

Mercury Suite: Print & Document Management Solution (DMS & OMS)

**Mercury Suite at a Glance** 



**Mercury Accounting** 



**■ MPS Integration** 



■ Follow"2"Print & Cloud Printing



■ DMS/OMS 📳











# The "who is who" of docuFORM

- Company founded in 1986 in Karlsruhe by employees of the Technical University of Karlsruhe - until today an independent company!
- First projects in cooperation with the Institute for Manufacturing Technology, TU Karlsruhe for companies such as Bosch and Daimler AG
- Acquisition of several specialist companies and their know-how
- Development orders for print controllers from Océ, Xerox, FujiXerox Japan, Heidelberger Druck, EFI
- Strategic reorientation to a pure software company in the field of printing solutions. Launch of the new core product Mercury in 2000.
- Acquisition of sales and trading partners worldwide
- Unique selling points, thanks to a manufacturer-independent and independent solution: Mercury suite!
- 2015: Development of a manufacturer-independent, virtual printer driver (GPD).
- 2017: Europe-wide patenting of the Global Printer Driver (GPD).
- Today: Leading provider of DMS, OMS and MPS solutions.





# What is Mercury?

- Individual printing solutions and workflow through a modular system for medium-sized and large companies.
- Mercury sees itself as a vendor-independent and overarching solution. This provides the user with the highest level of investment protection.
- The Modular System Mercury covers the following topics:
  - Document Design & Management (ATLAS)
  - Interfaces to host systems and required data conversions
  - Certified SAP BC / XOM interface
  - Output Management & PDF Workflow
  - Comprehensive MPS solution
  - Accounting & Follow "2" Print (multi-vendor embedded apps)
  - Windows Global Printer Driver (GPD)
  - end'2'end encrypted printing
- This comprehensive workflow optimizes the processes at the user and simplifies support and maintenance concepts for the user.





# Modular workflow concept in competition comparison

Company	MANAGED PRINT SERVICES	SAP APPLICATION	MICROSOFT PRINT SERVICES	OMS/DMS	VARIABLE DATA HOST PRINTING
DOCUFORM	MPS	SAP BC/XOM Interface	GPD	Mercury	Atlas
a					
b				1	K
С					
d				Br	
е					
f					
g		N			
h					
i					
j	11.				
k					
I					
m					
Docuform Portfolio	Limit	ed functionality	Purchase	product, therefore severel	y limited
Comparable with D	ocuform Manu	ufacturer specific solution			

■ Integrated solution concept → unique selling point







# Which benefits and advantages does Mercury offer?

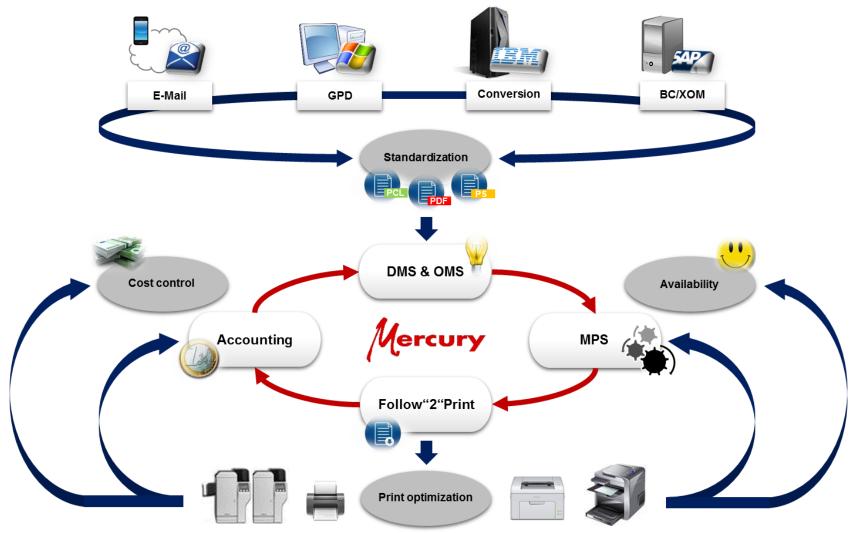
- Mercury is the bridge between host, AS/400 and office world.
- With conversion of print data in standardized formats, Mercury offers manufacturerand hardware independence to the user.
- The combined usage of all resources results in a high cost saving potential for the user.
- Overlay- and forms management replace cost intensive matrix printing systems and makes the usage of pre-printed paper forms redundant.
- The implementation of a customer workflow with Mercury saves time and money with concurrent safeguarding of the print process.
- Page based interpretation of print data within the Mercury rules system allows customer specific forms generation and forms control.
- Accounting and fleet & service management (MPS) detect hidden costs and provide comprehensive transparency ,all around printing. At the same time, the availability of the printer landscape is increased and thus costs are reduced.
- Global Printer Driver (GPD) as a manufacturer-independent office printing solution.
- Fully integrated Follow"2"Print solution for classic printer drivers & GPD.



# Mercury DMS & OMS V051118 @ by docuFORM GmbH



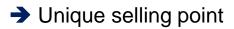
# **Comprehensive & modular Document & Output Management**





# Global Mercury installation with Follow"2"Print and MPS control

- Coupling of individual networks using the MPS Index Server for worldwide Follow"2" Print
- Central rollout and management of device data, AD information for IT networks worldwide
- Automatic control and configuration of the GPD within Mercury OMS incl. manufacturer-independent Follow"2"Print solution
- Global accounting including cost center accounting
- Direct AD replication for Follow"2"Print requests
- Cloud and AirPrint support
- Host and SAP integration for print and Follow"2"Print workflow
- End"2"end encryption of print data with standard printer drivers and Global Printer Driver (GPD) also with Follow"2"Print



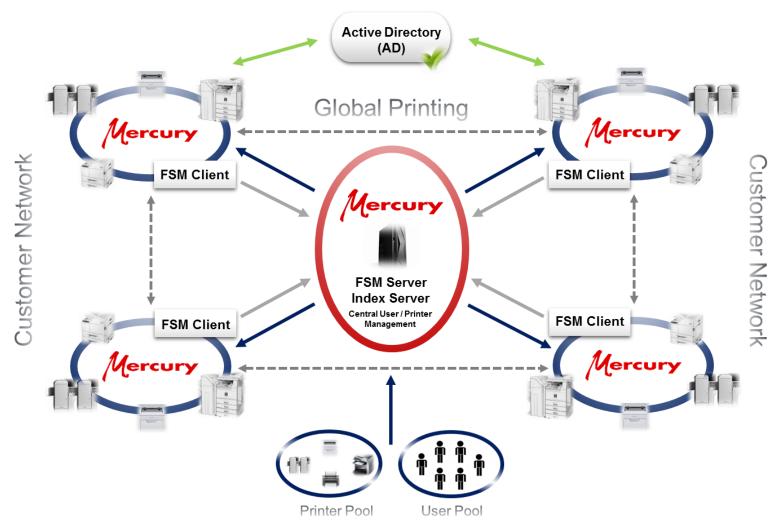




# Mercury DMS & OMS V051118 @ by docuFORM GmbH



# **GLOBAL Mercury installation with Follow"2"Print & MPS**

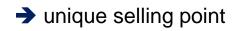






# Functional data from Mercury Accounting conjunction with Mercury MPS

 Mercury OMS data parsers ensure seamless analysis of both Windows and host / SAP print data



