

## Your benefit out of the Print- and Plot-solution for Oracle Agile PLM

- reliability and stability through server-based solution and platform independence
- comfortable, easy, powerful and reliable printing of database information also combined with the related graphics (files/BLOB's) via XML & XSL:FO with the identical features like *plotting\**
- easy to use directly out of the PLM-system (*incl. the fully integrated output-mangement-system, if used*)\*
- no difference between plotting of files and printing of reports any more
- protection of investment and independence of manufacturer through use of the worldwide standards XML and XSL:FO for reporting (separation of data and formatting)
- convenient and automatic compilation of all documents and reports starting at any root object in PLM
- output of single records or complete output folders *incl. usage of stamp's\**
- administration of reports as documents in PLM with all standard document-features (versioning, effectivity, access-rights, replication, ...)
- background processing of time-consuming (or all) functions possible incl. time-offset
- automated batch-creation of PDF-files out of reports and check-in in batch
- best TCO through centralized installation and administration for PLM-system *and output management server\** (devices, stamps\*, accounting, etc.)
- supports all functions of the output management system for printing and plotting\**
- shared utilization of all output components for all systems (PLM, ERP, CAD, etc.)\**

## Prerequisites

- min. Oracle Agile PLM e5.1; others available on request
- if using integration with standard output-systems: min. Plossys netdome 3.x (available for PLOSSYS and gXnetplot) ), CIMgraph, Uniplot

server operating systems (only on supported platforms for Agile PLM or output-system):

- most UNIX-Systems (IBM AIX, HP-UX, SUN Solaris, Linux)
- min. Windows 2000

Clients depend on the version of the PLM system

\*: function only usable with deployment and integration of an output-management-system

## References

Albis Technologies, Areva NP GmbH, ARTEC GmbH, Braun GmbH, Cross Hüller/MAG Powertrain, E.G.O. GmbH, ERBE GmbH, ETA SA Manufacture Horlogère Suisse, Feintool AG, Georg Fischer Piping Systems, Giesecke & Devrient GmbH, GEDIA GmbH, Albert Handtmann Metallgusswerk GmbH & Co. KG, Dr. Johannes Heidenhain GmbH, Hydro Building Systems GmbH, Kistler Intrumente AG, Knorr Bremse SFS GmbH, Krauss-Maffei Wegmann GmbH, Magna Steyr, Marquardt GmbH, Medela AG, Montplast GmbH, Philips Lightning N.V., Raytheon Anschütz GmbH, Rheinmetall Landsystem GmbH, Siemens AG A&D, Siemens AG PTD, Siemens Audiologische Technik GmbH, SkiData AG, SMS Demag AG, Stork Food Systems, Stork PWV, Synthes AG, Thyssen Krupp Presta AG, Veritas AG, Werner Turck GmbH, V-Zug AG, ZF Friedrichshafen AG

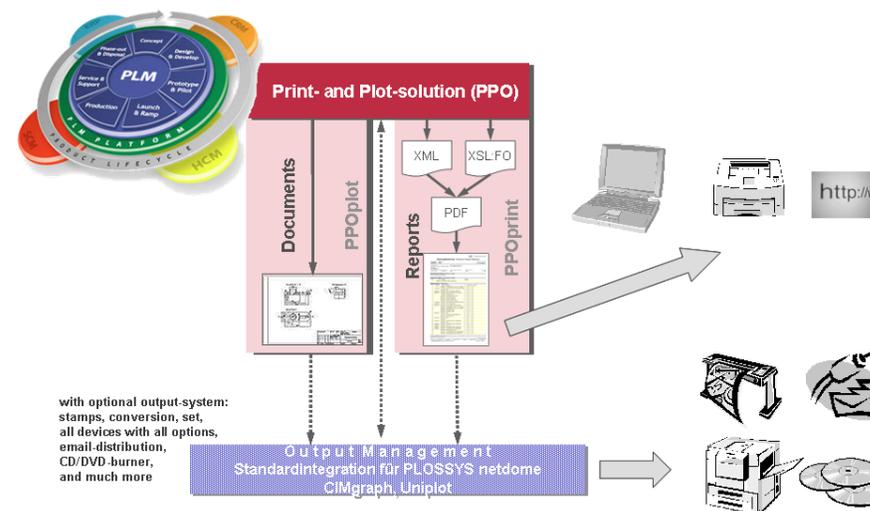
Additional information is available at:

