

Definiens Enterprise Image Intelligence Suite 7.0.0

Release Notes



Imprint and Version

Document Version 7.0.0

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Published by

Definiens AG
Trappentreustr. 1
D-80339 München
Germany

Phone +49-89-231180-0

Fax +49-89-231180-90

E-mail info@definiens.com

Web <http://www.definiens.com>

Dear User,

Thank you for using **Definiens** software. We appreciate being of service to you with image intelligence solutions.

At Definiens we constantly strive to improve our products. We therefore appreciate all comments and suggestions for improvements concerning our software, training, and documentation.

Feel free to contact us via web form on the Definiens support website

<http://www.definiens.com/support/index.htm>.

Thank you.

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Protected by patents US 7146380, US 7117131, US 6832002, US 6738513, US 6229920, US 6091852, EP 0863485, WO 00/54176, WO 00/60497, WO 00/63788 WO 01/45033, WO 01/71577, WO 01/75574, and WO 02/05198. Further patents pending.

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New Features

Developer Productivity

- Comment control and Rule Set Documentation Bar
- Rule Set Snippet Bar
- Undo for Rule Sets
- "Find and Replace" for rule sets
- Generic Copy and Paste for processes
- Customized Algorithms: New UI supporting automatic dependency handling between ruleset objects
- Customized Algorithms: appear in separate tab in process editor
- Customized Algorithms: removed decorated scope names were not necessary to improve readability of rule sets
- Restructured process editor context menu
- Variable UI: filter for variable drop down and UI improvements
- new algorithm: rule set options
- created icons for most algorithms
- added icons to algorithm selection drop down
- feature tree does no longer collapse nodes when another node is expanded
- Export current View: scale is now related to absolute settings

Image Viewer Usability

- New Window Splitting with three modes: Independent View, Side-by-side and swipe
- Cancel Button for Image Object Information
- Improved Performance of Feature View by caching Values
- Transparency Slider for Classification View
- Scale Display and Magnifier Bar for viewing.

Definiens Architect

- Architect widgets allow selecting features, classes and levels and configure associated variables / parameter sets. These widgets are dependency aware.
- Added dependency "Forbidden"
- Insert action dialog does no longer close after inserting an action

Engine Capabilities

- Variables can store classes, features and levels
- Parameter sets allow managing variables that store classes, features and levels

Workspace Programming

- Map statistical results from sub-scenes to entire scene
- Workspace Programming: Stitching for subsets
- Workspace Programming: Algorithm "Create Scene Subset" with exact shape of an image object
- Stitch ruleset results back
- Algorithm for deleting scenes
- Random tile processing

- Ability to pass parameter sets to sub routines

Customized Import

- Improved Usability
- Support for more than one metadata to cover the change detection use case
- Added a button to generate all metadata as features

Unit Handling

- Refactor Units: Split coordinate system and units conversions

Shape File Handling

- Shape file export: removed internal columns
- Added feature "class name" and "class color"
- String variables are no longer exported as numerical values
- Export string variable length extended to 255 characters

General Improvements

- Restructured Dialog "Tools.Options..."
- View Polygons & Skeleton Buttons are always active
- Added time stamps to DiaControlService log file
- Application Look is Customizable (default: Windows XP)
- Algorithm update variable: full string support to assign and concatenate
- Algorithm Description is displayed in process dialog
- Supports Weights in Membership Function (not tested)
- JobSchedulerPage: Numbers for "Active" engines are now synchronized
- Added possibility of timeout in workspace
- Support variables as search range in local extrema algorithms
- Process read thematic attributes" allows to select a specific local variable
- Library->Export Action Item/Import Action Item – allows overwrite of existing files.
- Added "save polygon subset" feature to enable creating user defined sub-images from larger images
- Added Cancel Button to Image Object Table

Filter Algorithms

- Gauss
- Custom kernel
- Linear Normalization
- Histogram Normalization
- Median
- Max Pixel Frequency
- Lee Sigma Edge Enhancement (Bright & Dark)
- Canny Edge Enhancement
- Slope
- Layer Arithmetics
- Line Extraction

Definiens Data Management

- Workspace Management
 - Metadata
 - Versioning
 - Search
- Ruleset Version Management
 - Versioning, Version Labels

