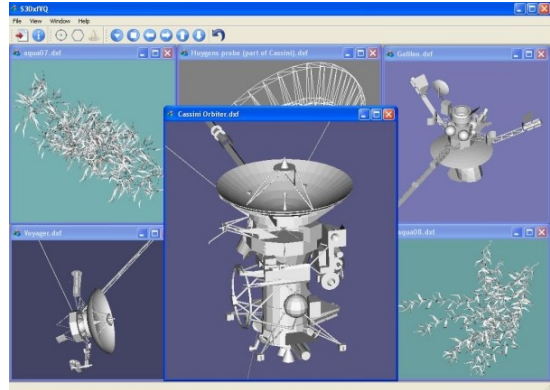


## S3DxfVQ v.2.1.

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S3DxfVQ application is the "Sample 3-dimensional Dxf-file Viewer based on Qt". This software makes processing and viewing of the main entities of 3D graphical data, stored at DXF-files.

S3DxfVQ application has the following features:

- The using of the extended possibilities of Qt and Open Graphics Library (OpenGL);
- Ability to work with several DXF-files (or different views of the same drawing) simultaneously;
- Possibility to use the command line for selecting the necessary DXF-file;
- Easy managing with opened images and navigation through them;
- Representing of the basic properties of drawings by means of main entities;
- Fast rotation around axes, easy changing of the actual views of opened images;
- Quick scaling and translation of drawings;
- Presence of several kinds of rendering of images;
- Ability of easy selection of the graphical entities;
- Quick obtaining of the information about actual drawings and used software;
- Easy tuning of working environment and access to the basic help information.

### References.

- Qt v.4.7.0 ( is available under the Lesser General Public License, LGPL ), Copyright (C) Nokia Corporation, <http://qt.nokia.com> ;
- OpenGL ( is a registered trademark of SGI, <http://www.sgi.com> )  
<http://www.opengl.org> ;
- Icon set ( freeware ), Copyright (C) Aha-Soft, <http://www.aha-soft.com> .

### Platform.

S3DxfVQ application was created with using of C++ as cross-platform software. There are executable codes for Windows and Ubuntu Linux operating systems. Also, S3DxfVQ can be compiled for other operating systems - according to availability of Qt software for appropriate platforms (<http://qt.nokia.com/products/platform>).

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### **License Agreement.**

This software is free for personal and commercial using. By purchasing S3DxfVQ software, the purchaser agrees to the terms of this agreement, as detailed below.

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### **About DXF.**

Drawing eXchange Format (DXF) is a CAD data file format developed by Autodesk (<http://www.autodesk.com>) for enabling data interoperability between AutoCAD and other programs. Now a lot of software supports DXF. Among them: Adobe Illustrator, Corel Draw, Caddie, OpenOffice.org, Solidworks etc.

The DXF format is a tagged data representation of all the information contained in an AutoCAD drawing file.

Tagged data means that each data element in the file is preceded by an integer number that is called a group code.

A group code's value indicates what type of data element follows. This value also indicates the meaning of a data element for a given object (or record) type.

Virtually all user-specified information in a drawing file can be represented in DXF format.

### **Installation and Uninstallation.**

Installation procedure is not needed for work under Windows. Just unpacking of content of distributive archive (S3DxfVQ-2.1.zip) to any place on disk is necessary. The S3DxfVQ application will be started after the mouse's click on S3DxfVQ.exe file. The uninstall procedure is simply deletion of appropriate files from actual place on disk.

Debian package for work under Ubuntu Linux should be unpacked from S3DxfVQ-2.1.deb.tar.gz archive. Then, Package Installer can place (after the mouse's click on S3DxfVQ-2.1.deb) the appropriate files (S3DxfVQ.\*) to /usr/bin, the necessary libraries (libQt\*) to /usr/lib and the test DXF-gallery to /tmp/S3DxfVQ\_dxf\_gallery directory. Application will be started by /usr/bin/S3DxfVQ executable module. Removing of package can be done by execution in terminal: `dpkg -r s3dxfvq` .

### **Using.**

S3DxfVQ application was built with a Multiple Document Interface

(MDI). So, user can work with several DXF-files (or different views of the same file) simultaneously.

Visualization of the graphical information which is presented in an existing DXF-file starts after selection of this file by "File->Open DXF-file..." (or by appropriate button of ToolBar). Also there is possibility to select the necessary DXF-file directly (at start of application) by entering in the command line: S3DxfVQ [some.dxf] . Another similar way is to open any DXF-file by item "Open With..." of the file browser of actual operating system and to select, then, S3DxfVQ application.

Opened graphical windows can be quickly managed by selection in "Window" menu, accordingly: closed - "Close" and "Close all", suitably placed - "Tile" and "Cascade", navigated - "Next" and "Previous".

The fact should be noted that this software is not a complete parser of DXF-files. S3DxfVQ application manages only data of the main basic graphical entities - 3DFACE, LINE, POINT of ENTITIES section of these files.

User can rotate the image around axes by pressing of left or right mouse button and then by moving of mouse.

Quick setting of the Front, Back, Left, Right, Top and Bottom view of image can be done by selection of the appropriate item at "View" menu (or by appropriate button of ToolBar). Return to the source view can be done by "View->Source view" also here.

Scaling of image can be done by rotating of the mouse wheel. Translation of image can be done by the simultaneously pressing of left and right mouse buttons and then by moving of mouse.

The rendering of image as "Set of points", "Wireframe" or "Solid" state can be done accordingly by selection of "Point rendering", "Wireframe rendering" and "Solid rendering" items in "View" menu (or by appropriate buttons of ToolBar).

Double clicking by left mouse button does a selection of the stated graphical entity (clearing of selection can be performed by the same double clicking on the background of the drawing).

Information concerning important data of the opened DXF-file (placement, dimensions, quantity of the drawing entities) can be obtained by selection of the "File->Information..." item (or by appropriate button of ToolBar).

Data concerning actual version of the used Open Graphics Library (OpenGL) will be displayed after opening of the first DXF-file.

Color of the background of the drawing can be changed by the double clicking of right mouse button on the field of drawing (the appropriate dialog of the changing of color will be called). Also user can switch layout direction by selection of the appropriate item in "File" menu. Necessary help information is accessible via appropriate items of "Help" menu.

### **Development.**

The actual information concerning S3DxfVQ application can be found in Internet at [http://shvachko.net/my3w/vsh\\_wares\\_eng.html#s3dxfvq](http://shvachko.net/my3w/vsh_wares_eng.html#s3dxfvq).

The graphical software of any complexity can be created on base of S3DxfVQ code - according to the actual needs of the future customers.