

Plex Systems

IMPLEMENTATION GUIDELINES FOR ANSI X12 EDI CONVENTIONS

830 TRANSACTION SET MATERIAL RELEASE Version 004010 Revised November 18, 2009

830 Material Release

Functional Group ID=PS

Introduction:

This Standard contains the format and establishes the data contents of the Planning Schedule with Release Capability Transaction Set (830) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to provide for customary and established business practice relative to the transfer of forecasting/material release information between organizations. The planning schedule transaction may be used in various ways or in a combination of ways, such as: (1) a simple forecast; (2) a forecast with the buyer's authorization for the seller to commit to resources, such as labor or material; (3) a forecast that is also used as an order release mechanism, containing such elements as resource authorizations, period-to-date cumulative quantities, and specific ship/delivery patterns for requirements that have been represented in "buckets," such as weekly, monthly, or quarterly. The order release forecast may also contain all data related to purchase orders, as required, because the order release capability eliminates the need for discrete generation of purchase orders.

Heading:

M	Pos. No. 010	Seg. ID ST	Name Transaction Set Header	Req. Des. M	Max.Use	Loop <u>Repeat</u>	Notes and Comments
M	020	BFR	Beginning Segment for Planning Schedule	M	1		
	130	DTM	Date/Time Reference	O	10		
			LOOP ID - N1			200	
M	230	N1	Name	M	1		
M	250	N3	Address Information	M	2		
M	260	N4	Geographic Location	M	1		
	280	PER	Administrative Communications Contact	O	2		

Detail:

Pos. <u>No.</u>	Seg. <u>ID</u>	Name	Req. <u>Des.</u>	Max.Use	Loop <u>Repeat</u>	Notes and Comments
		LOOP ID - LIN			>1	
010	LIN	Item Identification	M	1		
020	UIT	Unit Detail	O	1		
080	PID	Product/Item Description	O	1000		
150	PER	Administrative Communications Contact	O	3		
230	ATH	Resource Authorization	O	20		
678	SDP	Ship/Delivery Pattern	M	1		
		V A A D V D DOG				
					>1	
410	FST	Forecast Schedule	О	1		n1
		LOOP ID - SHP			25	
470	SHP	Shipped/Received Information	О	1		
	No. 010 020 080 150 230 678	No. ID 010 LIN 020 UIT 080 PID 150 PER 230 ATH 678 SDP	No. ID Name LOOP ID - LIN 010 LIN Item Identification 020 UIT Unit Detail 080 PID Product/Item Description 150 PER Administrative Communications Contact 230 ATH Resource Authorization 678 SDP Ship/Delivery Pattern LOOP ID - FST 410 FST Forecast Schedule LOOP ID - SHP	No. ID Name LOOP ID - LIN 010 LIN Item Identification M 020 UIT Unit Detail O 080 PID Product/Item Description O 150 PER Administrative Communications Contact O 230 ATH Resource Authorization O 678 SDP Ship/Delivery Pattern M LOOP ID - FST 410 FST Forecast Schedule O LOOP ID - SHP	No. ID Name LOOP ID - LIN Des. Max.Use 010 LIN Item Identification M 1 020 UIT Unit Detail O 1 080 PID Product/Item Description O 1000 150 PER Administrative Communications Contact O 3 230 ATH Resource Authorization O 20 678 SDP Ship/Delivery Pattern M 1 LOOP ID - FST 410 FST Forecast Schedule O 1 LOOP ID - SHP	No. ID Name LOOP ID - LIN Des. Max.Use Max.Use Repeat 010 LIN Item Identification M 1 020 UIT Unit Detail O 1 080 PID Product/Item Description O 1000 150 PER Administrative Communications Contact O 3 230 ATH Resource Authorization O 20 678 SDP Ship/Delivery Pattern M 1 LOOP ID - FST >1 410 FST Forecast Schedule O 1 LOOP ID - SHP 25

Summary:

	Pos.	Seg.		Req.		Loop	Notes and
	No.	ID	<u>Name</u>	Des.	Max.Use	Repeat	Comments
M	010	CTT	Transaction Totals	M	1	_	n2
M	020	SE	Transaction Set Trailer	M	1		

Transaction Set Notes

- 1. At least one occurrence of segment FST is required, either in the FST loop or within the SDP loop. These two loops are mutually exclusive.
- Number of line items (CTT01) is the accumulation of the number of LIN segments. If used, hash total (CTT02) is the sum of the values of the quantities (FST01) for each FST segment.