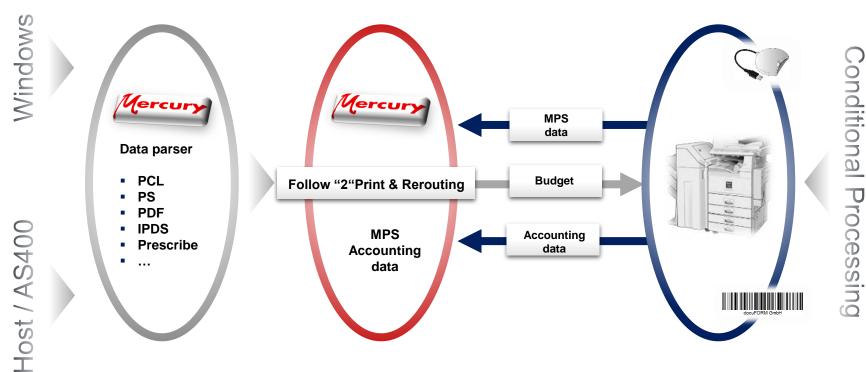


- Full integration of accounting functionality as MPS option
- The accounting functions are optionally offered within the MPS web interface
- User-related evaluations incl. budget allocation as an extension to the MPS integrated cost center evaluation according to printing systems
- User pop-up tool to review the estimated printing costs and, for cost reasons, choose alternative printing systems
- Comprehensive reports with CSV export
- For MFP, pure Follow"2"Print apps are available, as well as advanced apps for additional acquisition of copies, scans and scan to-home / folder functionality



# **Printer Monitoring & Accounting overview**

# Managed Print Services (MPS)



Accounting

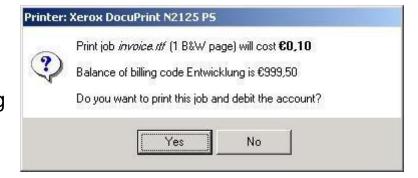


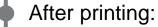


# **Enhanced "Pop Up" functionality on the Windows PC**

The following information is individually displayed to the user for his printing process:

- Before printing:
  - estimated printing costs
  - current budget
  - eventual cancellation of printing
  - new selection for printing

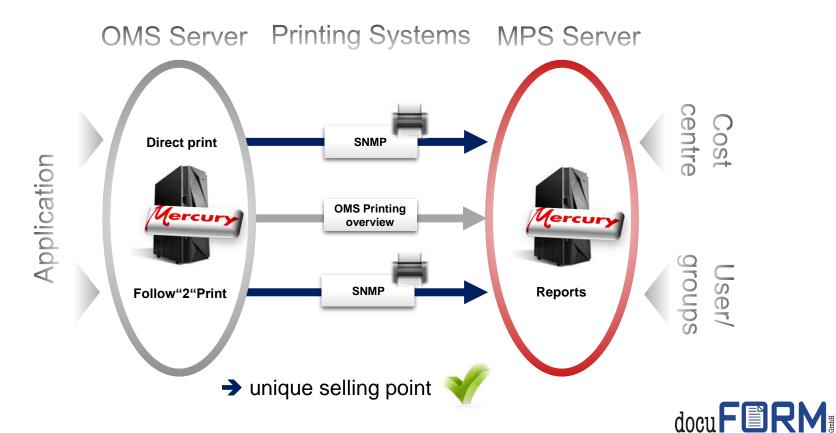




- true printing costs
- remaining budget

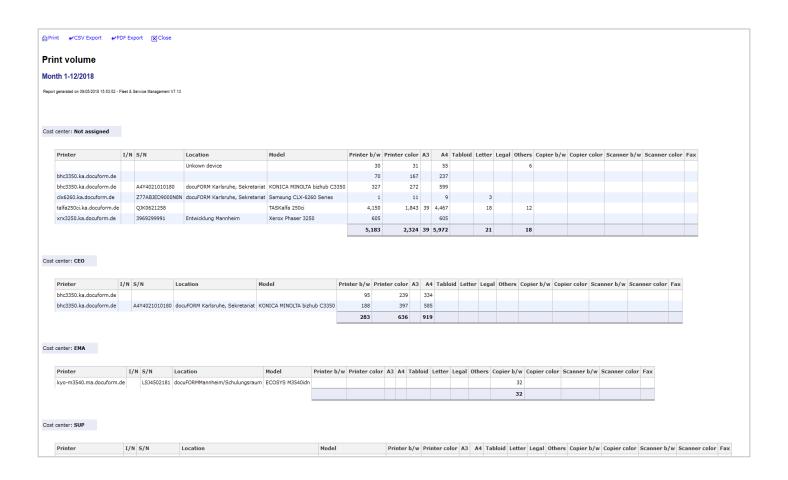


- By combining Mercury OMS with MPS, additional statistical evaluations can be generated:
  - Usage overview of printing systems according to customers and cost centers
  - Follow "2" print statistics on printed / non-printed pages



# Mercury OMS in conjunction with MPS

# Report Print volume per customer classified according to paper sizes Extended design according to cost centers is also possible





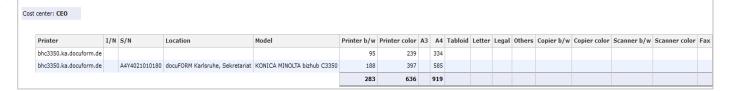
# Mercury OMS in conjunction with MPS

# The Usage Overview report provides an overview of the printed / non-printed pages & jobs of each print system, grouped by:

Customer

C	ustomer: docuFORM Karlsruh	he																	
	Printer	Cost center	T/M	C/N	Location	Model	Duinton h /w	Printer color	A 2	84	Tablaid	Lattan	Logal	Othous	Capian b/w	Capian salan	Cannon h /w	Scanner color	Env
	rrinter	Cost Center	1/ N	5/ N	Location	Model	Printer b/ w	Printer Color	AS	A4	Tabloid	Letter	Legai	others	Copier b/ w	Copier Color	Scanner b/ w	Scanner Color	rdx
	bhc3350.ka.docuform.de	Not assigned		A4Y4021010180	docuFORM Karlsruhe, Sekretariat	KONICA MINOLTA bizhub C3350	327	272		599									
	bhc3350.ka.docuform.de	CEO		A4Y4021010180	docuFORM Karlsruhe, Sekretariat	KONICA MINOLTA bizhub C3350	188	397		585									
	clx6260.ka.docuform.de	Not assigned		Z77ABJED9000N8N	docuFORM Karlsruhe, Sekretariat	Samsung CLX-6260 Series	1	11		9		3							
	talfa250ci.ka.docuform.de	Not assigned		QJK0621258		TASKalfa 250ci	4,150	1,843	39	4,467		18		12					
	xrx3250.ka.docuform.de	Not assigned		3969299991	Entwicklung Mannheim	Xerox Phaser 3250	605			605									
							5,271	2,523	39	6,265		21		12					

