



PBS Enterprise Content Store

Access to Data and Documents without an SAP System



Independent Access to Data in Modern SAP Environments

Today, the information stored in ERP systems is more important than ever before as a production factor in global economic cycles. This is particularly true for current operational data that forms the basis for business decisions to be made. But information loses value rather quickly over the course of its life cycle. Nevertheless, it still needs to remain accessible, even for decades in some cases. German law already calls for at least three sets of regulations to be observed here: the Telecommunications Act, the Federal Data Protection Act (BDSG) and the Principles of Data Access and Auditing of Digital Documents (GDPdU). In addition to the German legislative jungle, companies must also observe international law. From Basel II, which is aimed at analyzing creditworthiness, to various EU Directives and the American Sarbanes Oxley Act, which may also apply to German companies, if they have business relationships with U.S. companies.

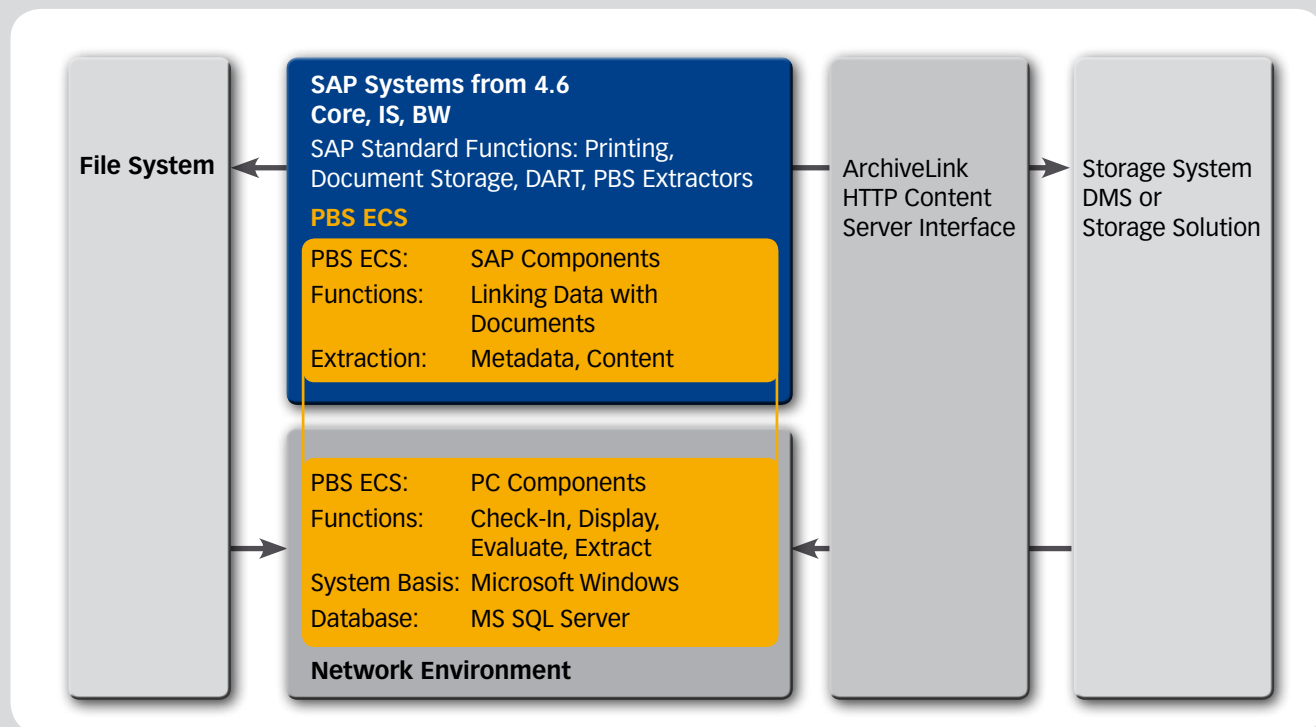
The challenge of modern data management lies in the ability to store information in a safe and cost-effective manner and, on the other hand, be able to access it easily. If, for instance, legacy systems are left behind that still contain data that is subject to the duty of disclosure for tax purposes, the question is how to access historical data in the future. After all, providing access to 'historical' hardware, software, and human resources can be very expensive.

