

**ELECTRONICS INDUSTRY DATA EXCHANGE
(EIDX)**

**Inventory Management Business Models
for Consignment Processes**

**Distribution, Contract Manufacturing,
and Three-Party Models**

IMPORTANT NOTE

Pre-1999 business models are undergoing recast into Unified Modeling Language (UML) notation, and some restructuring. In addition, we've been adding cross-references to XML standards, such as RosettaNet. **The Downloadable business model documents have *not* been updated. Always refer to the "[Clickable Business Models](#)" for the latest and greatest information.** That area of the website also contains very useful information on newer, internet-based technologies. The changes to the existing models *have not changed the original intent* of the models published here in this table, but are (we hope) improvements to presentation that enhance understanding of the business processes and how to implement them.

July 1998

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**EIDX Distribution, Contract Manufacturing and Three-Party Inventory Management Models
for Consignment Processes**

Revision History

Date	Description
November 1997	Ballot Draft
July 1998	As Issued

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Purpose

The purpose of this document is to model the flow of documents and information used in some common distribution, contract manufacturing, and three-party business processes related to managing consigned inventory. A previously published document (*EIDX Business Models: Inventory Management Business Models for Consignment - Two Party Models* (August 1997)) modeled the flow of information in two-party business processes for managing consigned inventory, which also are applicable in distribution and contract manufacturing. The previously published document should be reviewed before reviewing this document.

Any implementation method should be agreed upon by trading partners. It is the intent of this document to make interpretation of the models used for consigned inventory more consistent, so that implementations are based upon common practices.

ADDITIONAL REFERENCES:

- *Product and Other Identifiers Recommendations* (June 1997).
- *EIDX Business Models: Order Models* (July 1997).
- *EIDX Business Models: Forecast / Planning Models* (July 1997).
- *EIDX Business Models: Inventory Management Business Models for Consignment - Two Party Models* (August 1997)
- *Issues Log - tpcissue.doc*

STANDARDS VERSION

Any reference to transactions, messages, data segment or element positions referred to in this document are particular to ASC X12 Version 003070 or EDIFACT D.97A. Users of this document may need to adapt information when applying these recommendations to other standards versions.

ABBREVIATIONS USED

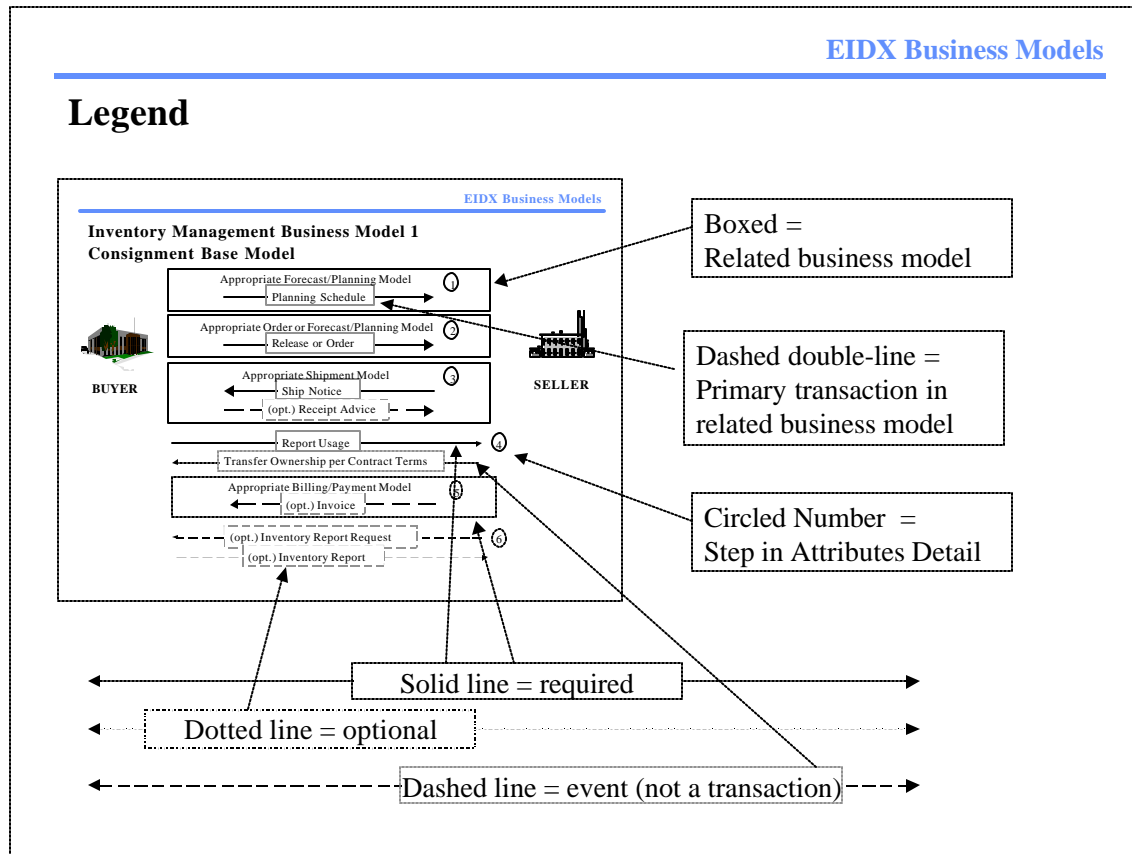
ANSI	American National Standards Institute
ASC X12	Accredited Standards Committee X12 (ANSI)
CM	Contract Manufacturer
CS	Component Supplier (Manufacturer)
DS	Distributor
EDI	Electronic Data Interchange
PC	Prime Contractor
SC	Subcontractor
UN- EDIFACT	United Nations - EDI for Administration, Commerce and Trade

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VAR	Value-Added Reseller
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MODELS LEGEND



EIDX Distribution, Contract Manufacturing and Three-Party Inventory Management Models for Consignment Processes

Project Proposal

- Title:** Consignment Inventory Management
- Description:** We need a standard format on consignment inventory management to clarify the process.
- Project Champion:** Motorola SPS
- Project Leaders:** Stephenie Cooper, Hewlett-Packard Co.; Paul Pierce, Motorola SPS
- Team Members:** Dave Weyer, Arrow Electronics; Steve Marino, Avnet; Tony Mandle, Celestica; John Kinney, Solectron; Marilyn Cooper, Sterling Electronics; David Minter, TTI; Ida Mata, Philips Semiconductors
- Scope/Objective:** Define and develop consignment inventory scenarios in support of business processes.
- Related Projects:** INVRPT and SLSRPT guidelines are in process.
- Assumptions/Constraints:** All guidelines will support or be modified to support consigned inventory models.
- Benefits:** Standardized and clarified processes for implementing consigned inventory programs resulting in decreased implementation cycle time.

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Definitions

CONSIGNED INVENTORY

Consigned inventory is inventory which is in the possession of one party (e.g. customer, dealer, agent, etc.), but remains the property of another party (e.g., manufacturer, prime contractor, etc.) by mutual agreement.

The possessor of the inventory does not hold title to the inventory. Liability for the inventory is per contractual agreement. Title may or may not pass to the possessor depending on the contractual agreement.