Cost center



Printer

enter: Not assigned																	
,																	
Printer	I/N	S/N	Location	Model	Printer b/w	Printer colo	<b>A3</b>	A4	Tabloid	Letter	Legal	Others	Copier b/w	Copier color	Scanner b/w	Scanner color	
			Unkown device		30	31		55				6					
bhc3350.ka.docuform.de					70	167		237									
bhc3350.ka.docuform.de		A4Y4021010180	docuFORM Karlsruhe, Sekretariat	KONICA MINOLTA bizhub C3350	327	272		599									
clx6260.ka.docuform.de		Z77ABJED9000N8N	docuFORM Karlsruhe, Sekretariat	Samsung CLX-6260 Series	1	11		9		3							
talfa250ci.ka.docuform.de		QJK0621258		TASKalfa 250ci	4,150	1,843	39	4,467		18		12					
xrx3250.ka.docuform.de		3969299991	Entwicklung Mannheim	Xerox Phaser 3250	605			605									
					5,183	2,324	39	5,972		21		18					ĺ



# **Graphical evaluation of device usage**

### Follow2Print print volume

DE006-Office, Month 1-12/2018

Report generated on 10/30/2018 09:25:40 - Fleet & Service Management V7.13

### Department: DE006-Office

Print jobs	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	0ct	Nov	Dec
Not printed	17	22	164	38	31	0	0	0	0	0	0	0
Printed	0	0	0	0	0	0	0	0	0	0	0	0



### Relative use of Follow2Print

DE006-Office, Month 1-12/2018

Report generated on 10/30/2018 09:27:05 - Fleet & Service Management V7.13

### Department: DE006-Office



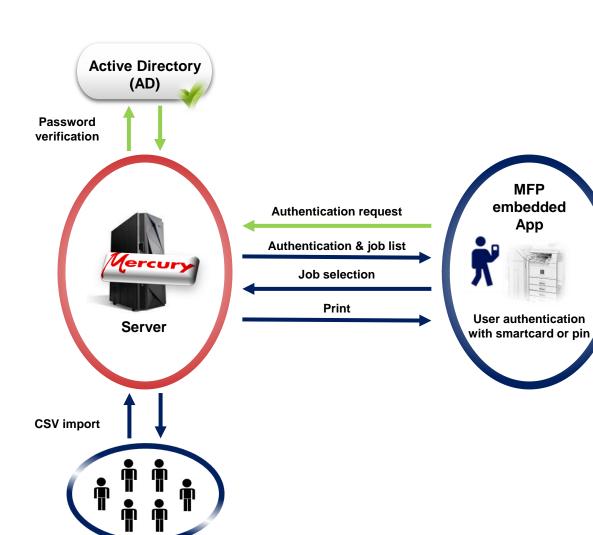


# Follow"2"Print integration - highlights

- The manufacturer-independent Follow "2" print solution is based on three different authentications on the devices:
  - Card Reader
  - Barcode authentication by PDA
  - Embedded Java Web Apps (only MFP and manufacturer-dependent)
- Cross-location "cloud printing" from all smartphones incl. AirPrint
- Authentication on pure printing systems through the combination of Doculan / reader hardware possible
- Support of all common card systems:
   Mifare, Legic Hitag I & II, Biometric ID etc.
- All data streams, such as host, AS / 400 and SAP, are additionally supported and also offered to the user during authentication on the device
- Feedback of Follow "2" Print Status, etc. into the SAP GUI
- Interface for accounting for e.g. Copy billing, budgets, cost-sensitive printing



**User Pool** 



Different manufacturer apps:

- HP
- Lexmark
- Konica Minolta
- XEROX
- Ricoh
- Samsung
- Brother
- Canon
- ٠...



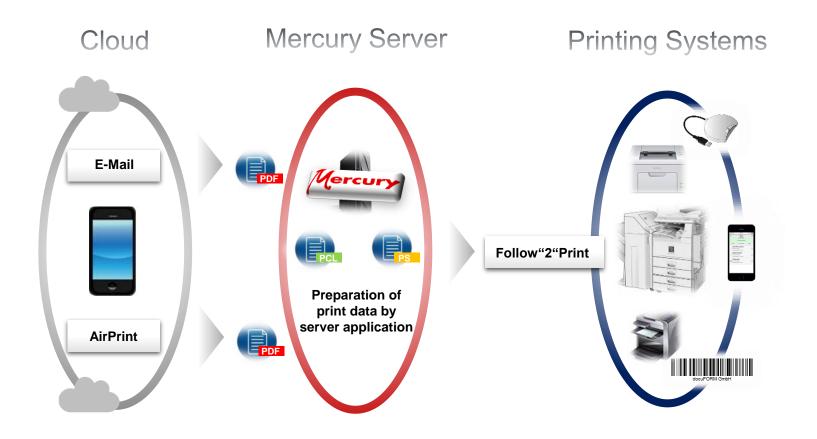
# **Authority configuration for Follow"2"Print users**







# **Completely integrated Cloud Printing functionality - AirPrint**







# Mobile (PDA) option on the smartphone

- Unified app for MFP and Smartphone option
- Optical representation of the job selection analogous to the MFP app
- Authentication of the user on the device by barcode scanning
- Additional redirection of print jobs directly on the smartphone



Authentication with PDA



Job redirection with PDA



Job selection with PDA



# Modular design within the Mercury server depending on the requirement

- Web client
- Data parser
- Reprint & cluster module
- SNMP status monitor
- Overlay & forms manager
- Atlas form designer integration
- Print data conversion
- Job separator / collector
- String & record change filter





# **Functional design of the Mercury system**

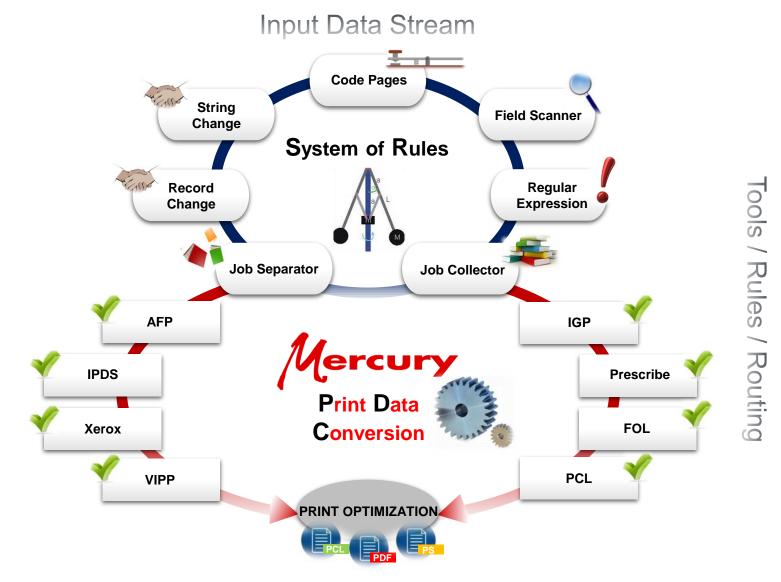
- Easy configuration of Mercury processes with rules.
- Combination of multiple rules is possible, e.g. data conversion forms merging cluster & reprint.
- Input / output filter compensate printer specific control codes,
- that means with Mercury a "generic" printer driver can be used.
- Administration of host, AS/400 and Windows print data with Mercury as an individual output management tool.
- Complex customer workflow processes can be automated with the field scanner in combination with systems of rules.
- PDF generation and email distributing structures allow paperless dispatching.
- With overlay and dynamic forms processor, new applications can be generated from raw data formats (incl. barcode and OMR module).