- Version History
 - Metadata
- Query View
 - Default Filters
 - User Saved Filters
 - Search for Rulesets, Workspaces, Projects, Annotations
- Metadata
- Name, descriptions, version information, keywords etc...
- Annotation
- Results Database Schema
 - Oracle 10g Implementation
 - Multi Repository Support
- Results Spooling
- Security
 - Workspace Security
 - User Login

Earth Sciences Customer Client Features

- Architect Toolbox for Earth
- Separation of Earth Pre Defined Connectors

Life Sciences Customer Client Features

- Heat Map visualization tool
- Inclusion of additional Slide/Scanner Tissue Connectors

Installation and Deployment

- Web Based Administration Console
- User Administration (Data Management)
- Repository Management (Data Management)
- Grid Administration
- Software Deployment
- Grid Installation Procedure
- Installer for Guided Tours

Contrast Split

- Contrast Split Algorithm

GUI Layout

- Developer GUI Default Settings Optimization/Simplification

Developer

- Guided Tour – Earth Samples
- Optional SDK Installation

Software Development Kit and APIs

APIs Data IO, Automation and Engine APIs with Samples/Examples

Documentation Improvements

- Learning recommendations
- Guided Tour Mapping Impervious Surface
- New introduction into object-oriented image analysis.
- New chapter focuses about rule set development including the strategic approach.
- Reworked chapter about segmentation basics.
- Reworked section about focusing processes by using the domain concept.

Hints

Licensing

Bug-9676: Client engine consumes server extension licenses until the client is closed.

Known Issues

Installation

Bug-9693 Installation: uninstall Grid does not delete all folders.

Definiens Data Management / Workspace Handling

Bug-9543 Workspace: Open/Close Context menu handler is disabled when bar is floating. Please use the according menu item in the file menu in this case.

Bug-9663 Status Column in Ruleset Query does not display the status of the latest rule set version.

Bug-9678 The spooler configuration can cause crashes of the Command Line Client. Please comment out this section in the configuration file when using the command line client

Bug-9684 Workspace: Selection is lost while screen updates during processing

Cellenger

Bug-9657 Evotec Files with more than one site per well are not displayed correctly in the plate view

eCognition Server

Bug-9689 SOAP protocol can create TCP errors when under heavy load.

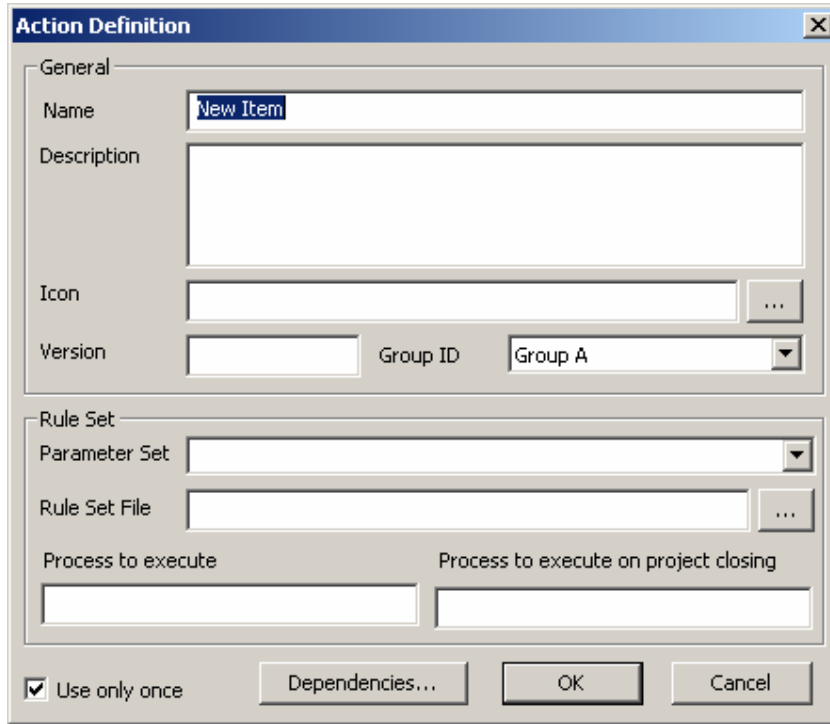
Other

Bug-8737 Undo: crash after reaching memory limit. Please limit the maximum memory consumed by the UNDO manager accordingly.