- Title may pass from a seller to a buyer when the buyer consumes the inventory.
- Inventory may be consigned by a buyer to a third-party warehouse, to whom liability may pass but not title.
- Inventory may be consigned by a buyer to a contract manufacturer; title may or may not transfer depending on the contractual agreement.

Synonyms:

- Supplier-owned inventory (from the buyer's perspective)
- Customer-owned inventory (from the contract manufacturer's perspective)
- In-house stores (from consignee's perspective)
- Line-side stocking
- Remote warehouse (from seller's perspective)

NOT CONSIGNED INVENTORY

There are a number of terms for reserving or "setting apart" inventory that should not be confused with "consigned" inventory.

Allocated Inventory

Allocated inventory is inventory on hand or on order which is assigned to a specific production or customer order. The possessor of the inventory holds title to the inventory; title may transfer when the goods are transferred (sold/shipped) to the customer, or allocated inventory may become consigned inventory, with title transfer to occur based on contractual agreement. Synonyms: Reserved inventory (reservation); assigned inventory; mortgaged inventory; obligated inventory; bonded inventory.

Safety Stock

Safety stock is inventory reserved for protection against fluctuations in demand and/or supply. The possessor of the inventory holds title to the inventory; title transfer is not applicable - safety stock either

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remains safety stock, gets sold, gets consumed, becomes allocated, becomes consigned, shrinks, or gets lost. Synonyms: Buffer stock; hedge.

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Scope

EIDX Business Models: Inventory Management Business Models for Consignment - Two Party Models (August 1997) addressed two-party business models. Some additional two-party models are included in this document. This document will address the following Distribution, Contract Manufacturing and Three-Party Models:

Inventory Management Model	Description	Discussed in this Document	In 8/97 Two-Party Models Document
1	Consignment Base Model		X
2	Consignment with Bill-Only Purchase Order		X
3	Consignment - Transfer or Resale		X
4	Consignment - "Retail"		X
5	Consignment - Consumption-based SMI (Supplier-Managed Inventory)		X
6	Consignment - Forecast-based SMI (Supplier-Managed Inventory)		X
7	Consignment with Distributor as Inventory Management Service Provider	X	
8	Consignment to CM/Subcontractor for Finishing or Value-Add	X	
9	Consignment, PC Sells Components to CM	X	
10	Consignment, CS Drop-Ships PC's Components to CM	X	
11	Consignment , Third-Party Warehouse, Seller-Contracted	X	
12	Consignment , Third-Party Warehouse, Buyer-Contracted	X	

CONSIGNMENT BASE MODEL AND VARIATIONS

Refer to *EIDX Business Models: Inventory Management Business Models for Consignment - Two Party Models* (August 1997) for a discussion on the Consignment Base Model and variations.

Three Party Models

Three-party models are more often than not composed of a series of two-party models. Some models that appear to be multi-party at first may really be two-party models; the difference may be that the two

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parties need to make reference to a third-party in the data that is exchanged.

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Types of Consignment Processes

The table below describes some basic consignment scenarios and identifies which business model(s) will address the process described. The scenarios below are not exhaustive.

Abbreviations:

CM = Contract Manufacturer

CS = Component Supplier

DS = Distributor

PC = Prime Contractor

VAR = Value-Added Reseller

SC = Service Contractor

Process	Process Description	EIDX Business Model
Seller consigns to Buyer	<ul style="list-style-type: none"> • Buyer forecasts planned orders • Buyer orders parts • Seller ships parts, retains ownership • Buyer consumes parts, reports usage to seller • Seller transfers ownership and bills buyer 	Inventory Management Models 1, 2
CS consigns to distributor (DS) or Value-Added Reseller (VAR)	<ul style="list-style-type: none"> • DS/VAR forecasts planned orders • DS/VAR orders parts • CS ships parts, retains ownership • DS/VAR sells parts, reports sale to CS • CS transfers ownership and bills DS 	Inventory Management Models 3, 4
CS consigns to PC/OEM, Drop Ships to DS	<ul style="list-style-type: none"> • PC/OEM sends forecast to DS • DS forwards forecast to CS • DS places orders on CS for PC/OEM • CS drop-ships to DS warehouse • DS does JIT releases to PC/OEM 	Inventory Management Model 7

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	<ul style="list-style-type: none">• Upon receipt of product (usage), PC/OEM pays CS for components and pays DS for inventory management	
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(continued on next page)

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<p>PC consigns components to CM or SC for assembly/finishing/value-add</p>	<p>(Ownership does not transfer; if for assembly, typically, CM is local; does not involve component supplier)</p> <ul style="list-style-type: none"> • PC issues order to CM/SC • PC ships/issues parts to CM/SC, retains ownership • CM assembles (optionally provides other components), finishes (e.g. painting, plating), performs value-add (e.g. programming), etc. • CM ships assembly/finished component to buyer • CM bills for services, additional components/materials • PC internally transfers inventory (components → assembly or finished component) 	<p>Inventory Management Model 8</p>
<p>CS consigns to PC for transfer to CM</p>	<ul style="list-style-type: none"> • PC/OEM orders component from CS • CS ships to PC/OEM • PC/OEM orders assembly from CM • CM orders components from PC/OEM • PC/OEM transfers/sells parts to CM • PC reports transfer/sale to CS • CS bills PC/OEM and transfers ownership 	<p>Inventory Management Model 9</p>
<p>CS/DS drop ships components to CM and consigns to PC</p>	<ul style="list-style-type: none"> • PC/OEM forecast to Disti/Component Supplier • Replenishment of inventory at CM site triggered by Disti, CM or PC/OEM • Disti/CS ships to CM • CM manufactures OEM's assembly per release • CM transfers assembly to 	<p>Inventory Management Model 10</p>

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	<p>OEM (either physically delivers or financially transfers to OEM)</p> <ul style="list-style-type: none">• DS/CS invoices OEM and backflushes inventory	
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<p>Seller ships components to Third Party Warehouse but retains ownership</p>	<ul style="list-style-type: none"> • Buyer forecasts planned orders to seller • Buyer orders parts • Seller sends order to warehouse to ship parts to buyer • Warehouse advises seller that parts have been shipped • Seller bills buyer • Seller replenishes inventory maintained at third-party warehouse 	<p>Inventory Management Model 11</p>
<p>Seller ships drop-ships components to Third Party Warehouse contracted by the buyer</p>	<ul style="list-style-type: none"> • Buyer forecasts planned orders to seller • Buyer sends transfer order for parts to buyer-contracted warehouse • Warehouse advises buyer that parts have been shipped • Buyer advises seller of inventory transfer • Seller transfers ownership and bills buyer • Seller replenishes parts to third-party warehouse, retains ownership 	<p>Inventory Management Model 12</p>

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Benefits

Consignment processes are initiated for business reasons decided between trading partners. EIDX will make no recommendations as to whether/when consignment should be used. However, EIDX will recommend guidelines for business models and transactions/messages to be used in support of consignment processes in order to clarify processes for implementing consigned inventory programs, resulting in decreased implementation cycle time

EIDX Distribution, Contract Manufacturing and Three-Party Inventory Management Models for Consignment Processes

Considerations

There are going to be a variety of ways that information is transferred in consignment processes. How usage is reported and replenishment is triggered may depend on which Order and/or Forecast/Planning Model is being used in conjunction with a consignment Inventory Management model, as well as upon contractual terms agreed between trading partners.

