
warp it AG

Package for SPEC2000 XML



Overview – Industry Standard

Air Transport Association

SPEC2000
e-business standards

- Created by the airline industry
- Comprehensive set of e-business specifications, products and services
- Widely used by the world's airlines and suppliers
- Administered by the Air Transport Association (ATA)
- www.SPEC2000.com

Overview – Industry Standard

Air Transport Association

SPEC2000
e-business standards

E-Business Specification for Materials
Management

Revision 2012.2
(18th Revision)



AIR TRANSPORT ASSOCIATION

Air Transport Association of America, Inc.
1301 Pennsylvania Avenue, NW - Suite 1100
Washington, DC 20004-1707
USA

- Order Administration quotation process, shipment, customer invoice
- Repair Order Administration
- Warranty Claims Placement
- XML Representations
ATA_SparesOrder,
ATA_SparesOrderExc,...

Overview – Industry Standard

E-Business Specification for Materials Management

Revision 2014.1
(20th Revision)



AIR TRANSPORT ASSOCIATION

Air Transport Association of America, Inc.
1301 Pennsylvania Avenue, NW - Suite 1100
Washington, DC 20004-1707
USA

- **New Version for changes in 2014**
 - PNR length to CHAR25
 - ACN length to CHAR10
 - INV/RIN length to CHAR25
 - New TEI DNS
 - Other changes
- **New SAP certification end 2015**