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# PPO: The Print- and Plot-solution for Oracle Agile PLM e-series

## Total output management out of the PLM-System

Despite electronic data management the good old paper – esp. "electronic paper" – is still necessary, even more. Because information is available electronically the expectation is, that producing of output is very easy and comfortable. For your benefit we have developed a comfortable and powerful Print- and Plot-Solution for Oracle Agile PLM e-series – running standalone or with an output management system which fulfils nearly every requirement.



## Short description

Our solution gives all users the possibility to output all types of data – for example (**print**) formatted database-information like lists of parts or bill-of-material as well as (**plot**) graphical data like drawings or PDF-files – *with all features offered by the output management system\**. Only PLM-internal masks will be used for all functions *and the users do not even recognize the "external" output management system\**.

Each user has his own default-settings for output parameters (e. g. output-mode, layout/report, number of copies, output-device, output-format, *stamp\**, etc.). These default-settings are used every time the user wants to output something and depend on the current mask and function. All PPO output functions also can be called directly with all parameters and without any user interaction. The PPO-procedures generate all the data necessary for the output directly/standalone *or forward them to the output management system\**, which processes the generated order with all available functions: *scale, rotate, convert, copy, spool, synchronize output device with folder-machine, etc.*

The output-functions can be used in two different ways: single and folder. In single mode the user can call the functions by selecting several records in any mask. After confirming (or changing) the default settings all the information will be displayed on the client as preview (PDF, Word, TIFF, PNG or other formats) or send directly to the device for output – *with banner and stamp and any additional information\**. The other way is to use an output folder: this folder can be created and filled automatically starting from any root-object (e.g. article, project, etc.) and gathering all the defined data according to the template or simply filled manually by drag&drop.

Printing via XML and XSL:FO incl. PDF-PreViewing

new: generic standard-layouts available for all masks

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# PPO: The Print- and Plot-solution for Oracle Agile PLM e-series

## Total output management out of the PLM-System

So the user is able to generate a complete list of reports and documents mixed up in any manner in a very easy and comfortable way – just a very few clicks.

The creation process of an output folder can be freely defined using n\*tree's in the PLM-system for the structure-handling and a PPO-template, which consists of a set of rules to get the right object into the folder (document or report) using also dynamic conditions.

This folder is stored in the database and the user can change (add or delete elements or change the settings per element), filter and select the components he wants to output. The output settings are generated and stored for each element based on the user-defaults while the folder is created. So the folder can be used for controlling the generated output – also as a history; and can be reused again and again, or even changed.

These folders can even be filled manually via drag&drop of any documents and/or reports using any mask of the system.

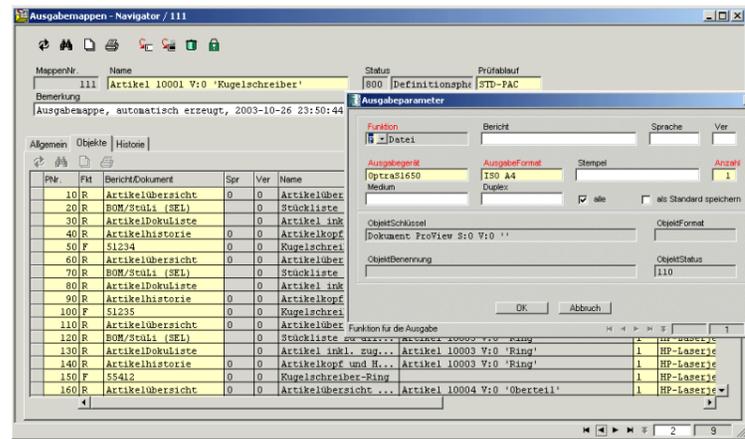
After starting the output the user will get a feedback-message to indicate, that the order was created in the output management system\* and started for processing. Using the InfoClient of the output management system the user is able to track all his orders and the general state of the devices. This also lets him reroute or repeat his orders if a device is not available or jammed.