With PBS Enterprise Content Store (PBS ECS), you'll be able to gain access to structured and non-structured ERP data even without using an SAP system. This client/server-based solution enables you to analyze SAP DART Ex-

tracts, PBS Data Export Interface Extracts, SAP print lists, and original documents with links to SAP in a system-independent manner. The links between documents that are of relevance for tax purposes and original documents are retained. PBS ECS can be seamlessly embedded in existing system and storage environments.

The basic functions include data extraction, SAP-independent data access, and comfortable search options. To what extent these functions are actually put to use depends on how PBS ECS is to be used. Three basic application possibilities help make this more clear. They also allow for a wide variety of customer-specific modifications and different versions, however.

Figure 1
Application Components



Application Scenarios

Centralized Data Management for External Data Access

Centralized administration of data extracts generated on a periodic basis in SAP system environments that branch out like the branches of a tree represent one typical area of application for PBS Enterprise Content Store. To this end, the SAP DART or PBS extracts from the local systems are stored centrally inside a file or storage system. With PBS Enterprise Content Store, you'll then be able to access extracts and expand DART content to include document access, if you'd like, without using SAP. In this way, your employees and external auditors will always have a comprehensive source of information available, including comfortable research options with respect to old SAP data.

Efficient Decommissioning of SAP Systems

Once an SAP system has been decommissioned, the original data stored inside it can no longer be accessed. In this case, it is important that you maintain a data pool that is as large as possible in order to retain access to the original data. PBS takes this into account. PBS ECS offers a Content Extractor that takes care of the task of table-oriented extraction of SAP data per extraction object based on the SAP definition of the data volume of central data archiving objects.

In addition to data extraction, print lists can be a valuable source of information after decommissioning. PBS also pays tribute to this fact with ECS and offers functions for comprehensive retrieval, printing and PDF conversion while retaining the original layout of the SAP lists. To ensure smooth interaction between the data, print lists and documents, technical and descriptive information on the original source system, or so-called metadata, needs to be added to the dataset.

Pass on Company Data When Needed – ArchiveLink on Demand

If a company has been sold, the judicial responsibility for historical data and documents that are often passed on in physical form is transferred over to the new owner. Here, passing on documents from a storage system poses a special challenge. The use of PBS ECS together with PBS ContentLink offers an appropriate solution to this problem. PBS ContentLink is a lean middleware that is located between SAP and modern storage systems that ensures compliant and cost-effective storage of data. Here, PBS capitalizes on the fact that PBS ContentLink can also be configured as a NAS version (Network Attached Storage) and thus offers the ability to form a temporary ArchiveLink connection on the basis of a pure file system without having to install additional software components in the SAP system.

For combined use, both products are installed locally on the same (mobile) hardware, whereby PBS ContentLink is activated as a NAS version. A content repository that refers to the local PBS ContentLink installation is set up inside the SAP system. Now, stored data, documents and print lists for the section of the company that is to be decommissioned can be copied from existing content repositories and added to the local content repository of PBS ECS and other storage scenarios can be added to it, if necessary. Even after it has been separated from the SAP system, the respective data will be available immediately on an unlimited basis thanks to the retrieval functionality in PBS ECS.