What makes consignment processes complex is not so much the flow of data, but rather the contractual issues and the application interfaces.

INVENTORY AUDITS AND RECONCILIATION

Inventory needs to be accounted for when it is physically located in one party's warehouse (may be buyer's warehouse or third party's warehouse) but owned by another party (e.g. seller). For example, the consignee (buyer) may need to show inventory data on their system so they can report it to the consignor (seller), but the consignee does not want to show that inventory on their books. Conversely, the consignor needs to show inventory on their books that is not physically located on the consignor's property.

Consigned inventory processes must have a reconciliation mechanism of some kind. In all business models for consigned inventory processes, an optional step for inventory reporting is included. Inventory reporting is done for audit purposes, inventory balancing, and reconciliation. This inventory reporting supplements physical audits which the consignor (owner of the inventory) performs on inventory physically located at the consignee's facility.

INVENTORY ACTIVITY AND TRANSFER OF OWNERSHIP

As mentioned above, the contractual agreement between trading partners may specify what event triggers transfer of ownership, and therefore triggers the billing/payment cycle. The following is a non-exhaustive list of points at which transfer of ownership might take place:

Inventory activities that typically do not trigger transfer of ownership of consigned inventory:

- At shipment from seller to buyer
- At notification of receipt of goods from customer
- When Ship Notice is issued by seller
- When product moves from buyer's receiving dock to seller's warehouse at buyer's plant

Inventory activities that can trigger transfer of ownership of consigned inventory:

- When product moves from seller's warehouse at buyer's plant to buyer's stockroom
- When product moves from buyer's stockroom to buyer's shop floor (to WIP)

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- When product moves from buyer's shop floor (WIP) into buyer's finished goods
- When product shipped to end-customers from buyer's finished goods

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Transactions/Messages Used for Consignment Processes

Transactions and Messages recommended in the business models addressed in this document are based on a high-level evaluation transactions and messages available in ASC X12 and EDIFACT that are already being used for consignment processes. The recommendations in this document are subject to revision when the EIDX Guidelines and Standards Subcommittee evaluates the transactions/messages in detail.

CONSIGNMENT DATA REQUIREMENTS

- Quantity used, transferred or sold
- Part number
- Purchase order number that the inventory was associated with
- Date of use or date of event triggering title transfer
- Location
- End-customer information

CONSIGNMENT TRANSACTION/MESSAGES

A variety of transactions/messages are used for consigned inventory processes. As will be shown in the business models for consigned inventory, sometimes the choice of which transaction or message to use is trading partner preference, and sometimes there is a business need which requires use of a specific transaction or message. The following table gives a high-level description of the transactions/messages commonly used for consigned inventory processes and their differences.

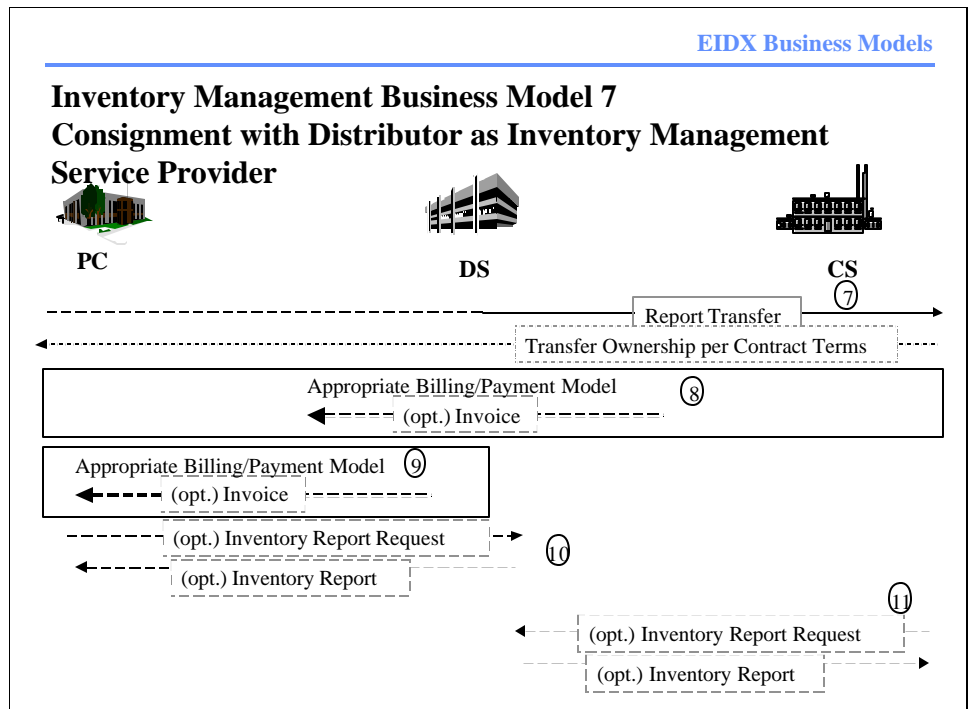
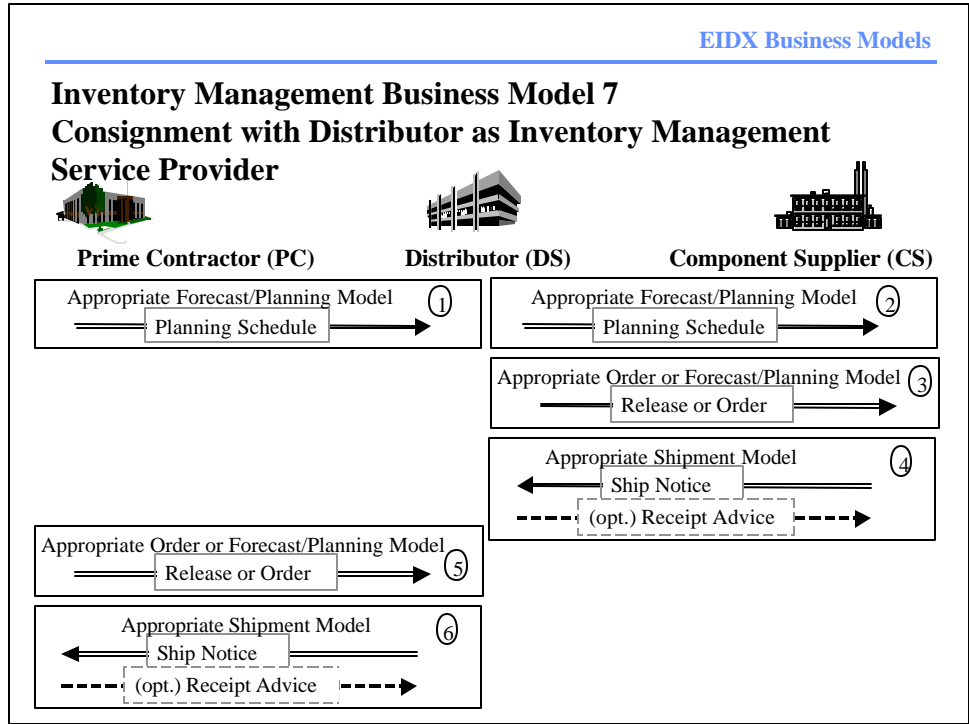
X12 Txn	UN Msg	Description
846	INVRPT	Used to report inventory levels, lead time
850	ORDERS	Used to trigger replenishment and used bill-only to report usage (distinguished from Stand-Alone Order or Blanket Order by Purchase Order Type Code or Message Type).
852	INVRPT	Used primarily in retail when reference not made to specific end-customer; allows combined sales and inventory data; allows some granularity on inventory activity such as quantity on hand, quantity in transit, quantity sold, beginning and ending balances, additional demand, etc.
867	SLSRPT	Used to report sales or transfer; allows detail about sold-to or ship-to (end