Overview – Industry Standard

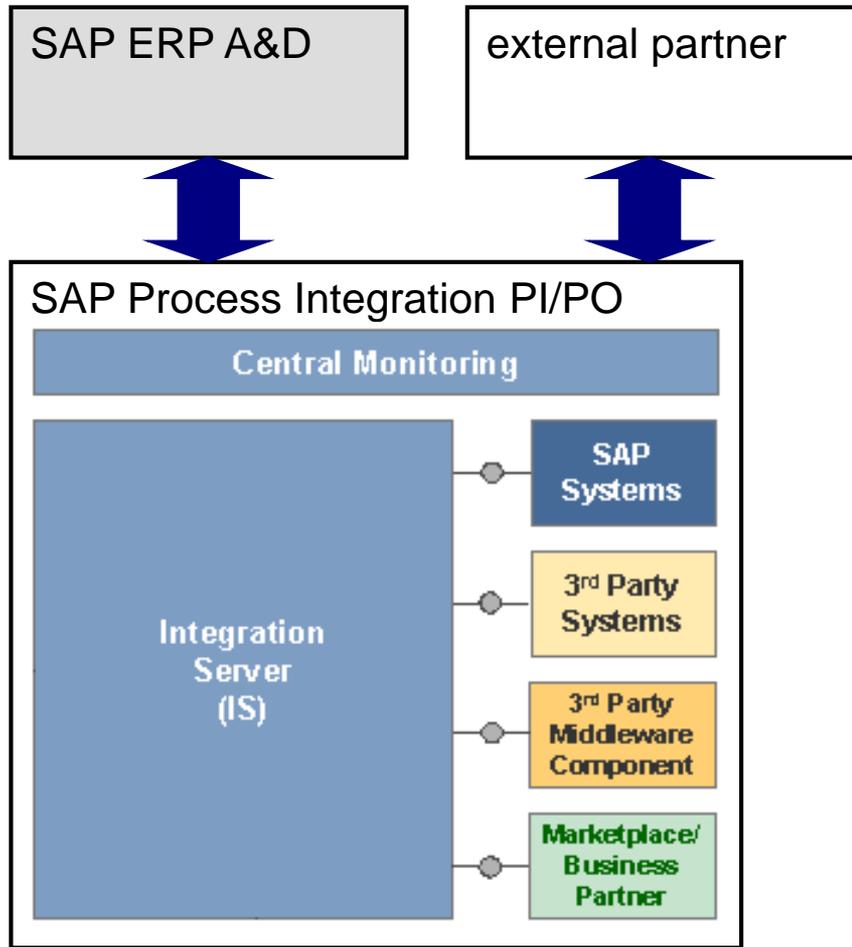
Air Transport Association

SPEC2000
e-business standards

XML Representations

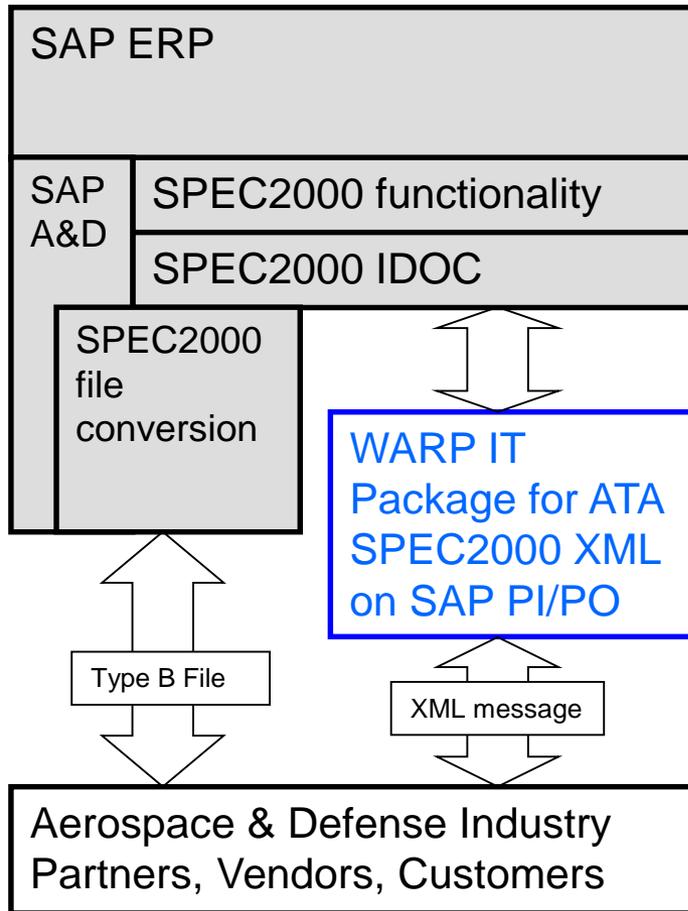
SPEC2000: CHAPTER	SPEC2000: MESSAGE	XML SCHEMA INITIAL TRANSACTION	XML SCHEMA RESPONSES or ACKNOWLEDGMENT
2	S1QUOTES	ATA_SparesQuoteRequest	ATA_SparesQuoteInterim, ATA_SparesQuoteFinal
2	S1STOCKS	ATA_SparesStockInquiry	ATA_SparesStockResponse
3	S1BOOKED	ATA_SparesOrder	ATA_SparesMessageAck
3	S1BOOKBK	ATA_SparesOrderBookback	
3	S1ORDEXC	ATA_SparesOrderExc	ATA_SparesMessageAck
3	S1POSTAT	ATA_SparesOrderStatusInquiry	ATA_SparesOrderStatusResponse
3	S1SHIPPD	ATA_SparesSupplierShipNotice	
4	S1INVOICE	ATA_SparesInvoice	ATA_InvoiceMessageAck
		ATA_CommonTypes	
		CSDD_MM	
		MM_CommonTypes	