Segment: ST Transaction Set Header

Position: 010

Loop:

Level: Heading Usage: Mandatory

Max Use:

Purpose:

To indicate the start of a transaction set and to assign a control number

Syntax Notes: Semantic Notes:

1 The transaction set identifier (ST01) is used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810

selects the Invoice Transaction Set).

Comments:

M	Ref. <u>Des.</u> ST01	Data Element 143	Name Transaction Set Identifier Code	Attr M	ributes ID 3/3
			Code uniquely identifying a Transaction Set 830 Planning Schedule with Release Capabil	lity	
M	ST02	329	Transaction Set Control Number	M	AN 4/9
			Identifying control number that must be unique within the tra functional group assigned by the originator for a transaction s		ion set

Segment: **BFR** Beginning Segment for Planning Schedule

Position: 020

Loop:

Level: Heading Usage: Mandatory

Max Use:

Purpose:

To indicate the beginning of a planning schedule transaction set; whether a ship or delivery based forecast; and related forecast envelope dates

Syntax Notes: Semantic Notes:

- 1 At least one of BFR02 or BFR03 is required.
- 1 If BFR01 contains the value "04" (Net Change), BFR09 is required.
- 2 BFR02 is the identifying number for a forecast assigned by the orderer/purchaser.
- 3 BFR06 is the forecast horizon start date: The date when the forecast horizon (envelope) begins.
- 4 BFR07 is the forecast horizon end date: The date when the forecast horizon (envelope) ends.
- 5 BFR08 is the date forecast generated: The date the forecast data was generated.
- 6 BFR09 is the date forecast updated: The date the forecast was updated with "net change" data. (Used only when data element 353 in BFR01 contains the value "04", meaning net change.)

Comments:

Data Element Summary

М	Ref. <u>Des.</u> BFR01	Data Element 353		Set Purpose Code ing purpose of transaction set Replace	ANS BW	ibutes SI / <u>Features</u> ID 2/2
	BFR02	127	Reference Ide	-	X	AN 1/30
			specified by the	ormation as defined for a particular Trans he Reference Identification Qualifier umber is not used this field is mandatory -	saction Set of	
	BFR03	328	parties involve If a Reference	ber ifying a release against a Purchase Order ed in the transaction ED is not used this field is mandatory - e	X previously	
M	BFR04	675	must be used Schedule Typ	ne Qualifier	М	ID 2/2
141	DI KU4	073	Code identify	ing the type of dates used when defining a dule or forecast Delivery Based Shipment Based		-
M	BFR05	676	Schedule Qua	antity Qualifier	M	ID 1/1
			Code identify forecast A C	ing the type of quantities used when defir Actual Discrete Quantities Cumulative Quantities	ning a sched	lule or
M	BFR07	373	Date		M	DT 8/8
			Date expresse	d as CCYYMMDD		
	830 (v0	4010)	On Demand	d Software for the Manufacturing	j Enterpri	se

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			Forecast start date		
M	BFR08	373	Date	M	DT 8/8
			Date expressed as CCYYMMDD		
			Date forecast created		
O	BFR09	373	Date	M	DT 8/8
			Date expressed as CCYYMMDD		
			Date forecast updated		
M	BFR11	324	Purchase Order Number	O	AN 1/22
			Purchase order		

Segment: PER Administrative Communications Contact

Position: 060
Loop: N1
Level: Heading
Usage: Optional
Max Use: 2

Purpose: To identify a person or office to whom administrative communications

should be directed.

Syntax Notes: 1 If either PER03 or PER04 is present, then the other is required.

If either PER05 or PER06 is present, then the other is required.

3 If either PER07 or PER08 is present, then the other is required.

Semantic Notes: Comments:

Data Element Summary

M	Ref. <u>Des.</u> PER03	Data Element 365	<u>Name</u> Commu	nication Number Qualifier	Attributes ANSI / BW Features M ID 2/2
			Code ide	entifying the type of communication number.	
			FX	Facsimile	
			TE	Telephone	
M	PER04	364	Commu	nication Number	X AN 1/80 M AN 1/15

Complete communications number including country or area code when applicable.

Segment: DTM Date/Time Reference

Position: 130

Loop:

Level: Heading Usage: Optional Max Use: 10

Purpose: To specify identifying information

Syntax Notes: Semantic Notes: Comments:

			Data	Dicincia Summary	
M	Ref. <u>Des.</u> DTM01	Data Element 374	Name Date/Time Qu	alifier	Attributes ANSI / <u>BW Features</u> M ID 3/3
			Date Code		
			168	Release	
	DTM02	373	Date		X DT 8/8
			CCCCMMDD		
	DTM03	337	Time HHMMSS		X TM 6/6

Segment: N1 Name

Position: 230

Loop: N1 Optional Level: Heading Usage: Optional

Max Use:

Purpose: To identify a party by type of organization, name, and code

Syntax Notes: 1 At least one of N102 or N103 is required.