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		customer) and ship-from locations; used for Point-of-Sale.
940	ORDERS	Used to advise a warehouse to make a shipment, confirm a shipment, or modify or cancel a previously transmitted shipping order.
943	DESADV	Used to advise the recipient that a transfer shipment has been made.
944	RECADV	Used by a receiving location to advise a depositor or an agent of the depositor that a transfer shipment has been received.
947	INVRPT	Used to inform a warehouse/depositor of a quantity or status change to inventory records.

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Inventory Management Model 7 - Consignment with Distributor as Inventory Management Service Provider



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Attributes (Summary)

A Component Supplier (CS) is consigning inventory to a buyer (a/k/a Prime Contractor (PC)). Inventory is in possession of a Distributor (DS) who is providing inventory management and/or other value-added services to the PC. A replenishment model is established between DS and CS for replenishment of inventory at the DS's facility; PC is referenced. A replenishment model is established between DS and PC for replenishment of PC's inventory. DS or PC reports transfer of inventory to CS to trigger transfer of ownership. Billing/payment model is established between PC and CS for components. Billing/payment model is established between PC and DS for services.

Attributes (Detail) and Transaction/Message Recommendations

Step	Description	Transaction/Message Recommendation
1.	Prime Contractor (PC) sends forecast to DS per appropriate Forecast/Planning Business Model.	See Forecast/Planning Models
2.	DS sends forecast of PC's requirements to CS per appropriate Forecast/Planning Business Model.	See Forecast/Planning Models
3.	DS issues release or order to CS per appropriate Order or Forecast/Planning Business Model.	See Order and Planning/Forecast Models.
4.	CS ships goods to consignment warehouse (distributor's facility) per appropriate Shipment Model.	See Shipment Models.
5.	PC issues release or order to DS per appropriate Order or Forecast/Planning Business Model.	See Order and Planning/Forecast Models.
6.	DS ships goods to PC per appropriate Shipment Model.	See Shipment Models.
7.	DS or PC reports transfer of inventory to trigger transfer of ownership and Billing/Payment cycle. Reporting of inventory movement between DS and PC does not trigger replenishment of inventory in consignment (DS's) warehouse (replenishment is per next release or order - Step 3 above).	850/ORDERS, 852/INVRPT, 867/SLSRPT may be used. Which to use may be based on trading partner preference. Inventory Management Models 2, 3 and 4 describe situations where business requirements may dictate a specific choice of transaction/message to use. Alternatively, DS's Ship Notice (856/DESADV) to PC or PC's Receipt Advice (861/RECADV) to DS (Step 6) may be dual-routed to CS as notification of inventory transfer.
8.	Ownership transfers from CS to PC per contractual terms. CS invoices PC or payment for components is triggered per appropriate	See Billing and Payment Models.

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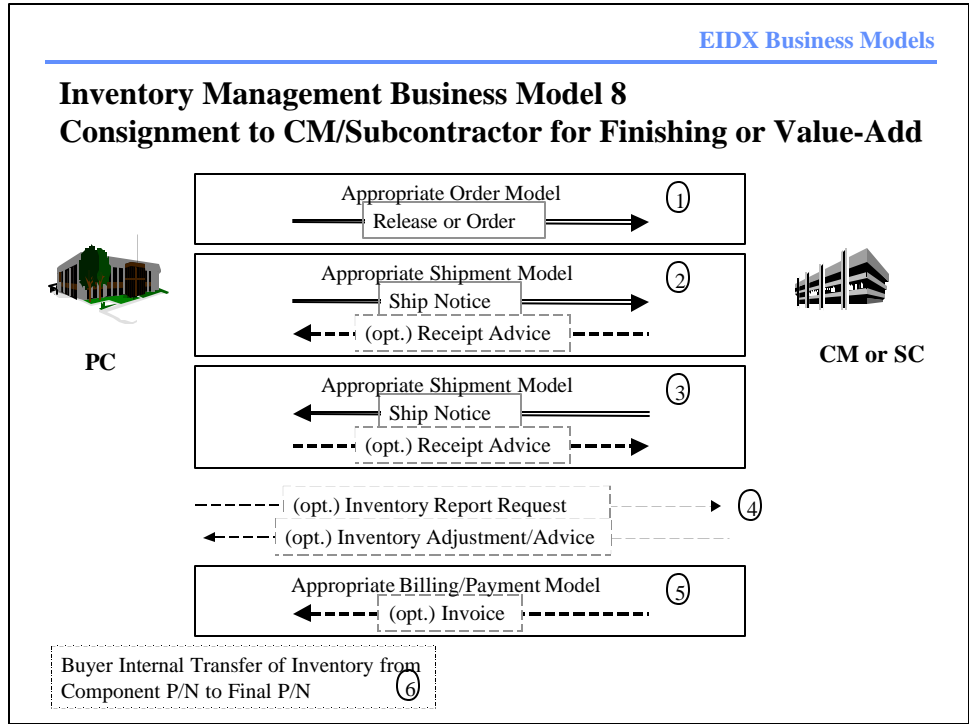
	Billing or Payment model.	
9.	DS invoices PC or payment for services is triggered per appropriate Billing or Payment model.	See Billing and Payment Models.
10.	(Optional) At any point in the process, DS performs inventory counts of inventory owned by the CS and allocated to the PC and reports to PC (scheduled, as-needed, or at PC request.	846/INVRPT Inventory Request/Report may be used; alternative Electronic Commerce solutions may be appropriate, such as controlled internet (web) access to a trading partner's inventory data.
11.	(Optional) At any point in the process, DS performs inventory counts of inventory owned by the CS and allocated to the PC and reports to CS (scheduled, as-needed, or at CS request. CS may invoice PC for inventory shrinkage.	846/INVRPT Inventory Request/Report may be used; alternative Electronic Commerce solutions may be appropriate, such as controlled internet (web) access to a trading partner's inventory data.

Other Usage Recommendations

- Not recommended with Order Model 4 - Consumption-based SMI (Supplier-Managed Inventory).
- Not recommended with Forecast/Planning Model 4 - Forecast-based SMI.