System Landscape



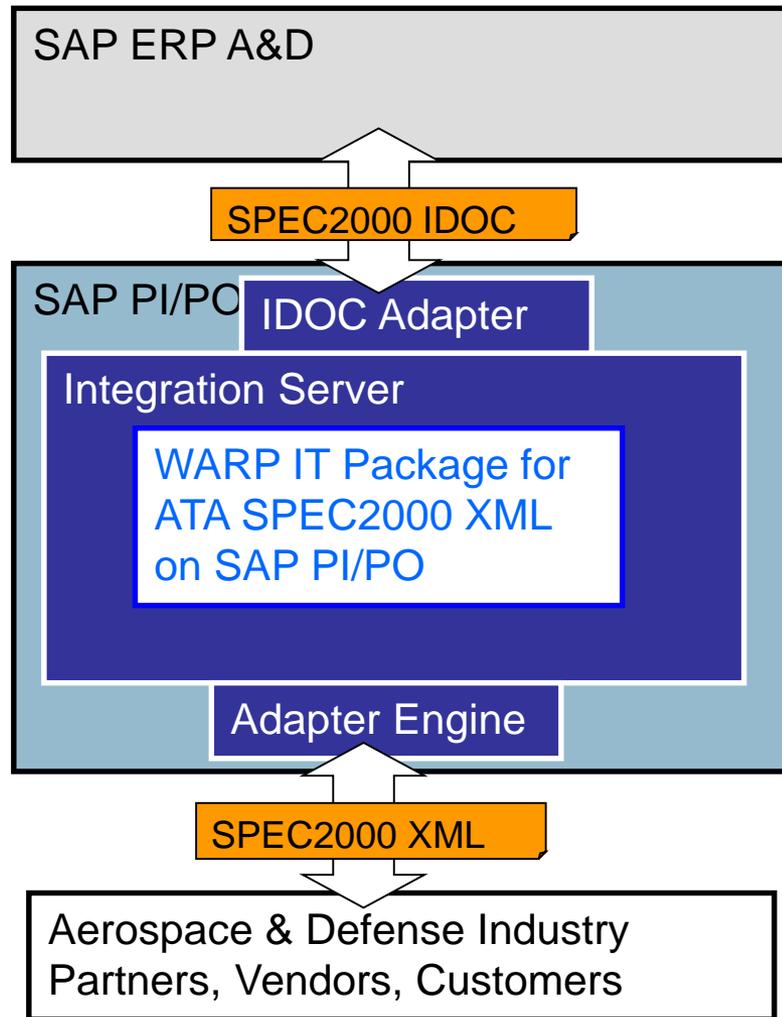
- Using SAP ERP A&D solution
- Exchange messages via SAP PI/PO which is part of SAP Netweaver™
Central development, configuration and monitoring of all business processes
- SAP standard adapters: File/FTP, HTTP, MQSeries, IDOC/RFC, 3rd Party Apps,...

Application Architecture



- SAP A&D Interface for ATA SPEC2000
- Build upon enhancements and developments in the SAP SPEC2000 functionality
- Concurrent use of SPEC2000 XML and SPEC2000 Type B for different partners

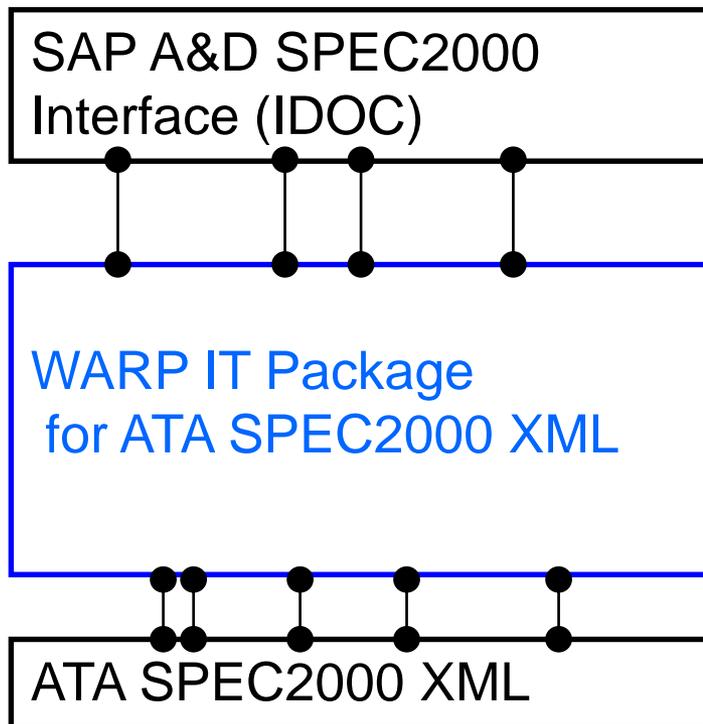
Application Architecture



- Data exchange via standard ALE interface and IDOC adapter
- Flow control for defined business processes
- Interface mapping between IDOC types and XML messages
- Field mapping and conversion between EDI and XML formats
- Adapter Engine sends and receives XML messages (HTTP protocol)