# The modular concept of Mercury

- Integrated all-in-one-solution: Connectivity, emulation, overlays, forms, barcodes and comprehensive print and job management functionality.
- Depending on emulation or task, various virtual printer can be created, which can print on one physical printer.
- Intelligent job & queue management results in an optimum load of the Mercury systems and the attached printing systems.
- AFP, Metacode/DJDE, XES, VIPP, IPDS and other data stream conversions, also possible within multiple simultaneously working emulations.
- String- and record-change-filter for individual adjustments;
- code-page-filter with international character sets for worldwide active customers.
- Document flow control for each network printer with PJL, based on the real printed pages ("page-event-feedback").
- Support for all network protocols for attachment of LAN and host, AS/400 systems.



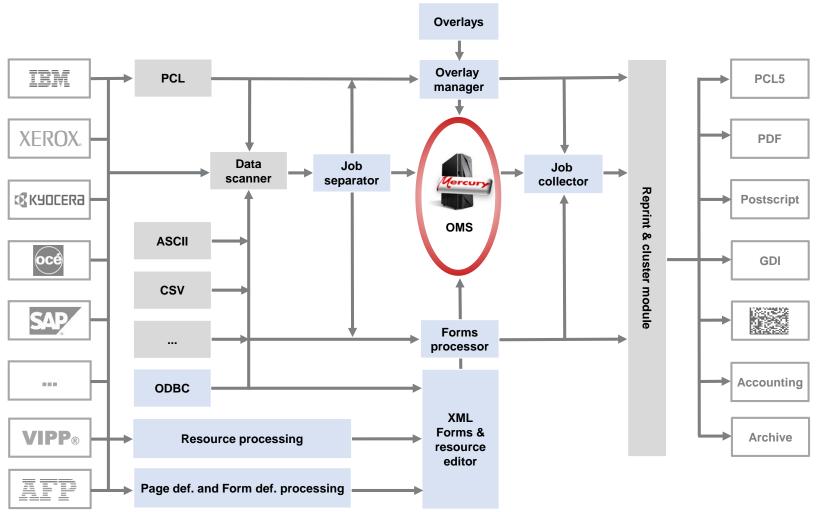


Output Data Stream





# **Schematic overview**

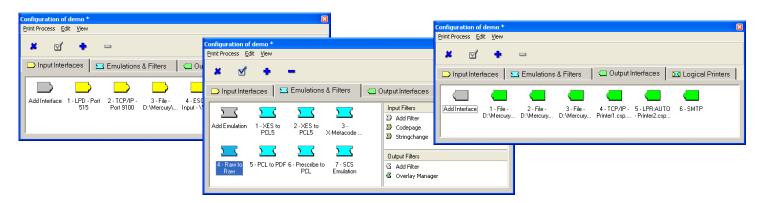




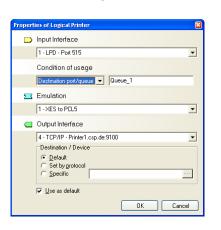


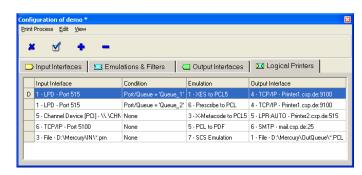
# Modular concept - configuration components

Configuration of the necessary components Input Interface, Data Conversion and Output Interface.



Combining of components for a Logical Printer.





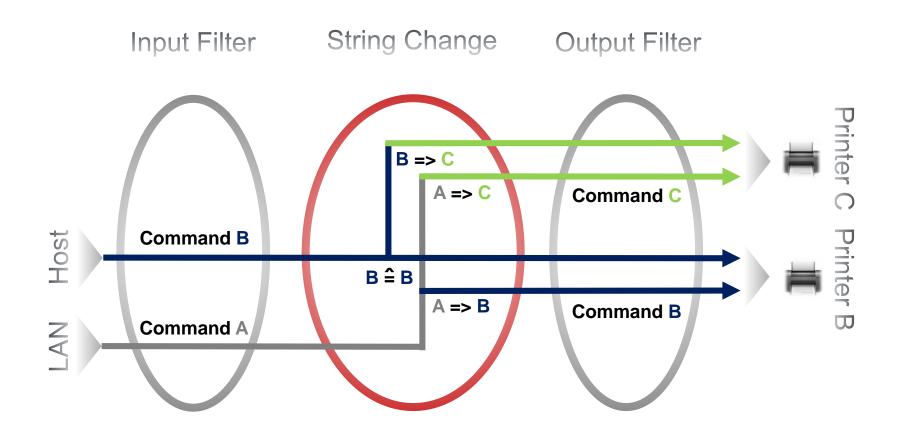






# Modular concept - multi dimensional

Usage of the "string-change" filter for unification of printer hardware and driver





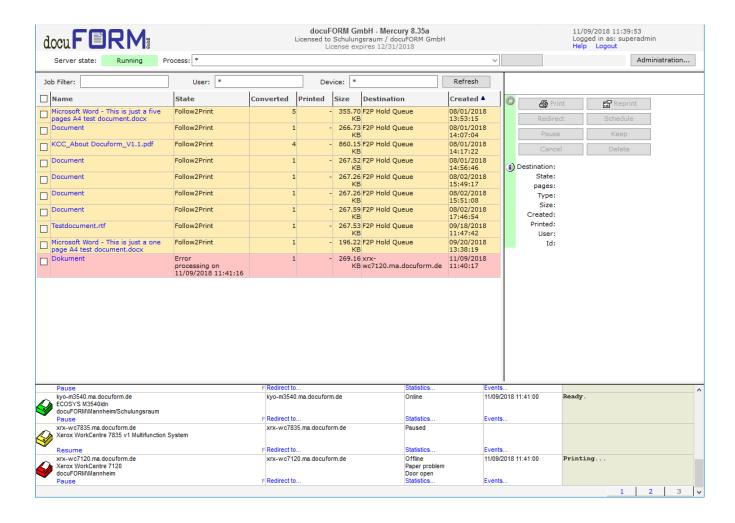
# **Functional overview of the Mercury Web client**

- Platform independent Web client for all hardware independent system environments
- Administration of users and user-groups.
- Import possibility via LDAP and "Active Directory".
- User defined printer pool and printer rights.
- Comfortable redirecting and distributing of print jobs.
- SNMP Window for printer status and information about possible redirection of prints, also information about printer statistics and
- toner / paper level.
- Web client works interactive with the Mercury server and therefore has an automatic "refresh function".
- All "event logs" can be automatically delivered to the Windows system protocol.