2 If either N103 or N104 is present, then the other is required.

Semantic Notes: Comments:

1 This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.

Attributes

2 N105 and N106 further define the type of entity in N101.

	T . 0	-				ibutes
	Ref.	Data			ANS	81 /
	Des.	Element	<u>Name</u>		\mathbf{BW}	Features
M	N101	98	Entity Identifier C	ode	M	ID 4/4
			Code identifying an individual	organizational entity, a physical location	, prop	erty or an
			MI	Planning Schedule/Material Release Iss	uer	
			ST	Ship To		
			SU	Supplier/Manufacturer		
			SF	Ship From		
	N102	93	Name	-	X	AN 1/60
			Free-form name			
	N103	66	Identification Cod	e Qualifier	X	ID ½
			Code designating the Code (67)	ne system/method of code structure used f	or Ide	entification
			1	D-U-N-S Number, Dun & Bradstreet		
			92	Assigned by Buyer or Buyer's Agent		
	N104	67	Identification Code	e		AN 2/80 AN 2/30
			Code identifying a p	party or other code		

Segment: N3 Address Information

Position: 250

Loop: N1 Optional

Level: Heading Usage: Optional

Max Use: 2

Purpose: To specify the location of the named party

Syntax Notes: Semantic Notes: Comments:

			Data Element Summary	
	Ref.	Data		Attributes ANSI /
	Des.	Element	Name	BW Features
M	$\overline{N301}$	166	Address Information	M AN 1/55
				M AN 1/40
			Address information	
	N302	166	Address Information	O AN 1/55
				O AN 1/40
			Address information	

Segment: N4 Geographic Location

Position: 260

Loop: N1 Optional

Level: Heading Usage: Optional

1

Max Use:

Purpose: To specify the geographic place of the named party
Syntax Notes: 1 If N406 is present, then N405 is required.

Semantic Notes:

Comments:

specify a location.

2 N402 is required only if city name (N401) is in the U.S. or Canada.

A combination of either N401 through N404, or N405 and N406 may be adequate to

= 11.02 is required only if end mand (11.01) is in the eller of earth

		2 404 210110110 8 41111141 3			
			Attr	ibute	S
Ref.	Data		AN	SI/	
Des.	Element	<u>Name</u>	\mathbf{BW}	Feat	ures
N401	19	City Name	0	AN	2/30
			O	AN	2/10
		Free-form text for city name			
N402	156	State or Province Code	O	ID 2	2/2
		Code (Standard State/Province) as defined by appropriate go	vernn	nent a	gency
N403	116	Postal Code	O	ID 3	3/15
		Code defining international postal zone code excluding punc	tuatio	n and	blanks
		(zip code for United States)			
N404	26	Country Code	O	ID 2	2/3
		Code identifying the country			

Segment: LIN Item Identification

Position: 010

Loop: LIN Mandatory

Level: Detail Usage: Mandatory

Max Use: 1

Purpose: To specify basic item identification data

Syntax Notes:

- 1 If either LIN04 or LIN05 is present, then the other is required.
- 2 If either LIN06 or LIN07 is present, then the other is required.
- 3 If either LIN08 or LIN09 is present, then the other is required.
- 4 If either LIN10 or LIN11 is present, then the other is required.
- 5 If either LIN12 or LIN13 is present, then the other is required.
- 6 If either LIN14 or LIN15 is present, then the other is required.
- The idea Linvia of Linvia is present, then the other is required.
- 7 If either LIN16 or LIN17 is present, then the other is required.
- **8** If either LIN18 or LIN19 is present, then the other is required.
- **9** If either LIN20 or LIN21 is present, then the other is required.
- 10 If either LIN22 or LIN23 is present, then the other is required.
- 11 If either LIN24 or LIN25 is present, then the other is required.
- 12 If either LIN26 or LIN27 is present, then the other is required.
- 13 If either LIN28 or LIN29 is present, then the other is required.
- 14 If either LIN30 or LIN31 is present, then the other is required.

Semantic Notes: Comments:

- 1 LIN01 is the line item identification
- 1 See the Data Dictionary for a complete list of IDs.
- 2 LIN02 through LIN31 provide for fifteen different product/service IDs for each item. For example: Case, Color, Drawing No., U.P.C. No., ISBN No., Model No., or SKU.