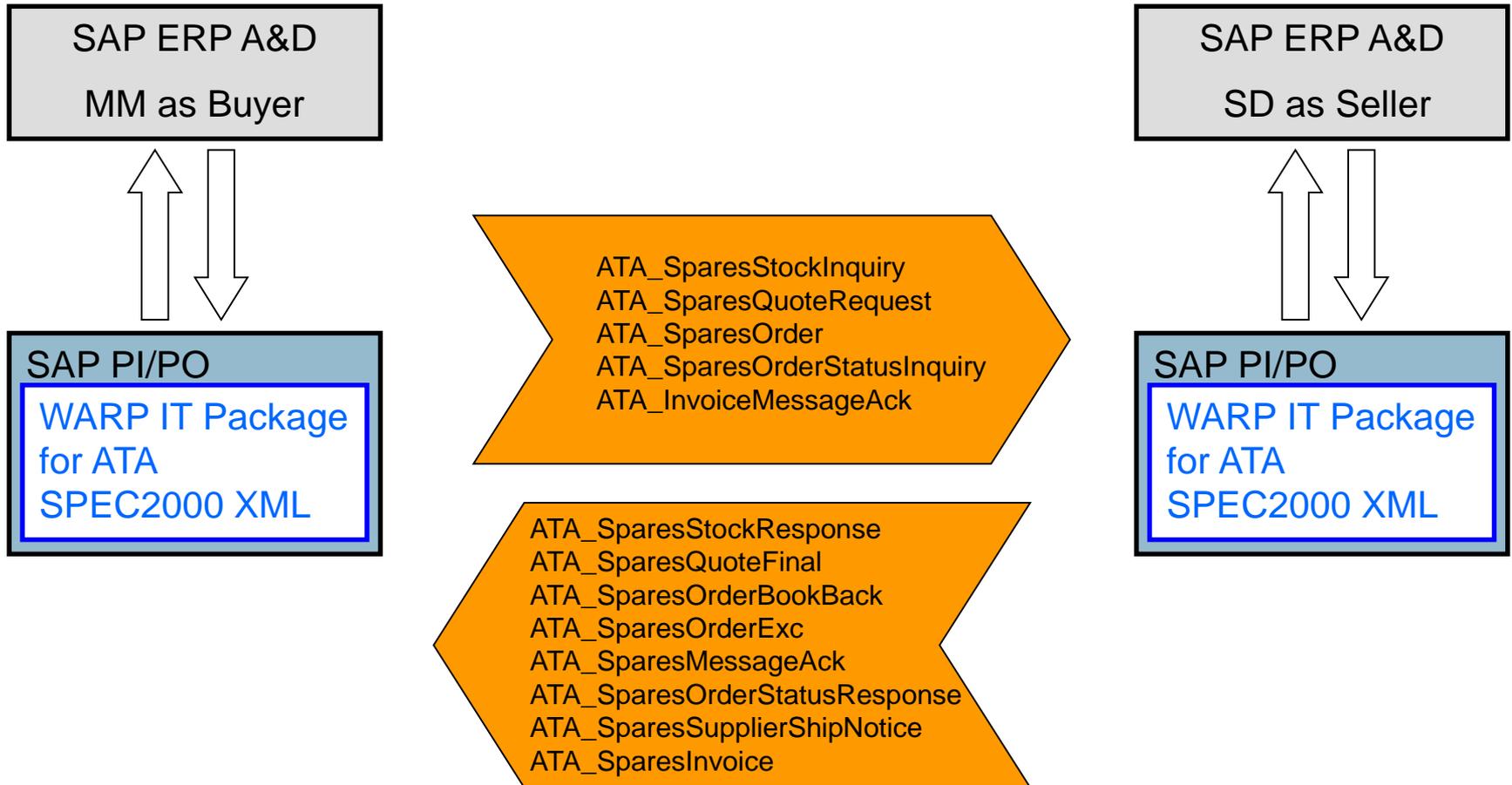
SAP PI(XI) Content

Following SAP PI Content packages are required

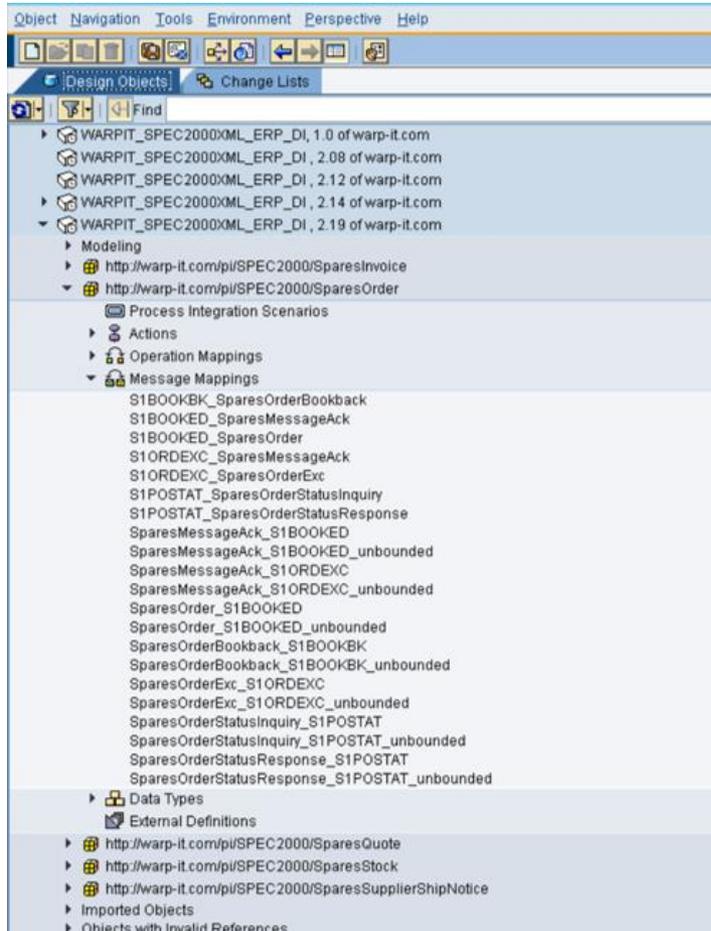


- SAP A&D Interface for ATA SPEC2000 defines interfaces (SPEC2000 IDOC) used in SAP A&D; → SAP Marketplace
- WARP IT Package for SPEC2000 XML provides mapping between interfaces and supports ATA processes → warp it AG or SAP Marketplace
- Interface for ATA SPEC2000 XML defines interfaces for ATA SPEC2000 XML messages; → warp it AG

Process Overview



Package for ATA SPEC2000 XML



- Chapter 2
S1QUOTES: ATA_SparesQuoteRequest,
ATA_SparesQuoteFinal,
ATA_SparesQuoteInterim
S1STOCKS: ATA_SparesStockInquiry,
ATA_SparesStockResponse
- Chapter 3
S1BOOKED: ATA_SparesOrder,
ATA_SparesMessageAck
S1ORDEXC: ATA_SparesOrderExc,
ATA_SparesMessageAck
S1POSTAT:
ATA_SparesOrderStatusInquiry,
ATA_SparesOrderStatusResponse
S1SHIPPD:
ATA_SparesSupplierShipNotice
- Chapter 4
S1INVOICE: ATA_SparesInvoice,
ATA_InvoiceMessageAck

Package for ATA SPEC2000 XML

The screenshot displays the IBM Business Process Manager (BPM) Message Mapping tool. The main window shows a message mapping configuration for the name 'S1BOOKED_SparesOrder'. The mapping is defined between two XML structures:

- Internal Structure (IDoc: S1BOOKED.SPCORD01):**

Structure	Type	Description
EDIDC40	xsd:string	Customer Identification
EDISZK11	xsd:string	Customer Code
COCODE	xsd:string	Supplier Code
CUS	xsd:string	Manufacturer Code
SPL	xsd:string	Quotation Request Number
MFR	xsd:string	Customer Order Number
QTR	xsd:string	Quotation Number
CPO	xsd:string	Contract Number
QTN	xsd:string	Inquiry Part Number
IPN	xsd:string	Response Part Number
RSP	xsd:string	Part Number
PNR	xsd:string	Replacing Part Number
RPN	xsd:string	Keyword Name
KWD	xsd:string	Interchangeability Code
INC	xsd:string	Reason For Part Number
RFC	xsd:string	Quotation Quantity
QTO	xsd:string	
- External Structure (ATA_SparesOrder):**