Additionally to the benefit of a centralized administration with high availability of the system the PDF-file of a report can be displayed on the client for previewing. This also gives you the possibility to use remote sites and devices, which are not defined in the central output-management-system\*, easily and without any additional effort.

### Technology

The solution only uses standard-components of the PLM-system (LogiView and DataView) as well as documented command-line and programming interface of the output system vendor\*. Beside setting up the system after installation (e. g. where the output server is installed\* resp. which devices can be used and how to control them) there are no other things to do in PLM (except for creating the reports). This is possible, because all necessary information will be read online from the database or the output management system\*, which centrally holds all definitions (queues, stamps, paper-sizes, etc.), and presented with PLM-internal menus and masks.

For formatted output of database information there are XML-files created and formatted with XSL:FO. These XSL:FO-files are stored in the PLM-system attached to the report-documents very easily. This way the existing functions in Agile PLM can be used for versioning, effectivity, access-rights and replication – because of using documents as basic element of the report-definition. The definition of data-



creation into XML-files can be structured freely and gives the possibility to collect data from quite different sources (e. g. head, relation 1, relation 2, history, etc.) into a single XML-file.

All devices and options are administered centrally in PPO or the output management system and can be used for all attached systems (PLM, ERP, CAD, etc.)\*.

The architecture of the solution allows extensive customizing and adoption to fit the customer needs (e.g. the options for sending output orders can easily be changed). Because only documented function calls of the PLM-system (and output management system\*) are used the integration is extremely robust and stable, and the dependencies on program versions are very low.

### Overview of functions

- very simple and comfortable printing and plotting\* of single documents or reports uses the userspecific default settings (also for multiselect in list masks); can be called from any object-mask or workflow in Agile PLM
- powerful, comfortable and freely definable function for automatic creation of output folders incl. population with documents and reports starting from any root element (e. g. project, article); can be called from any object-mask
- printing and plotting\* (also selective) of data from output folders without any further interaction using the saved parameters on per-record basis or as complete folder (using the set-functionality of the output-management system)\*
- printing of data via XML and XSL:FO: export of powerfully definable database information also incl. related graphical files/BLOB's using XML-files; administration of the related XSL:FO-layout-files and sending of all information to the output-management-server\*
- generic standard layout is available for all masks in the PLM-system
- customerspecific userexits can be used for XML data creation within the reports
- previewing of PDF-files (and other formats) directly on the client
- all PPO-functions can be called synchronously or as asynchronously background jobs as well as fully automated and in batch with all parameters; this way the functions can be used for automatic PDF-file-generation out of reports and check-in of the converted file
- userspecific default settings for output parameters depending on mask/function/document size (will be available after relogin to PLM-system)
- dynamic choice-menus for all output-parameters filled directly with the current values of the output management system\* resp. PLM-system, e.g. for output-mode, layout/report, device, output-format, medium, or any other parameter\*
- output parameters are saved per record in output folders and also for the output folder itself – makes it possible to reuse it again with exactly the same settings
- the generated order-id from the output-management-system is available for further tracking within the output management system
- detailed logging of all output-activities in Agile PLM
- output of standard and mandatory labels (also dynamically filled) for printing and plotting out of Agile PLM (e. g. user, date, time, status of document, etc.)\*
- full support of distributed PLM- and output management system installations\* – also multiple output-servers\* can be used easily and in parallel