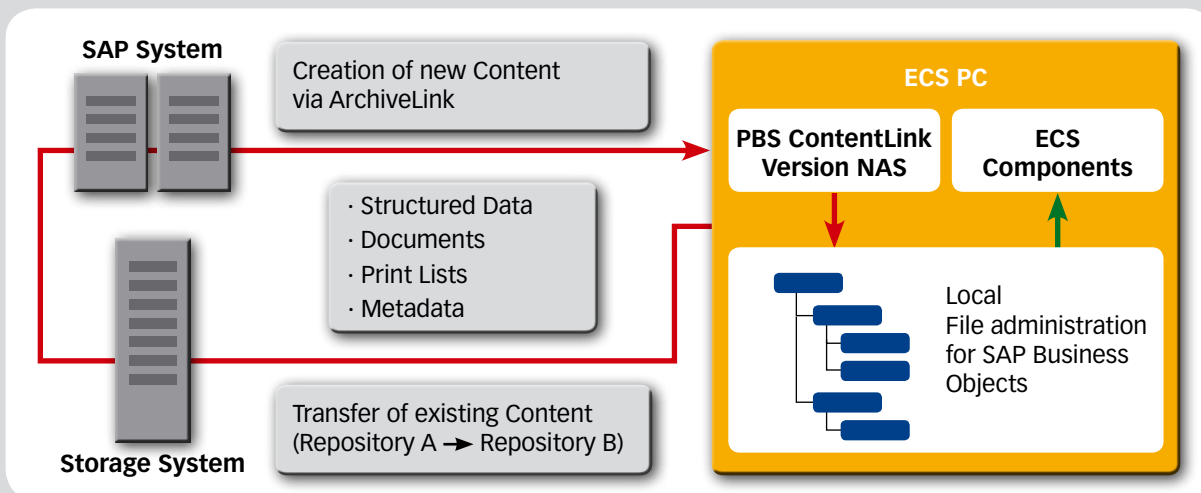


Figure 2
ArchiveLink on Demand

Data Pool / System Requirements

Data, documents and print lists from the SAP system form the basis of the retrieval functionality in PBS ECS. The structured data, in particular, can come from various extraction sources:

Data Format	Data Type	Data Source
DART Extract	Structured Data	SAP DART
DART View	Structured Data	SAP DART
Ad hoc Extracts in SAP AIS Format	Structured Data	PBS Data Export Interface
Decommissioning Extracts on the Basis of ADK	Structured Data	PBS Enterprise Content Store
Incoming Documents	Document	SAP Workflow Process → Receipt of Documents
Outgoing Documents	Document	SAP Application → Printing of Documents
Daily / Monthly / Annual Reporting	Print Lists	SAP Application → Generate Print Lists
System-related Information, Linking of Data ↔ Document, Signatures for the Storage System	Metadata	PBS Enterprise Content Store

System Requirements

To ensure successful installation of PBS ECS, the following minimum requirements need to be met:

SAP Release

SAP R/3 4.6C or higher, other release levels upon request

PC Features

- Processor: Compatible with Pentium III or higher
- At least 1 GB of Random Access Memory (RAM)
- At least 50 MB of available hard disk storage
- Operating System Windows® NT4.0 (including Service Pack 5 or higher), Windows® 2000, Windows® XP Professional, Windows® Vista
- Microsoft® Internet Explorer 5.0 (or higher)

SAP Extraction

The generation and extraction of link information is essential to ensuring smooth interaction between data and documents and successful research on documents, for instance delivery notes or incoming invoices. This is done by generating various indices with the help of the ECS Customizing Cockpit in the SAP system. These indices contain information on documents and access information on the linked documents. The standard indices include:

- Accounting documents
- Sales documents
- Individual billing documents
- Delivery
- Goods movement

Additional user-specific indices can also be created very easily to meet the demands of specific customers.