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Inventory Management Model 8 - Consignment to CM/Subcontractor for Finishing or Value-Add



Attributes (Summary)

Prime Contractor (PC) issues material to Contract Manufacturer (CM) or Subcontractor (SC). Ownership of goods does not transfer. CM or SC provides finishing or value-add (e.g. plating, painting, programming, assembly, etc.) CM or SC then ships completed material and excess inventory to PC. CM or SC may send inventory adjustment/advice detailing scrap, setup, etc. CM or SC bills PC for services and additional components/materials. PC internally transfers inventory from component part number to assembly or finished component part number. Typically, CM or SC is local; process does not involve Component Supplier.

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Attributes (Detail) and Transaction/Message Recommendations

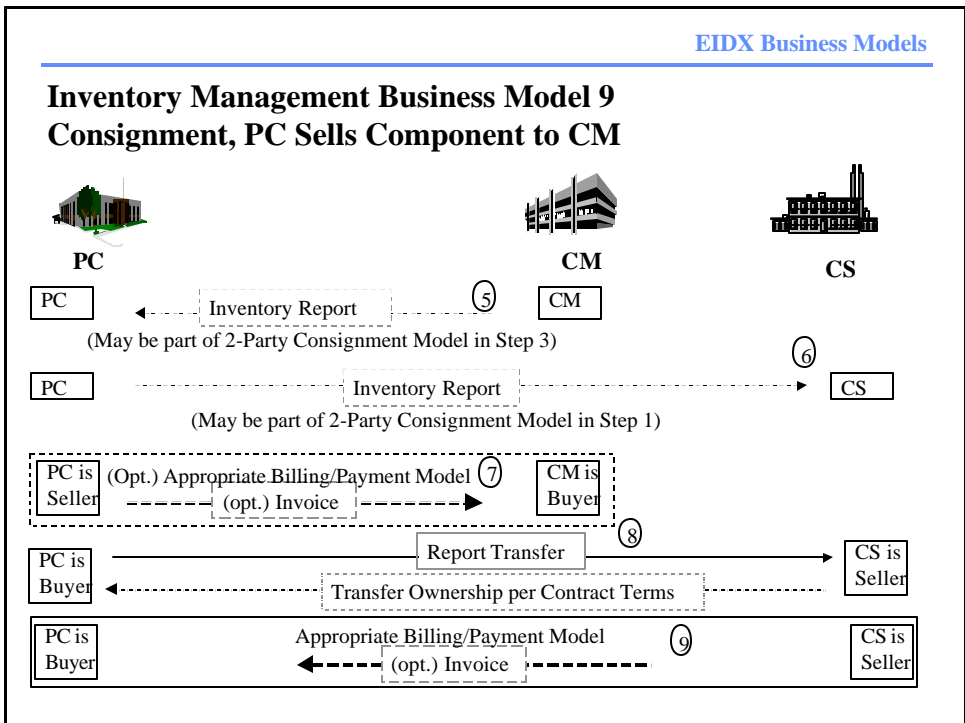
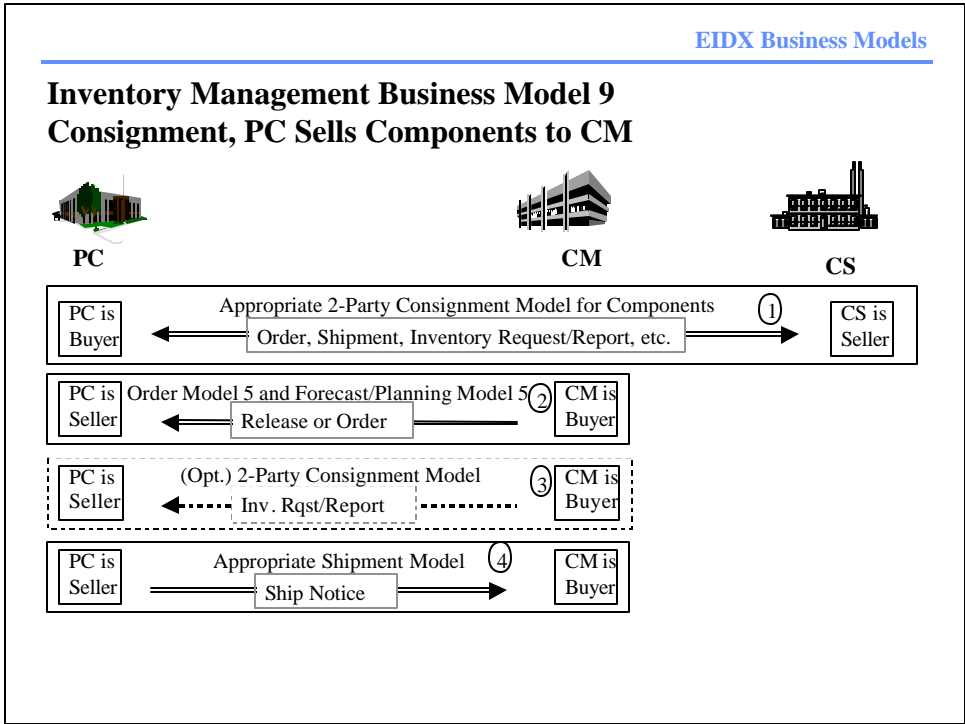
Step	Description	Transaction/Message Recommendation
1.	PC issues order to CM or SC. Typically, this is a discrete stand-alone order, or a blanket order may exist for on-going services.	See Order Models.
2.	PC transfers (ships) goods to consignment location (CM or SC) per appropriate Shipment Model. No transfer of ownership takes place.	See Shipment Models.
3.	CM or SC completes order (provides value-add or finishes goods) and ships completed parts to PC per appropriate Shipment Model.	See Shipment Models.
4.	(Optional) At any point in the process, CM or SC performs inventory counts and reports to PC (scheduled, as-needed, or at PC request). CM or SC provides detail of inventory adjustments, scrap, setup, etc. PC may debit for inventory shrinkage.	846/INVRPT Inventory Request/Report may be used; alternative Electronic Commerce solutions may be appropriate, such as controlled internet (web) access to a trading partner's inventory data.
5.	CM or SC invoices PC or payment is triggered for services and additional components/materials, per appropriate Billing or Payment model.	See Billing and Payment Models.
6.	PC internally transfers inventory from component part number to assembly or finished component part number.	Internal EC/EDI process.

Other Usage Recommendations

- Not recommended with Order Model 4 - Consumption-based SMI (Supplier-Managed Inventory).
- Not recommended with Forecast/Planning Model 4 - Forecast-based SMI.

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Inventory Management Model 9 - Consignment, PC Sells Components to CM



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Attributes (Summary)

Component Supplier (CS) consigns inventory to a Prime Contractor (PC). Ownership transfers when PC sells/transfers inventory to Contract Manufacturer (CM) for use in PC's assembly builds or when CM ships finished assembly to PC. This is really a series of two-party models. Two-party order, forecast, and consignment processes exist between CS and PC. Two-party order and forecast processes exist between PC and CM, and may optionally include a two-party consignment process.