Structure	Occurrences	Type
OrderHeader	1..1	MessageHeaderType
CIC	1..1	CIC
SPL	1..1	SPL
MessageSender	0..1	SupplementaryAddressTextType
MessageReceiver	0..1	SupplementaryAddressTextType
OrderDetails	1..unbounded	
TNC	1..1	TNC
CPO	1..1	CPO
PNR	1..1	PNR
UNP	1..1	UNP
QTO	1..1	QTO
SSD	1..1	SSD
MFR	1..1	MFR
ISM	0..1	ShippingMethodType
SHT	0..1	SHT
QTN	0..1	QTN
SDC	0..1	SDC
PRI	0..1	PRI
ACN	0..1	ACN
PDP	0..1	PDP

Red arrows indicate the mapping between the internal and external structures. The mapping is as follows:

- EDIDC40 maps to OrderHeader.CIC
- EDISZK11 maps to OrderHeader.CIC
- COCODE maps to OrderHeader.SPL
| CUS | MessageSender |
| SPL | MessageReceiver |
| MFR | OrderDetails.TNC |
| QTR | OrderDetails.CPO |
| CPO | OrderDetails.PNR |
| QTN | OrderDetails.UNP |
| IPN | OrderDetails.QTO |
| RSP | OrderDetails.SSD |
| PNR | OrderDetails.MFR |
| RPN | OrderDetails.ISM |
| KWD | OrderDetails.SHT |
| INC | OrderDetails.QTN |
| RFC | OrderDetails.SDC |
| QTO | OrderDetails.PRI |
| | OrderDetails.ACN |
| | OrderDetails.PDP |

- Mapping example for S1BOOKED to ATA_SparesOrder

Demo – Outbound process

(1) Customer creates purchase order in ERP MM

(2) IDOC is sent through SAP PI and mapped

Standard PO 4500017472 Vendor SPLXM Supplier PI Doc. date 17.11.2020

Delivery/Invoice Conditions Texts Address Communication Partners Additional Data Org. Data Status P...

Payment Terms Currency EUR Exchange Rate 1,00000 Exch.Rate Fixed

Payment in days %
Payment in days %
Payment in days net
Incoterms GR Message

S...	Itm	A	I	Material	Short Text	PO Quantity	O...	C	Deliv. Date	Net Price
	10			S2KMPN15	MPNMATNR		12EA	D	23.11.2020	12,...

```
<?xml version="1.0" encoding="UTF-8"?>
- <ATA_SparesOrder version="2.14">
  - <OrderHeader>
    <CIC>CICGL</CIC>
    <SPL>SPLXM</SPL>
  </OrderHeader>
  - <OrderDetails>
    - <TNC>
      <TNC_Order>3</TNC_Order>
      <TNC_Item>4</TNC_Item>
      <TNC_Action>1</TNC_Action>
    </TNC>
    <CPO>00174720010</CPO>
    <PNR>S2KMPN15</PNR>
    <UNP UNT="EA" ICR="EUR">12.00</UNP>
    <QTO UNT="EA">12</QTO>
    <SSD>2020-11-23</SSD>
    <MFR>S2KM2</MFR>
    <VRN>DE123456789</VRN>
  </OrderDetails>
</ATA_SparesOrder>
```

Message Status Overview Database Archive

Time Range: 16.11.2020 01:00:00 - 23.11.2020 01:00:00 Go

Overview of Messages and their Statuses

Error	Scheduled	Success	Canceled	Integration Scenario	Sender Party	Sender Component	Receiver Party
0	0	1	0	SAP_WA1_800 S1BOOKED SPCORD01 *		SAP_WA1_800	SPEC2000_Set

(3) XML message is sent out from SAP PI/PO

Capabilites

- Implementation and configuration of the package
- Customer specific enhancements for mappings and processes
- Support of available SAP A&D versions
- Support of future releases of ATA SPEC2000 standard
- Member of ATA XML Taskforce/Markup Working Group

Preview

- Recertification with newer XML Version
- Additional Adapter modules
- New Mappings and business processes

Contact

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