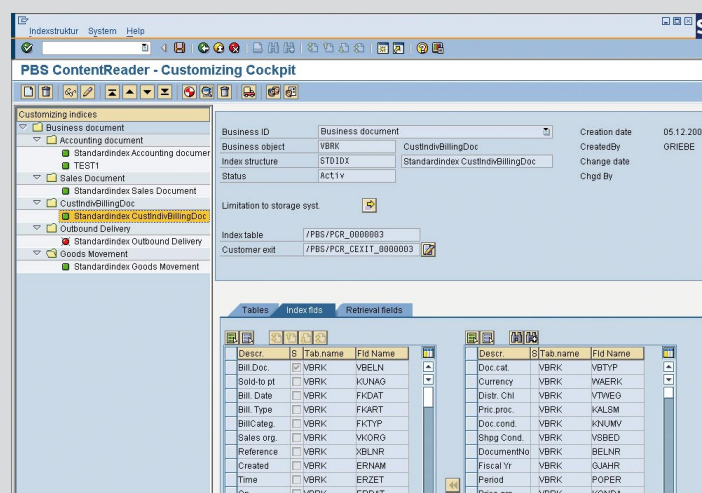


Figure 3 Customizing Cockpit, Definition of search indices

Functions

With PBS Enterprise Content Store, you are able to access all of the relevant data through the storage or file system completely independently of the original SAP system. You will be able to activate the metadata and business management content from the original source system with the help of the 'Check-In/Check-Out' technique and then deactivate it after your work has been completed.

Access Types

You will be able to access your old SAP data in a variety of different ways, depending on your exact needs and work habits. In addition to having direct access to tables, PBS ECS also features a View Builder, a single document display and preconfigured standard reporting. Branching off into the underlying original document is thus possible at all times.

View of the Data Directories

Business-related information from an organizational unit is presented to you in bundled form inside a PBS ECS Repository. The granularity of this type of data directory depends on the individual purpose, for instance documentation of a client, a company code, or a fiscal year, etc.

The role-based authorization concept allows you to define various user views for different user groups. In addition to the organizational separation of the administrative and the executive subsections of PBS ECS, the access to individual divisions of the company can also be designed with the help of the repository approach.

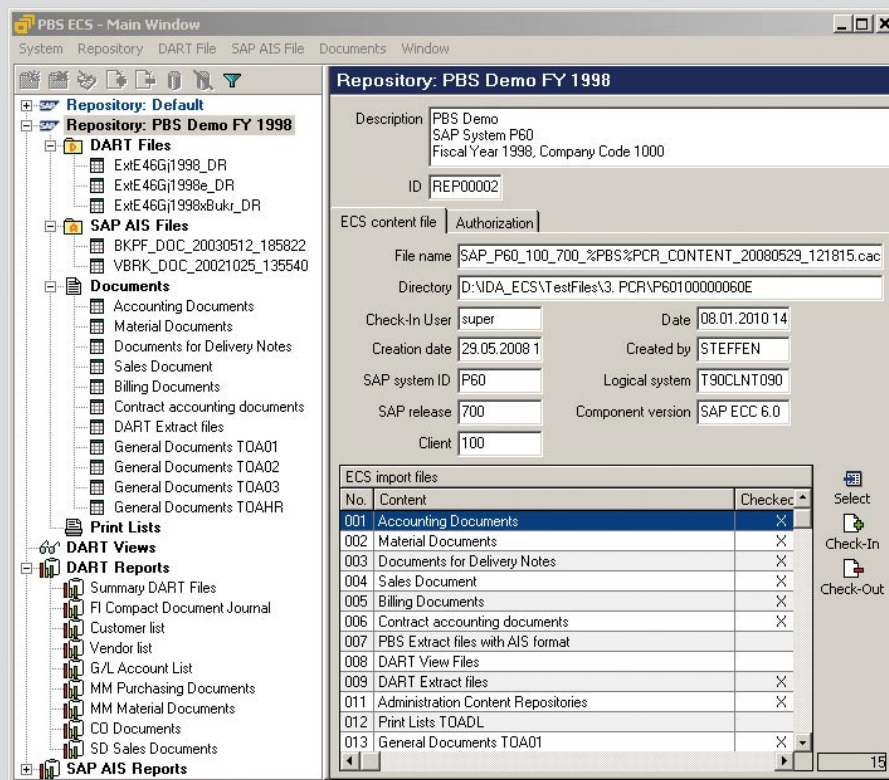


Figure 4
Main window of PBS Enterprise Content Store

Functions

Access to Single Documents

In order to increase the transparency of information, you can also integrate the single document display into PBS ECS based on the SAP transactions:

