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TITLE

OCCT INSTALLATION PROCEDURES MIGRATION

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0.1	20.04.10	KGV	Created draft	D
0.2	20.04.10	KGV	More information about InnoSetup project	D
0.3	21.04.10	KGV	Small changes	

D: Draft, **P**: Proposed for approval, **A**: approved

CONTENTS

1. INSTALLATION PROCEDURES MIGRATION REPORT....3
1.1. Introduction....3
1.2. Analyzed install systems....3
1.3. InnoSetup project....3
1.4. Fixed problems....4
1.5. Not fixed problems....4

LIST OF FIGURES AND TABLES

1. INSTALLATION PROCEDURES MIGRATION REPORT

1.1. Introduction

Open CASCADE Technology available for many platforms. Last version of the product was distributed as InstallShield package with main purpose to be installed on Windows platform.

However installation procedure and available InstallShield itself is outdated and not correspond to new requirements. Old package represent an WinRAR self-extructing archive with JVM installation and JAR file for OCCT installation itself. Installer dependence on Java (generally intended for cross-platform install procedures) which consider to be bad practice today.

1.2. Analyzed install systems

Several install systems were analyzed. There are:

- InnoSetup (http://www.jrsoftware.org);
- NSIS (Nullsoft Scriptable Install System) (http://nsis.sourceforge.net);
- InstallJammer (www.installjammer.com).

InstallJammer intended to be cross-platform (thanks to tk/tcl), highly configurable (all with GUI), effective, open-source install system. However current project state is tasteless. Created test OCCT distribution package was fat, installation GUI was Vista-incompatible. Project file always cache each installation file (masks not allowed) that prevents to create transparent installation creating procedures.

NSIS is highly scriptable install system for Windows. While it possible to create almost everything you needs for installation your products each step should be written manually on their own scripting language. In fact NSIS doesn't simplify installation package creating – just provide some common mechanisms for some routines with minimal automatization.

InnoSetup is open-source install system. InnoSetup provide a lot of automatization tasks to produce effective installation packages. Unlike to NSIS this system provide configuration mechanism with options for default tasks like files list (files should be installed and uninstalled), icons list (in Start Menu, desktop, etc), components list, ActiveX library registration and so on. However scripting language also available (with pascal alike syntax) for special tasks not accessible to be configured with standard options.

InnoSetup suggested to be primary install system to distribute OCC products for Windows' users.

1.3. InnoSetup project

InstallShield project for OCCT6.3.1 was manually converted into InnoSetup project and provides almost the same functionality (design was changed and image slideshow was removed). Also some fixes and improvements were implemented. Received experimental package has weight ~70MB (without JVM; InstallShield package was weight 176MB in RAR archive).
However InnoSetup projects still need to be integrated into common installation building procedure and after finalization committed into control version system.

Project consist of two files:

- config.iss;
- occtSetup.iss;

Instructions itself are in the main “occtSetup.iss” project file which reads configuration information from “config.iss” (paths to $OCC_BUILD, $OCC_DESIGN, $OCC_OUTPUT). Project expect similar environment as InstallShield project before (relative to configured paths). Paths should contains expected files (or lists of files) to successfully compile installation package (empty folders produce compilation errors).

“ISpack v.5.3.9 unicode” (contains InnoSetup and InnoSetup Preprocessor; could be downloaded from \\aquarex\nnt_03\Distr\!!!ForDownloadDistr!!!\Make Installation packages\InnoSetup\) should be installed to process compilation. There are two options to compile the project: “Compil32.exe /cc occtSetup.iss” with GUI and “ISCC.exe occtSetup.iss” for command line. Compiler also should work within the WINE on Linux stations (not tested).

Current InnoSetup project notes:

- image slideshow is not implemented;
- components' dependencies is not user-friendly shown in installer – if one component depends on another which is unchecked by user user can see that only by components weight;
- project was developed in emulated environment with files copied from original OCCT6.3.1 InstallShield package; thus some components is wrong-placed (like 'res' and 'src' components which both placed into ros/src directory); some (new and modified batch scripts) components temporary placed in $OCC_DESIGN folder but should be removed from project file and committed into place they should are.

1.4. Fixed problems

Problems fixed according to older installation package (created by InstallShield):

- ros/env.bat in OCCT installation now configure environment to use always this OCCT version (env.bat based on OCCTR16470);
- all links in Start Menu to the samples now used batch script files to configure appropriate OCCT installation environment (called ros/env.bat before); this provide links to work correctly without local machine environment setup (OCCTR16472);
- batch scripts updated to use launch path (~dp0) and quoted paths; this provide transparent work for scripts launched: without working directory set, from path with spaces and from network paths (samba paths like \\networkpc\occ6.3.1\); that is – OCCT environment could be configured from the network without disk mapping;
- user's guides (PDF files) now added to Start Menu;
- build procedures component now bound to source files component;
- ugly Vista-incompatible icons (Aladdin's lamp and Setup Package icons) were redrawn to be 32bit (with alpha channel) and high resolution (256px max);

1.5. Not fixed problems

For tests used outdated OCCT6.3.1 (thus some problems may be already fixed).

- Java sample is bind to old JVM and outdated (couldn't be started as is on Windows Vista test platform); seems to be newer version is available;
- samples and DRAWEXE not support OCCT installation path contained UNICODE symbols;
- WOK scripts (available in Start Menu) doesn't work as expected on Windows Vista test platform, however WOK planned to be removed from OCCT installation package and become independent package – thus problem is not subject of this document;

- ros\env.bat always prepend paths to %PATH% (and some others batch scripts), thus multiple calls will significantly increase %PATH% value!