Attributes (Detail) and Transaction/Message Recommendations

Step	Description	Transaction/Message Recommendation
1.	Prime Contractor (PC) establishes two-party consignment process with Component Supplier (CS), including appropriate replenishment (Order and Forecast) models, and reporting of inventory balances.	See Two-Party Inventory Management Models
2.	Contract Manufacturer (CM) procures components from Prime Contractor per Order Model 5 and Forecast/Planning Model 5 (Contract Manufacturing - PC Supplies Components).	See Order and Planning/Forecast Models.
3.	(Optional) PC may establish two-party consignment process with CM.	See Two-Party Inventory Management Models
4.	PC sells or transfers (ships) goods to CM per appropriate Shipment Model.	See Shipment Models.
5.	(Optional) CM performs counts of inventory owned by the CS and allocated to the PC and reports to PC (scheduled, as-needed, or at PC request).	846/INVRPT Inventory Request/Report may be used; alternative Electronic Commerce solutions may be appropriate, such as controlled internet (web) access to a trading partner's inventory data.
6.	(Optional) At any point in the process, PC reports inventory to CS per established consignment process (Step 1 above); CS may invoice for inventory shrinkage. Report may include inventory at CM's location if the terms of the consignment process in Step 1 are such that ownership does not transfer from CS to PC until CM ships finished assembly to PC. Alternatively, CM may send inventory counts of inventory owned by the CS and allocated to the PC	846/INVRPT Inventory Request/Report may be used; alternative Electronic Commerce solutions may be appropriate, such as controlled internet (web) access to a trading partner's inventory data.

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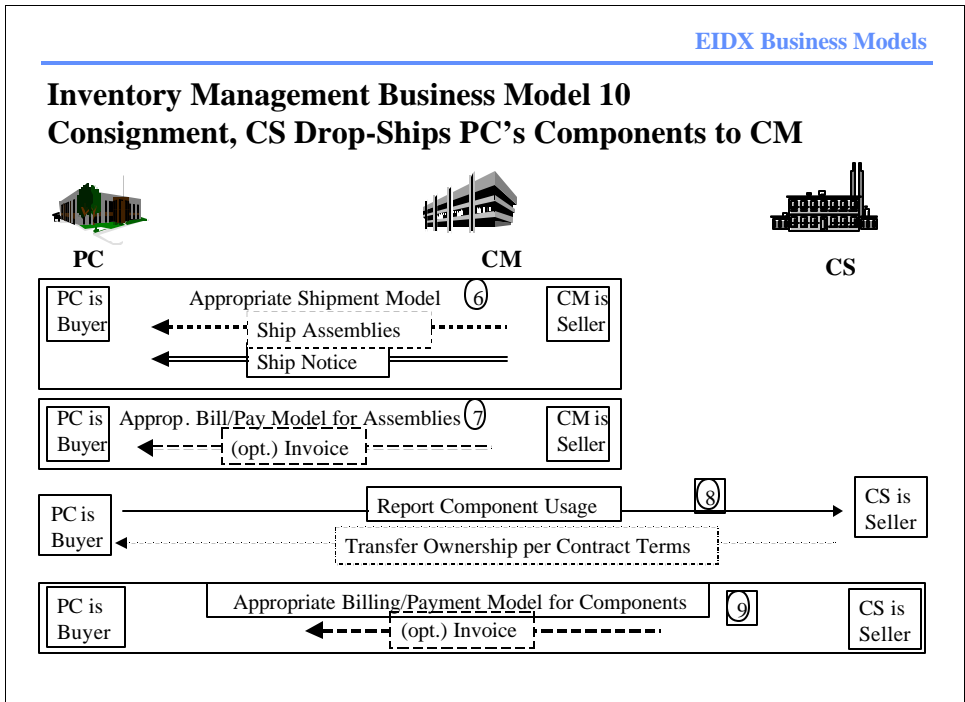
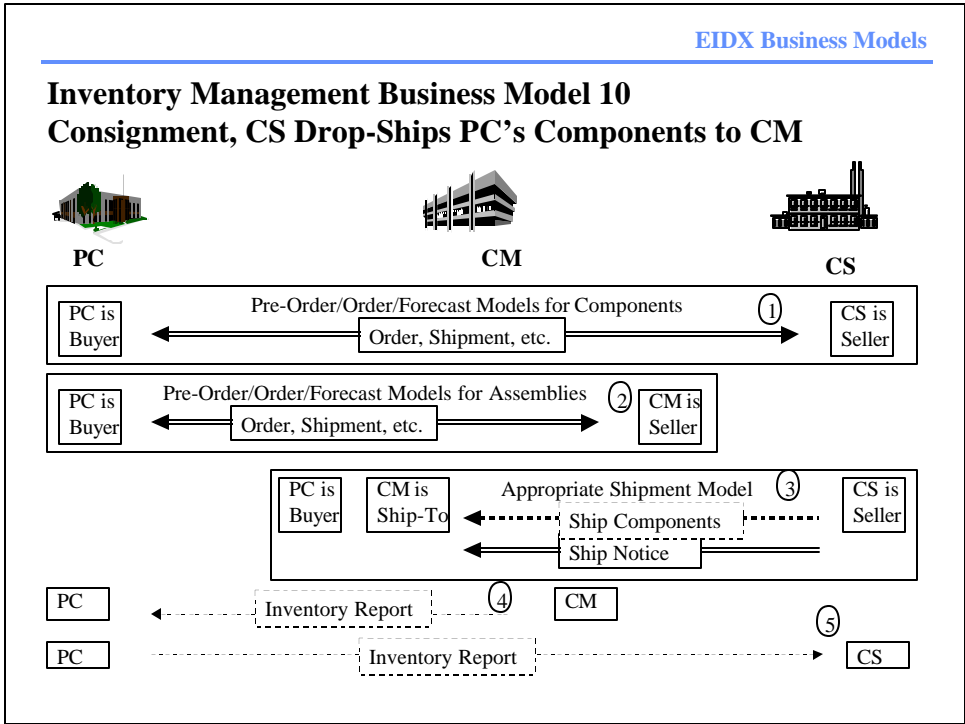
	directly to CS and dual route report to PC.	
7.	(Optional) PC may bill CM for components if CM is purchasing parts from PC. Billing/payment not applicable if inventory is just being transferred at no-charge or consigned to CM for use in PC's assembly.	See Billing and Payment Models.
8.	PC reports transfer or sale to CS to trigger transfer of ownership and Billing/Payment cycle. Reporting of transfer or sale does not trigger replenishment (replenishment is per next release or order - Step 1 above).	850/ORDERS, 852/INVRPT, 867/SLSRPT may be used. Which to use may be based on trading partner preference. Inventory Management Models 2, 3 and 4 describe situations where business requirements may dictate a specific choice of transaction/message to use.
9.	CS invoices PC or payment for components is triggered per appropriate Billing or Payment model.	See Billing and Payment Models.

Other Usage Recommendations

- Not recommended with Order Model 4 - Consumption-based SMI (Supplier-Managed Inventory).
- Not recommended with Forecast/Planning Model 4 - Forecast-based SMI.