- FB03 financial accounting document
- MB03 material document
- VF03 billing document (in preparation)
- ME23 purchase order (in preparation)

The links between the document information and the original documents are extracted with the help of meta information and thus saved.

Report Generator

Following the implementation of the MS SQL Database for storing and retrieving SAP data, the transparent structures allow for data access to be easily integrated using the analysis tools and data warehouse solutions common to the market. A preconfigured basis reporting system on the basis of the SAP Report Generator 'Crystal Reports' is already planned in PBS ECS.

Compliance

To fulfill the requirements of the digital company tax audit, PBS ECS can be used to store structured SAP data quite easily on a storage medium in a format that is generally readable and make this available to the auditor. In this case, the XML description standard recommended by the legislator is generated and stored.

Display of Print Lists

Generating and storing print lists as part of system documentation enhances the informative quality of independent data access with PBS Enterprise Content Store. All of the print lists stored can be displayed, searched, converted, and printed in the usual SAP format, and, if necessary, be converted into a data pool that can be evaluated digitally.

ECS Single Document Display in Financial Accounting

Line item	Posting Key	Account Type	G/L Account	Customer	Vendor	Amount in LC
1	12	D	0000140000	1000000020		-57.31
2	40	S	0000841000			57.31
3	19	D	0000196900	1000000020		-71.58
4	09	D	0000196910	1000000020		71.58
5	19	D	0000196900	1000000020		-81.81
6	09	D	0000196910	1000000020		81.81
						0.00

Figure 5 Overview

Document: AB Accounting document
 Doc. Header Text: Sollstellung Januar 98
 Branch number: [redacted] Number of Pages: [redacted]
 Card type: [redacted] Card no.: [redacted]
 Request Number: [redacted]
 Mandate: [redacted] Tax Report Date: [redacted]
 Reference: 000000011998MYSO Document Date: 01.01.1998
 Cross-CC no.: [redacted] Posting Date: 01.01.1998
 Currency: DEM / [redacted] Period: 1 / 1998
 Exchange rate: 0.51129 Translate Date: 01.01.1998
 Ref. Transactn: BKPF [redacted]
 Reference Key: 010000796610001998
 Entered by: 0002114 Parked by: [redacted]
 Entered on: 19980325 Entered at: [redacted]
 Transaction Code: FB08
 Rec. entry doc.: [redacted] Session name: [redacted]
 Changed on: [redacted] Last update: [redacted]
 Reversal Reason: [redacted] Reversal date: [redacted]
 Doc. status: [redacted]
 Ledger Group: [redacted] Ledger: [redacted]
 Ref. key(head) 1: [redacted] Ref. key(head) 2: [redacted]

Figure 6 Header

ECS - [Display document: Position 003]
 Customer: 1000000020 Steffen Ott G/L: 0000196900
 Company Code: 1000 Weigandufer 2 Branch: [redacted]
 IDES AG: Berlin Document Number: 3100007966
 - Position 3 / IS-RE Rev.AdPmtReqQC / 13J
 Amount: 140.00 DEM Amount in LC: -71.58 EUR
 Tax amount: 0.00 LC tax: 0.00
 Tax Code: [redacted] Business Place: [redacted]
 W. tax base: 0.0000 W. tax exempt: 0.0000 W. Tax Code: [redacted]
 Business Area: 9900 Trdg part BA: [redacted]
 Baseline Date: 01.01.1998
 Payment Ref.: [redacted] Individ. set: [redacted]
 Print Block: [redacted] Print Method: [redacted] Print meth. suppl.: [redacted]
 Payment cur.: [redacted] Pmnt/c. amnt: [redacted]
 Clearing: 01.01.1998 / 0100007966 Payment Amnt: 0.00
 Contract Number: [redacted]
 Flow Type: [redacted] / 0 / 0
 Assignment: 19980101 Sp.G/L. assgt: [redacted]
 Text: %VZ Betriebskosten 01.01.1998