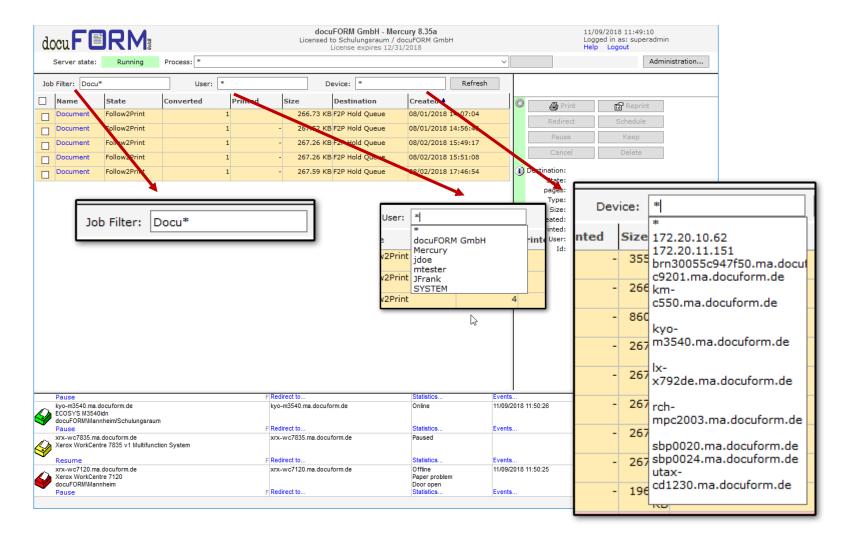
# Overview Web client







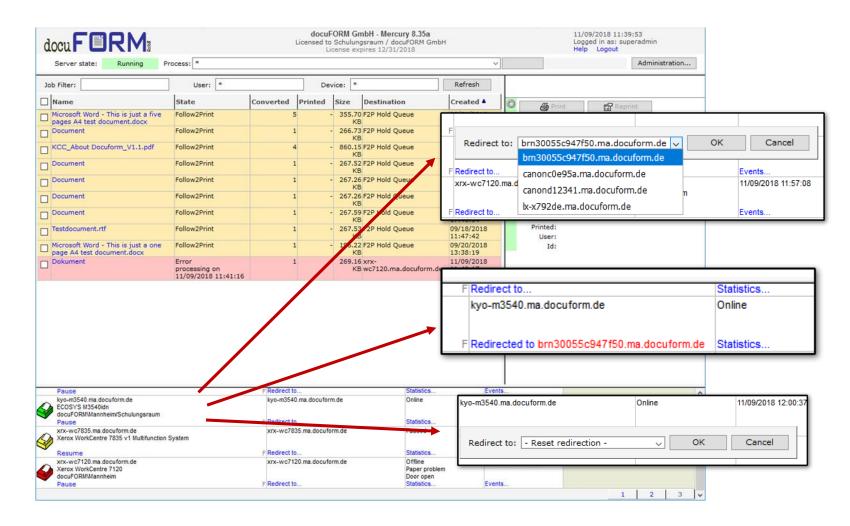
# Job selection within the Web client acc. to filter, user & printer







# Interactive redirection of print jobs by the user



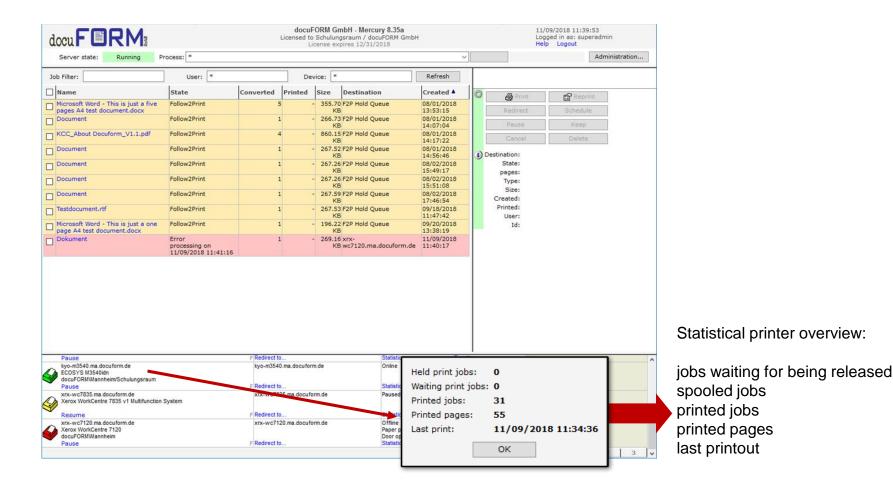


# **SNMP** and PCL monitoring within the Web client

- Bi-directional communication between Mercury and printer with direct Mercury output ports or Mercury spooler.
- Page based monitoring of all print jobs and printer.
- Printer specific SNMP messages are displayed unitary within the Web client.
- Page based clustering and reprint possible.
- Direct printer specific statistics including all relevant print jobs and print pages.
- Feedback of PCL-information back to the server/host by using the original network- or data protocol.
- Complete "streaming-capability" from the host to the printer.
- Redirection of print jobs, pages or page areas to other printer.



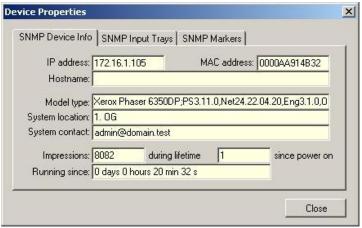
# Up to date SNMP printer overview with status "green-yellow-red"







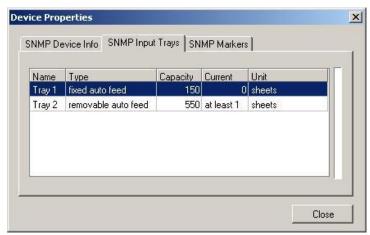
# Individual SNMP printer information within the Web client



SNMP printer overview



Paper trays overview incl. availability



Toner information per printer

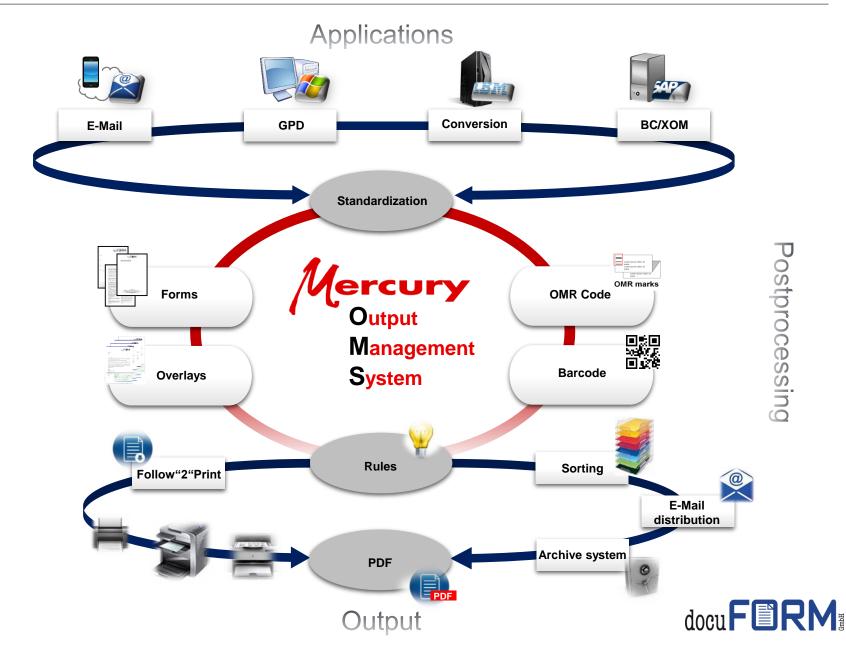


# **Main functionality of the Data Scanner**

- The scanner parses the data stream for pre-defined, constant strings and assigns the following characters to data fields.
- Currently any desired binary data streams and PCL are supported.
- The recognition and selection of pre-defined data fields works with ,Trigger Strings' or interactive on the screen.
- The selected data fields and their contents can be used for controlling the following Mercury modules:
  - Job Interpreter
  - Barcode module
  - Overlay & Forms Manager
  - "Field Positioner"
  - Job Separator
  - Rerouting of print jobs
  - Creation of index files for PDF workflow
  - Extraction of email addresses for document dispatching