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Inventory Management Model 10 - Consignment, CS Drop-Ships PC's Components to CM



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Attributes (Summary)

Inventory is drop-shipped to a Contract Manufacturer (CM) by the Component Supplier (CS) and consigned to the Prime Contractor (PC). Component Supplier may be a Distributor, etc. Appropriate order, forecast, etc., replenishment processes exist between CS and PC. Two-party order and forecast processes exist between PC and CM. When CM physically ships or financially transfers (per contractual arrangement and/or any consignment agreement between PC and CM) finished assemblies to PC, PC reports component usage to CS to trigger transfer of ownership of components and billing/payment cycle. CM bills PC for services and additional components/materials.

Attributes (Detail) and Transaction/Message Recommendations

Step	Description	Transaction/Message Recommendation
1.	Prime Contractor (PC) establishes two-party replenishment process for components with Component Supplier (CS), including appropriate Order and Forecast models.	See Order and Planning/Forecast Models.
2.	PC establishes replenishment process for assemblies with Contract Manufacturer (CM), including appropriate Order and Forecast Models.	See Order and Planning/Forecast Models.
3.	CS drop-ships goods to CM per appropriate Shipment Model.	See Shipment Models.
4.	(Optional) CM performs counts of inventory owned by the CS and allocated to the PC and reports to PC (scheduled, as-needed, or at PC request).	846/INVRPT Inventory Request/Report may be used; alternative Electronic Commerce solutions may be appropriate, such as controlled internet (web) access to a trading partner's inventory data.
5.	(Optional) PC reports inventory to CS per established consignment process (Step 1 above); report includes inventory at CM's location which is owned by the CS and consigned to the PC; CS may invoice for inventory shrinkage. Alternatively, CM may report PC's inventory directly to CS and dual route report to PC.	846/INVRPT Inventory Request/Report may be used; alternative Electronic Commerce solutions may be appropriate, such as controlled internet (web) access to a trading partner's inventory data.
6.	CM ships completed assemblies to PC per appropriate Shipment Model.	See Shipment Models.
7.	CM bills PC for or payment for assemblies is triggered per appropriate Billing or Payment model.	See Billing and Payment Models.

**EIDX Distribution, Contract Manufacturing and Three-Party Inventory Management Models
for Consignment Processes**

8.	PC reports component usage to CS to trigger transfer of ownership and Billing/Payment cycle. Reporting of transfer or sale does not trigger replenishment (replenishment is per next release or order - Step 1 above).	850/ORDERS, 852/INVRPT, 867/SLSRPT may be used. Which to use may be based on trading partner preference. Inventory Management Models 2, 3 and 4 describe situations where business requirements may dictate a specific choice of transaction/message to use.
9.	CS invoices PC or payment for components is triggered per appropriate Billing or Payment model.	See Billing and Payment Models.

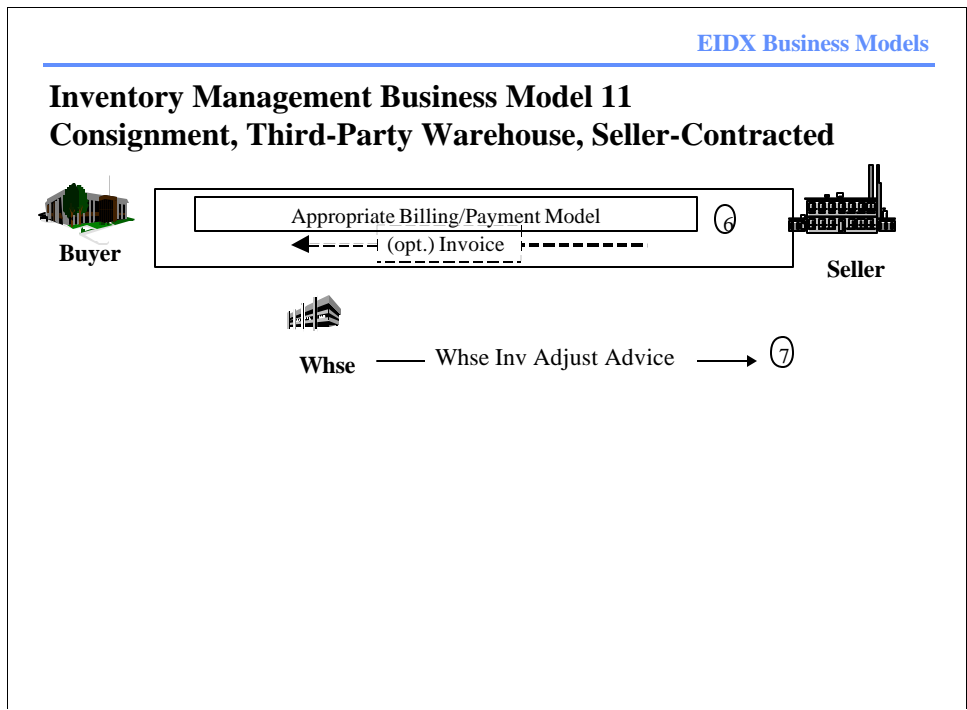
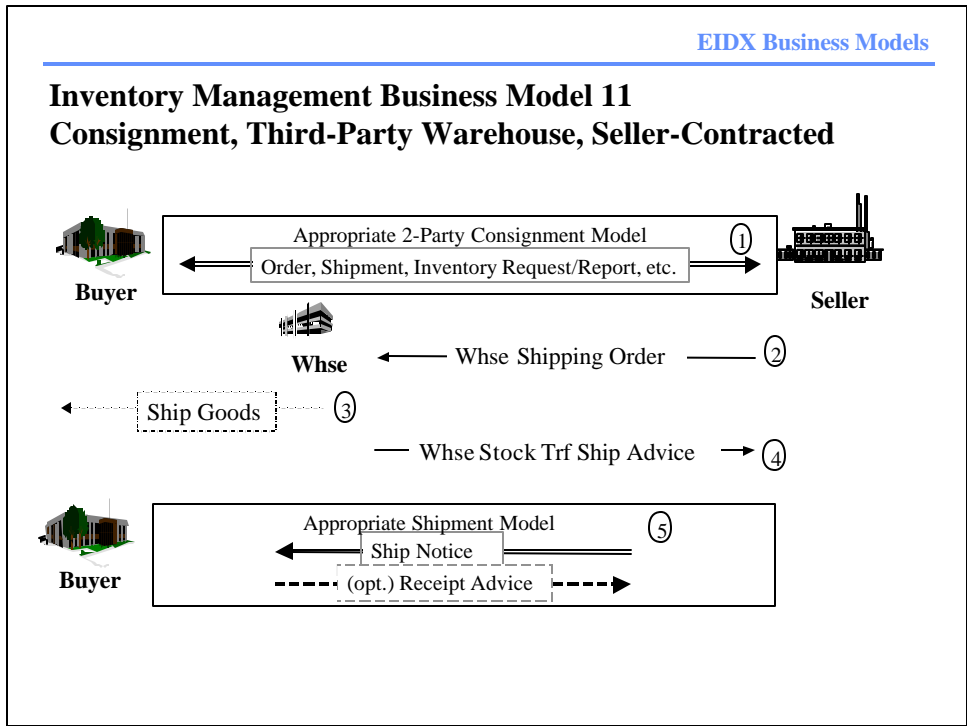
EIDX Distribution, Contract Manufacturing and Three-Party Inventory Management Models for Consignment Processes

Other Usage Recommendations

- Not recommended with Order Model 4 - Consumption-based SMI (Supplier-Managed Inventory).
- Not recommended with Forecast/Planning Model 4 - Forecast-based SMI.