Figure 7 Item

Summary

Due to its ability to access original documents and transparent company data, PBS Enterprise Content Store is suited for use in both company audits and system decommissioning, as well as the sale of a company. Even after an SAP system has been decommissioned, you will still be able to make further use of the data from these systems. This means PBS Enterprise Content Store also offers small and medium-sized companies convenient and cost-effective subsequent use of SAP Data Extracts and comfortable searching for original documents and print lists.

Combining PBS Enterprise Content Store with PBS ContentLink is especially useful. This allows for compliant storage of data in an SAP-independent format, on the one hand, and authorized data access via SAP ArchiveLink, on the other.

FI Compact Document Journal **PBS ECS**

DART File: ExtE46Gj1998e_DR 08.01.2010
 Company Code: 1000
 Doc. Numbers: all
 Posting Date: 01.02.1998 - 31.07.1998

CCde	Doc.No.	Year	Type	Post.dat	User	Gen. Ledger	TC	PK	Item	Month	Amount	Curr.
Comp. Code: 1000												
1000	0100007487	1998	RV	19980228	WEIMANN	0000140000	A1	01	1	2	352,79	DEM
						0000800000	A1	50	2	2	-255,65	DEM
						0000888000	A1	50	3	2	-51,13	DEM
						0000175000	A1	50	4	2	-46,02	DEM
						0000230051		40	5	2	0,01	DEM
											0,00	DEM
1000	0100007488	1998	RV	19980331	WEIMANN	0000140000	A1	01	1	3	352,79	DEM
						0000800000	A1	50	2	3	-255,65	DEM
						0000888000	A1	50	3	3	-51,13	DEM
						0000175000	A1	50	4	3	-46,02	DEM
						0000230051		40	5	3	0,01	DEM
											0,00	DEM
1000	0100007489	1998	RV	19980430	WEIMANN	0000140000	A1	01	1	4	352,79	DEM
						0000800000	A1	50	2	4	-255,65	DEM
						0000888000	A1	50	3	4	-51,13	DEM
						0000175000	A1	50	4	4	-46,02	DEM
						0000230051		40	5	4	0,01	DEM
											0,00	DEM
1000	0100007490	1998	RV	19980531	WEIMANN	0000140000	A1	01	1	5	352,79	DEM
						0000800000	A1	50	2	5	-255,65	DEM
						0000888000	A1	50	3	5	-51,13	DEM
						0000175000	A1	50	4	5	-46,02	DEM
						0000230051		40	5	5	0,01	DEM
											0,00	DEM
1000	0100007491	1998	RV	19980630	WEIMANN							

Figure 8
Automatic Linking of Data and Documents

Result DART View 1ECS_SD01 (2583 records)

VBELN SD document	MATNR Material	MAKTX Description	LFIMG Delivery qty	MEINS Base unit	NAME1 Name
0080003706	M-13	MAG DX 17F	20	PC	N.I.C. High Tech
0080003706	M-17	Jotachi SN4000	26	PC	N.I.C. High Tech
0080003706	M-17	Jotachi SN4000	26	PC	N.I.C. High Tech
0080003706	M-05	Flatscreen LE 50 P	19	PC	N.I.C. High Tech
0080003706	M-05	Flatscreen LE 50 P	19	PC	N.I.C. High Tech
0080003707	M-09	Flatscreen MS 1585	22	PC	Karsson High Tech Markl
0080003707	M-09	Flatscreen MS 1585	22	PC	Karsson High Tech Markl
0080003708	1400-400	Motorcycle Helmet -	187	PC	Motor Sports
0080003708	1400-400	Motorcycle Helmet -	187	PC	Motor Sports
0080003708	1400-400	Motorcycle Helmet -	187	PC	Motor Sports
0080003708	1400-400	Motorcycle Helmet -	187	PC	Motor Sports
0080003708	1400-100	Deluxe Headlight	440	PC	Motor Sports