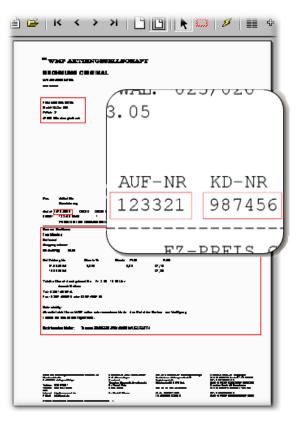


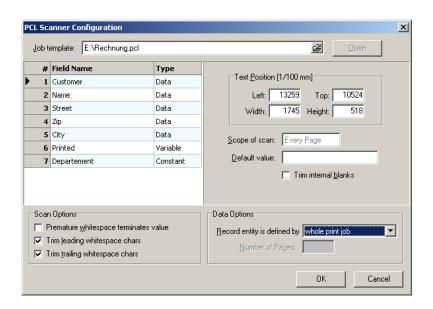




#### Extraction of text using the data scanner

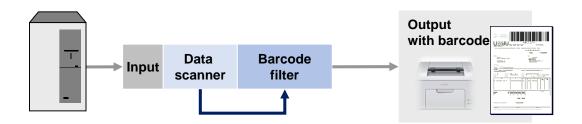
- A scanner for PCL print jobs recognizes data fields via defined areas of a page.
   Each marked area complied with a data field.
- The user defines the relevant areas interactively at the screen.







## Barcode generation from dynamically determined data with help of the Data scanner

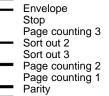










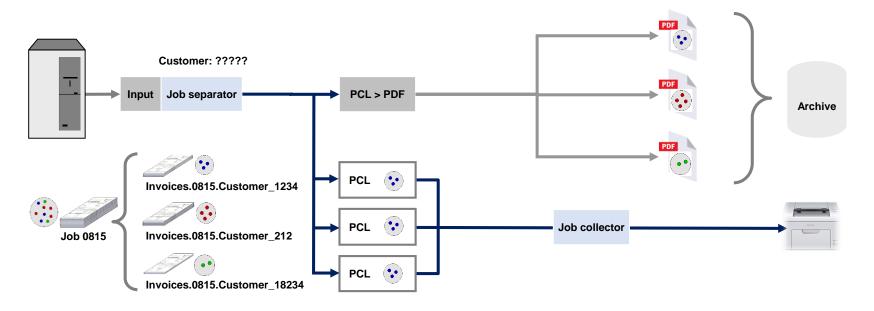


- Scan for data on each single page within a print data stream.
- Insertion of data as a barcode-graphic on the particular page.
- Any desired number of barcodes per page with free positions.
  - → No need for creation of barcodes for the host application.
  - → No need for the printer for printing barcodes.



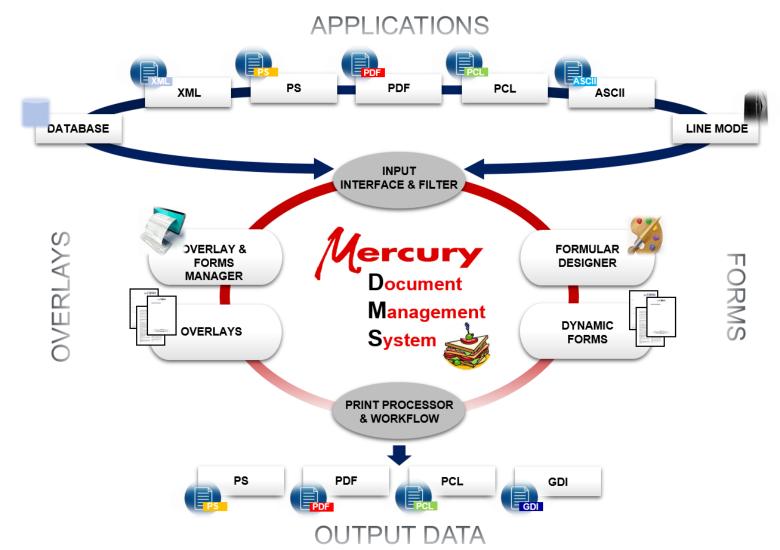


### ,Job Separator': Separation on variable data and re-assembling



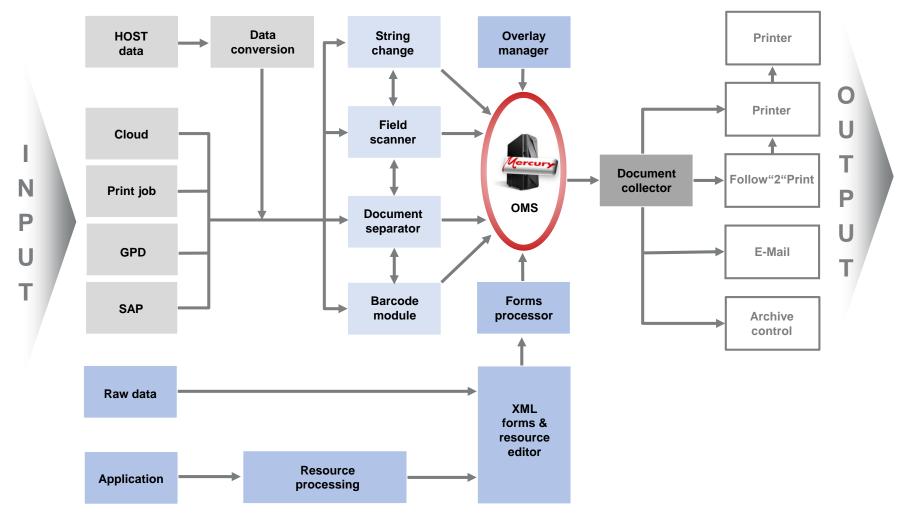
- Scan of the PCL-job for a constant string with a defined number of subsequent variable characters.
- Separation of the PCL-job in single print jobs per recognized string.
- Optional addition of banner- and/or trailer-page.
- Optional removal of recognized strings. (requires ASCII readable PCL print data)
- Assembling of single pages for ,new' print jobs.