Late Changes

Definiens Architect / Developer

An additional handler process called when closing a project was added to action definitions. This handler can be used to implement specific clean up operation (e.g. after sample input) that need to be executed when the users closes a projects.



Configuration

Default Server Configuration can now be defined in the eCognition.cfg file.

```
<profile name="DIAClient">
  <Settings>
    <key name="default server configuration" string="eCognitionServer"/>
  </Settings>
</profile>
```

```
<profile name="DIACmdClient">
  <Settings>
    <key name="default server configuration" string="eCognitionServer"/>
  </Settings>
</profile>
```

Administration Console

Access types can no longer be deleted. Instead they can be marked inactive if they should no longer be used.

Documentation Errata

Subsequent sections had been changed after closing the documents.

Lists of Available Connectors

In User Guides of **Definiens Developer**, **Architect**, **Analyst** and **Cellenger**, chapter **Load and Manage Data**, section **Import Scenes to a Workspace** the lists of connectors had been modified.

- [Generic Import Templates](#) on page 10
- [Supported Life Server Connectors](#) on page 10

Generic Import Templates

Import Template (Connector)	Description	File Formats	File Based	Windows	Linux	Available only for Definiens eCognition Life Server	Available only for Definiens eCognition Earth Server
Generic - One File per Scene ^[1]	A scene may consist of multiple image layers. All image layers are saved to one file.	All	Yes	Yes	Yes	X	X
Generic - One Scene per Folder ^[1]	All files that are found in a folder will be loaded to one scene.	All	Yes	Yes	Yes	X	X
Generic - Image with common thematic ^[1]	Multiple geocoded image files with a common thematic layer.	All	Yes	Yes	Yes		X
Geo Coded - One File per Scene ^[1]	A scene may consist of multiple geocoded image layers. All image layers are saved to one file.	All	Yes	Yes	Yes		X
Geo Coded - One Scene per Folder ^[1]	All geocoded files that are found in a folder will be loaded to one scene.	All	Yes	Yes	Yes		X

^[1] Generic Import Templates may support additional instruments or image readers not listed here. For more information about unlisted import templates contact **Definiens** support via internet on the website <http://www.definiens.com/support/index.htm>.

Supported Life Server Connectors

Import Template (Connector)	Image Reader	File Formats	File Based	Windows	Linux	Available in Definiens Cell Portal	Available in Definiens Tissue Portal
Applied Imaging		.xml	Yes	Yes	Yes		X
Bacus WebSlide		.ini	Yes	Yes	No		X
BD Pathway Bio Sciences		.tif	Yes	Yes	Yes	X	
Cellomics ArrayScan		.dib and .tif	Yes	Yes	Yes	X	
Evotec Flex files	Opera II	.flex	Yes	Yes	No	X	
Evotec Opera	Opera I	.tif	Yes	Yes	Yes	X	
GE In Cell Analyzer 3000	GE Incell 3000	.frm	Yes	Yes	Yes	X	
GE In Cell Analyzer 1000	GE Incell 1000	.tif	Yes	Yes	Yes	X	

Available only for Definiens eCognition Life Server

Generic One File per Scene	Generic Instruments ^[1]	All	Yes	Yes	Yes	X	X
Generic One Scene per Folder	Generic Instruments ^[1]	All	Yes	Yes	Yes	X	X
Maia Scientific MIAS		.tif and .jpeg	Yes	Yes	Yes	X	
Molecular Devices Discovery 1		.tif	Yes	Yes	Yes	X	
Molecular Devices MetaXpress Plate with Timepoint	Molecular Devices MetaXpress and Molecular Devices ImageXpress	.tif	Yes	Yes	Yes	X	
Zeiss Mirax Slide IO		.ini	Yes	Yes	No		X

^[1] Generic Import Templates may support additional instruments or image readers not listed here. For more information about unlisted import templates contact **Definiens** support via internet on the website <http://www.definiens.com/support/index.htm>.