Figure 9
DART View

Lieferschein

Wiederholungsdruck
 Nummer/Datum: 80014713 / 12.09.2005
 Referenznummer/Datum: DG-20050902-1 / 02.09.2005
 Auftragsnummer/Datum: 11412 / 02.09.2005
 Kundennummer: 2130

Transport-Details

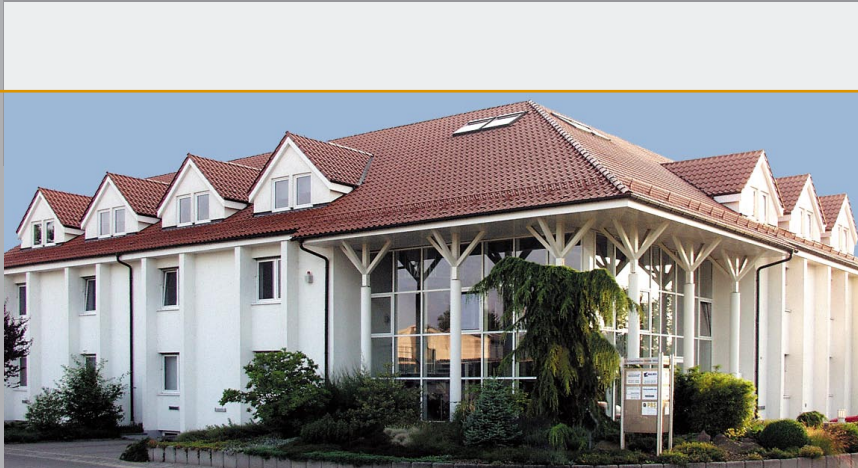
Bedingungen: Vorausbedingungen Standard
 Lieferbedingungen: CFR Köln

Gewichte (Brutto/Netto) - Volumen - Markierung

Bruttogewicht: 903,250 KG
 Nettogewicht: 903,250 KG

Pos.	Material Bezeichnung	Menge	Gewicht
000010	DFC1013 Tastatur Professional - Modell NATURAL Bestellnr._K / Pos:DG-20050902-1	287 ST	287 KG
000020	DFC1009 Tastatur Standard - Modell EURO Bestellnr._K / Pos:DG-20050902-1	448 ST	448 KG
000030	DFC1017 SIM-Modul 4M x 36, 70 ns Bestellnr._K / Pos:DG-20050902-1	122 ST	122 KG
000040	DFC1002 Festplatte 10,80 GB / SCSI-2-Fast Bestellnr._K / Pos:DG-20050902-1	370 ST	46,250 KG

Figure 10
Original Document



PBS Software GmbH

PBS Software is a leading provider of add-on software for SAP solutions for areas like data archiving, extraction and storage, as well as system closings. The company has been known to be an expert on complex, integrated data access to both archived and nearline data in SAP applications for many years. In addition to classical SAP data archiving, the extensive PBS solutions also support the SAP BW-specific nearline sto-

rage concept that enables completely new ILM application scenarios together with the column-based analytics server Sybase IQ.

PBS develops pragmatic ILM tools in close collaboration with SAP and supports the new SAP ILM solution as an SAP SOFTWARE SOLUTION PARTNER.

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Dolphin solutions improve business and IT performance, lower total cost of ownership and deliver high return on investment. The company was founded in 1995 and has offices in Philadelphia, PA and San Jose, CA. Dolphin solutions are implemented across North America and around the world.

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