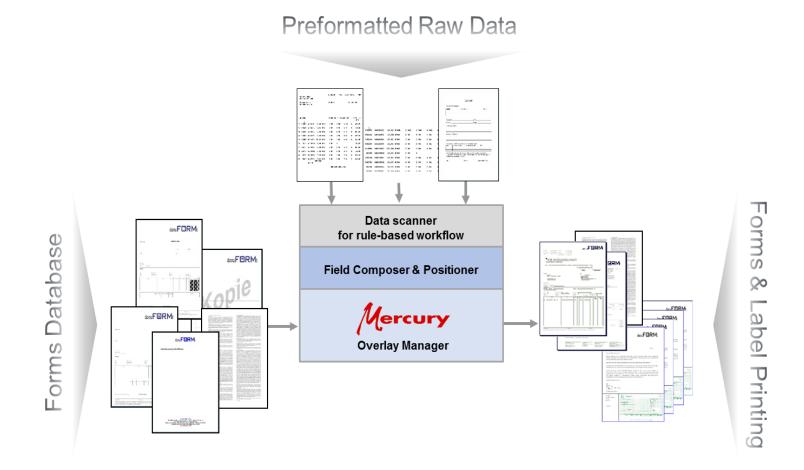
## **Global Mercury functional overview**







# Mercury Overlay Manager incl. "Field-Composer & Positioner" Fully integrated forms solution for secured production printing on a per-page basis



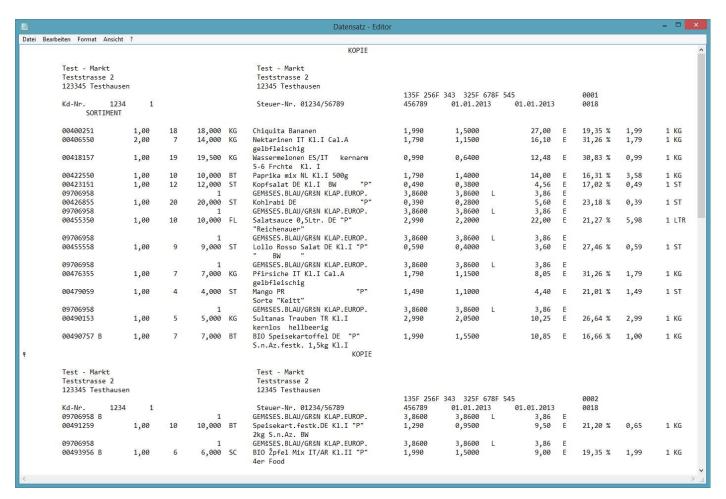


### **Example 1: Generating Invoices from Host Datasets**

- This example is intended to demonstrate the performance of the Mercury Overlay Manager modules.
- From Line Mode host records, the Mercury Overlay Manager module for Postscript, ASCII, and Line Mode data is used to generate billing records as follows:
  - Insertion and positioning of the host data within a form
  - Creation of original and copy sets
  - Applying of a watermark to the copy sets
  - Adding variable information by using the customer number
  - Generation of a barcode using information from the host datastream.



#### **Example 1: Output data in Line Mode format**



Output data: Line Mode data records from a host application





## **Example 1: Invoice form**

Anzahl Kolli	Gebinde							1000		-Datum		erat.		
*	Inhalt	gel. Menge in Stück	Pack. art	Artikelbezeichnung		% %	unverb. Laden- verk.pr. Euro	Einzelpreis Euro	KZ	Warenwert Euro	Mwst	Spanne % o. Mwst.	Grundpreis Euro	Einhei
		***********												
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		***********												
Rohertrag Euro				Spanne Gesamt	Unverbindlicher	Ladenve	saufswert Euro			Warenwert Euro				
E	Α	тот	AL		0%	Е	A	TOTA	L	0%	E		A	TOTA
Leergut Euro		Werbung Euro		Kosten Euro Kreditanteil Euro		0				Mwst. Euro				
			-		0%	E	A	TOTA	L	0%	E	<b>I</b>	A	TOT
				· · · · · · · · · · · · · · · · · · ·			GES	AMT BRUTTO E	URO					
Leergut / K	= Kosten /	S = Sonderpreis	/Aktionsa	artikel / V = Vorverkauf / I	Mwst.: E = ermäßig									
77777 T	esthausen	Telefax 0123	345 / 876	21 E-Mail: inf 543 www: wv	o@docuFORM.de vw.docuFORM.de	Spark (BLZ	asse Testhausen 999 999 99) Kto.12	34567			er,	Umsatzs Register	teuer-Ident-Nr. gericht Testhau	DE 123- isen HR
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Invoice generation form, filed on the Mercury server

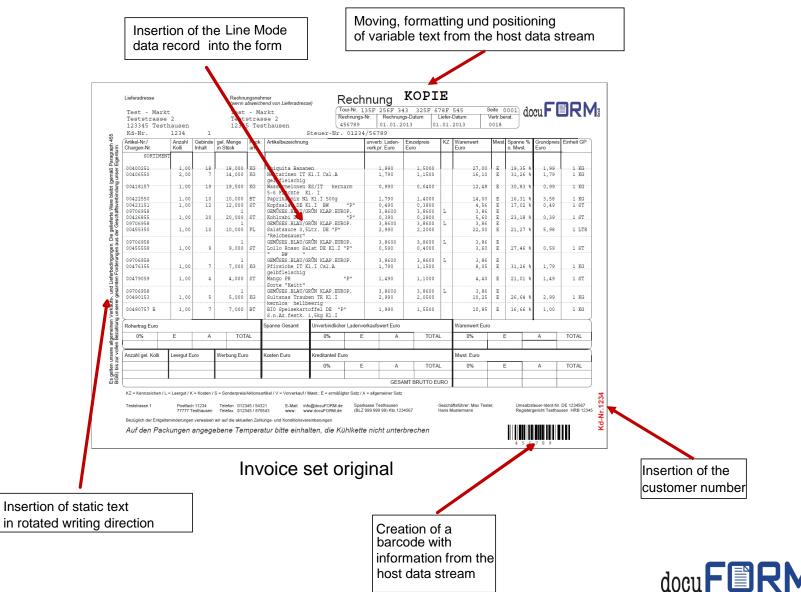


#### **Example 1: Results of Processing by the OVM Module**

- A set of invoices 'Original' and an identical invoice record 'Copy' are created from a host data record.
- A watermark is added to the 'Copy' billing record.
- Both billing records are mixed with dynamic barcodes containing content from the host data and a customer number extracted from the host data.
- The form is supplemented by a static text in rotated writing direction on the left edge of the form.

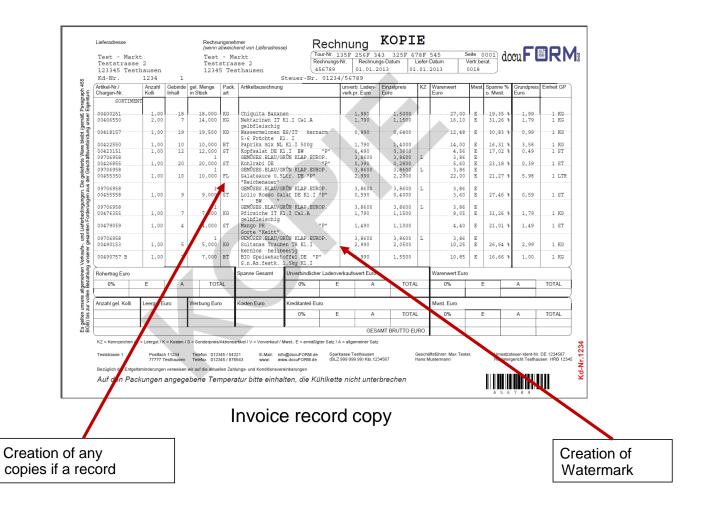


## **Example 1: Invoice Set Original**





## **Example 1: Invoice record copy**





## **Example 2: Label generation from CSV data records**

- In the second example, labels are automatically generated, which are filled with payload data from a CSV (Comma Separated Value) data stream.
- Here, the Mercury Overlay Manager module for Postscript, ASCII and Linemode data performs the following task:
  - Creation of four labels with borders and shading per page, one label per record of the CSV stream
  - Applying a custom logo on each label
  - Adding variable data from the CSV data stream to each label
  - Positioning and formatting of the variable data from the CSV data stream on the labels
  - Generation of 1D and 2D barcodes per label using customer-specific information from the CSV data stream