EIDX Distribution, Contract Manufacturing and Three-Party Inventory Management Models for Consignment Processes

Inventory Management Model 11 - Consignment, Third-Party Warehouse, Seller-Contracted



EIDX Distribution, Contract Manufacturing and Three-Party Inventory Management Models for Consignment Processes

Attributes (Summary)

Consigned inventory on seller's books, and Third-Party warehouse contracted by the seller. To the buyer, the Third-Party Warehouse is just another location of the seller's; legal terms for liability established between seller and warehouse, and between buyer and seller. Replenishment takes place per appropriate two-party Consignment Inventory Management Model. Seller sends shipment order to warehouse. Warehouse may ship directly to buyer, and send transfer advice to seller. Seller send ASN to buyer per appropriate Shipment Model; buyer may optionally send receipt advice. Adjustment advice used to keep inventories in synch.

Note: No Warehouse Receipt Advice between warehouse and seller. Buyer's Receipt Advice tells seller what they need to know (along with Warehouse Transfer Ship Advice).

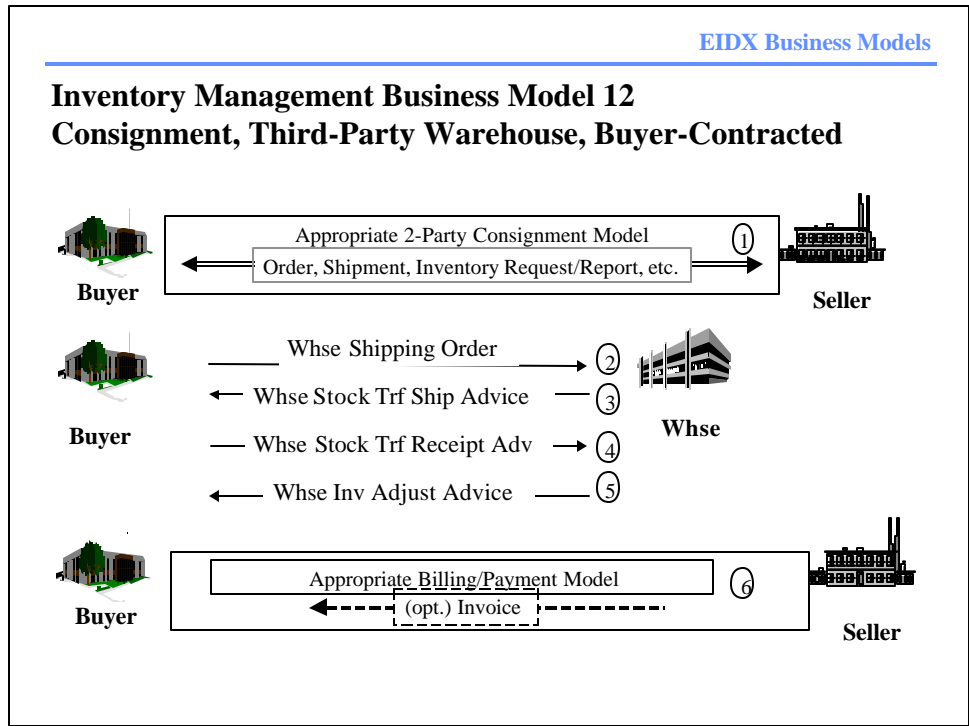
Attributes (Detail) and Transaction/Message Recommendations

Step	Description	Transaction/Message Recommendation
1.	Buyer establishes two-party consignment process with Seller, including appropriate replenishment (Order and Forecast) models, and reporting of inventory balances.	See Two-Party Inventory Management Models
2.	Seller sends Warehouse Shipping Order to Warehouse when parts need to be shipped to the Buyer.	940/ORDERS
3.	Warehouse ships parts to buyer.	
4.	Warehouse sends Stock Transfer Ship Advice to let seller know parts have been shipped..	943/DESADV
5.	Seller sends Ship Notice to buyer per appropriate Shipment Model.	See Shipment Models.
6.	Seller invoices buyer or payment is triggered per appropriate Billing or Payment model.	See Billing and Payment Models.
7.	Warehouse Inventory Adjustment Advice used to keep inventories in synch	947/INVRPT

Other Usage Recommendations

None.

Inventory Management Model 12 - Consignment, Third-Party Warehouse, Buyer-Contracted



Attributes (Summary)

Consigned inventory on seller's books, and Third-Party warehouse contracted by the buyer. To the seller, the Third-Party Warehouse is just another location of the buyer's; legal terms for liability established between buyer and warehouse, and between buyer and seller. Replenishment takes place per appropriate two-party Consignment Inventory Management Model; parts received into warehouse. Buyer sends pull signal to warehouse, and special warehouse ship advice/receipt advice used for both parties to increment/deduct on-hand inventories. Critical for buyer to have accurate visibility of on-hand at warehouse to report to seller. Adjustment advice used to keep inventories in synch

EIDX Distribution, Contract Manufacturing and Three-Party Inventory Management Models for Consignment Processes

Attributes (Detail) and Transaction/Message Recommendations

Step	Description	Transaction/Message Recommendation
1.	Buyer establishes two-party consignment process with Seller, including appropriate replenishment (Order and Forecast) models, and reporting of inventory balances.	See Two-Party Inventory Management Models
2.	Buyer sends Warehouse Shipping Order to Warehouse when parts need to be transferred to the Buyer's facility.	940/ORDERS
3.	Warehouse sends Stock Transfer Ship Advice to let buyer know parts are in-transit.	943/DESADV
4.	Buyer sends Warehouse Stock Transfer Receipt Advice to Warehouse	944/RECADV
5.	Warehouse Inventory Adjustment Advice used to keep inventories in synch	947/INVRPT
6.	Seller invoices buyer or payment is triggered per appropriate Billing or Payment model.	See Billing and Payment Models.

Other Usage Recommendations

None.

Issues Log is in Invil95.doc.

EIDX Distribution, Contract Manufacturing and Three-Party Inventory Management Models for Consignment Processes

Summary

Consigned inventory processes may be enabled between trading partners through complex business re-engineering aimed at significantly reducing inventory levels for both buyer and seller. EIDX recommends simplifying the process by eliminating any process steps unnecessary for both Trading Partners. It is encouraged that companies find ways to embrace the EIDX recommendations for consigned inventory processes, which will allow consistent implementations within the electronics industry. However, trading partners' systems and internal process limitations may require deviations from the EIDX process flow. Nevertheless, the goal of eliminating unnecessary steps from business operations makes the benefits of implementing consigned inventory process per EIDX recommendations worth the effort.