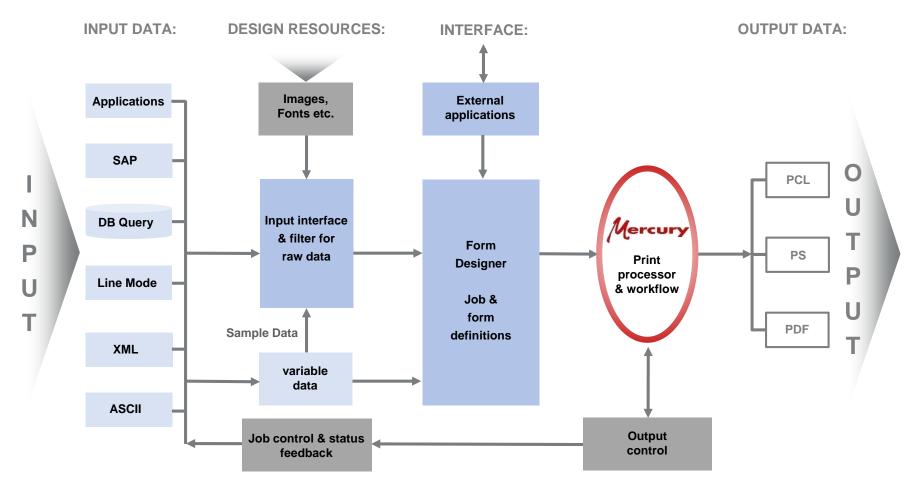
## **Example 2: Label page from OVM module**



### **Product highlights**

- Atlas is a universal document authoring tool for dynamic data printing and is fully integrated within the Mercury solution.
- Beneath XML structures, also classical data formats, such as line mode, can be processed from Atlas by using various input filters.
- The full integration of Atlas into Mercury allows a secure printing workflow.
- As part of the secure printing, within the Mercury Queue the Form Processor compares incoming raw data with the generated job pages and checks them for plausibility.
- The plausibility results can be reported back to the application as part of the secure printing.
- Integration of arbitrary graphic elements and font design.
- User-friendly user interface for simplified maintenance of the forms.

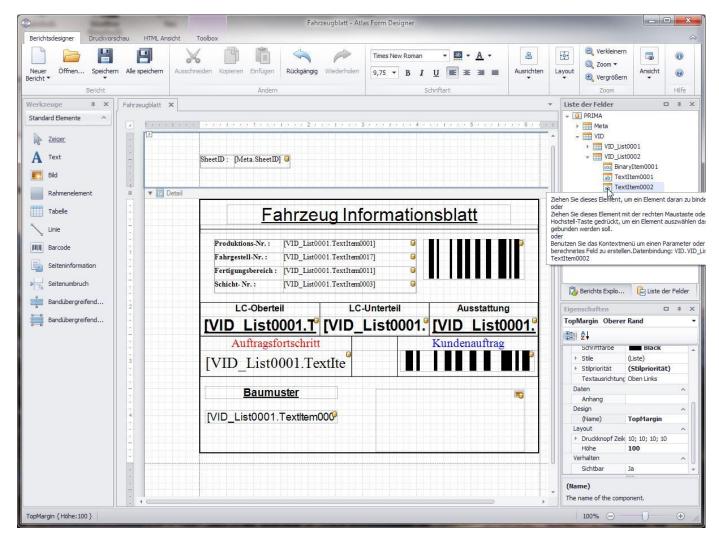
## Dynamic form editor & workflow





## **Mercury** Atlas Form Designer

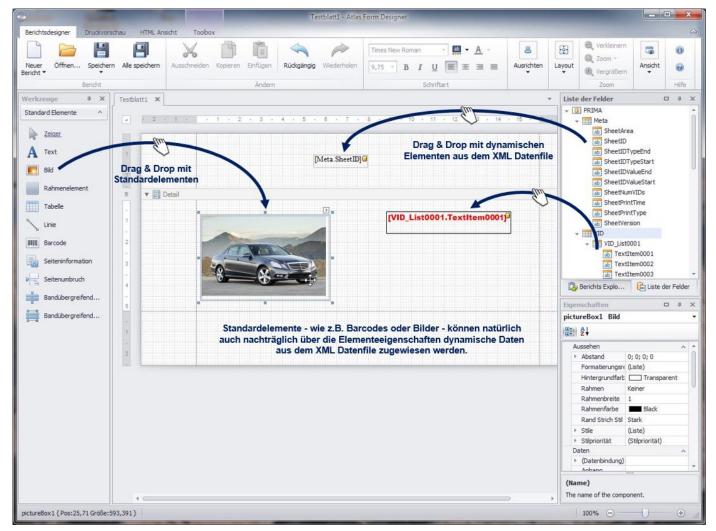
## Form design & field definitions





## **Mercury** Atlas Form Designer

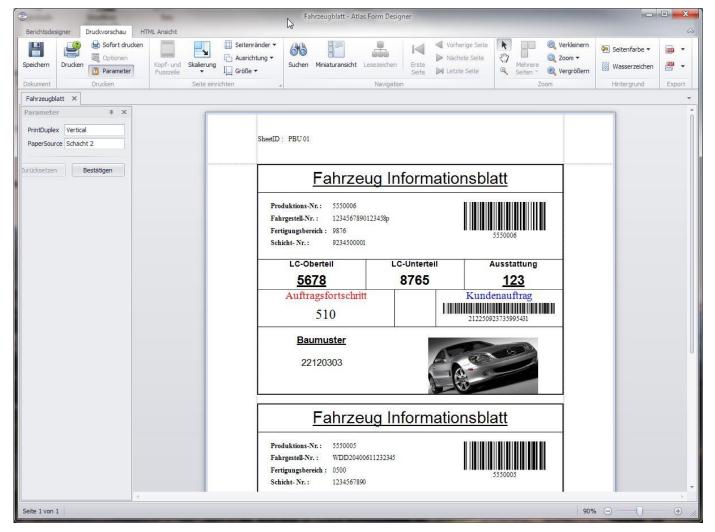
## **Design workflow**





## **Mercury** Atlas Form Designer

#### Form result with real data





## **Unique selling points**



- As part of Atlas's complete Mercury integration, secure printing is guaranteed, through print confirmation back to the host.
- The Form Processor embedded in the Mercury Print Queue compares the input data with the generated print pages and performs a plausibility check.
- The results of the plausibility check can be reported back to the application as part of the secure printing.
- With the patented Mercury technology, alternative forms can be processed without loss of quality, regardless of the manufacturer.
- Ability to use old line mode data for existing data streams.
- Unified user interface as part of the overall Mercury solution.
- Optimal printing performance by integrating the full package into the Mercury solution.



### Highlights and unique features



- Mercury is a vendor-independent and cross-module modular middleware
- ✓ The Mercury Suite covers all segments of a print workflow in one product.
- Integration of the Global Printer Driver (GPD) as a self-learning, patented and virtual printer driver
- Fully integrated form management and form designer
- Extended accounting through optional MPS coupling
- SAP certification and modules for host / AS/400 printing
- Complete integration of a vendor-independent and cross-discipline Follow"2"Print workflow



#### **Extract of our customer & partner portfolio:**













































































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