A ttributos

	D 6	D 4		Attributes
	Ref.	Data	NT.	ANSI /
	Des.	Element	Name	BW Features
	LIN 01	350	Assigned Identification	O AN 1/20
				O AN 1/10
			Not Used	
M	LIN02	235	Product/Service ID Qualifier	M ID 2/2
			Code identifying the type/source of the descriptive number u Product/Service ID (234)	
			Buyers part number is mandatory and will always be in LIN	04.
			BP Buyer's Part Number	
M	LIN03	234	Product/Service ID	M AN 1/48 M AN 1/25
			Identifying number for a product or service	
	LIN04	235	Product/Service ID Qualifier	X ID 2/2
			Code identifying the type/source of the descriptive number u Product/Service ID (234)	ised in
			PO Purchase Order Number	
	LIN05	234	Product/Service ID	X AN 1/48 X AN 1/15
			Identifying number for a product or service	

LIN06 235 Product/Service ID Qualifier

EC Engineering Change Level

LIN07 234 Product/Service ID

Identifying number for product

Segment: UIT Unit Detail

Position: 020

Loop: LIN Mandatory

Level: Detail Usage: Optional

Max Use: 1

Purpose: To specify item unit data

Syntax Notes: 1 If UIT03 is present, then UIT02 is required.

Semantic Notes: Comments:

Data Element Summary

			·	Attributes
	Ref.	Data		ANSI /
	Des.	Element	<u>Name</u>	BW Features
M	UIT01	355	Unit or Basis for Measurement Code	M ID 2/2

Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken

CH

Container

СН	Containe
DZ	Dozen
EA	Each
FT	Foot
GA	Gallon
LB	Pound
PR	Pair
ST	Set
UN	Unit
YD	Yard

Segment: PID Product/Item Description

Position: 080

Loop: LIN Mandatory

Level: Detail
Usage: Optional
Max Use: 1000

Purpose:

To describe a product or process in coded or free-form format

Syntax Notes: Semantic Notes: Comments:

Notes:

Data Element Summary

M	Ref. <u>Des.</u> PID01	Data <u>Element</u> 349	Name Item Descriptio	n Type	Attributes ANSI / <u>BW Features</u> M ID 1/1
			-	• •	
			Code indicating	the format of a description	
			F	Free-form	
	PID05	352	Description		X AN 1/80 X AN 1/25

A free-form description to clarify the related data elements and their content

Segment: PER Administrative Communications Contact

Position: 150

Loop: LIN Mandatory

Level: Detail
Usage: Optional
Max Use: 3

Purpose: To identify a person or office to whom administrative communications should be directed

Syntax Notes: 1 If either PER03 or PER04 is present, then the other is required.

If either PER05 or PER06 is present, then the other is required.

3 If either PER07 or PER08 is present, then the other is required.

Semantic Notes: Comments:

					Attributes
	Ref.	Data			ANSI /
	Des.	Element	<u>Name</u>		BW Features
O	PER01	366	Contact Function	on Code	M ID 2/2
			Code identifying	the major duty or responsibility of the pers	on or group named
			EX	Expeditor	
			BD	Buyer Name or Department	
				Buyer or material scheduler name	
	PER02	93	Name		O AN 1/60 O AN 1/20
			Free-form name		3 , -, -, -,
	PER03	365	Communication	Number Qualifier	X ID 2/2
			Code identifying	the type of communication number	
			TE	Telephone	
	PER04	364	Communication	Number	X AN 1/80 X AN 1/15
			Complete commu applicable	unications number including country or are	a code when

Segment: ATH Resource Authorization

Position: 230

Loop: LIN Mandatory

Level: Detail
Usage: Optional
Max Use: 20

Purpose: To specify resource authorizations (i.e., finished labor, material, etc.) in the planning

schedule

Syntax Notes: 1 At least one of ATH02 or ATH03 is required.

- 2 If ATH03 is present, then ATH05 is required.
- 3 If ATH04 is present, then ATH05 is required.

Semantic Notes:

- 1 ATH02 is the resource authorization through date: The date through which the buyer authorizes the seller to commit the resource defined in element ATH01.
- ATH03 is the current cumulative requirements quantity: The cumulative quantity that has been authorized to date from the cumulative start date (ATH05) through the resource authorization through date (ATH02).
- 3 ATH05 is the cumulative start date: The date where the cumulative quantity count starts. This date might be the start date of a contract period, a calendar or fiscal year, or other.

Comments:

- 1 It is imperative that negotiations defining financial commitment have previously occurred and are agreed to by both buyer and seller.
- 2 ATH04 is the maximum cumulative requirements quantity: The maximum cumulative quantity that has been authorized to date from the cumulative start date (ATH05) through the resource authorization through date (ATH02). This is a high water mark. If the forecast decreases, the current cumulative requirements quantity also decreases, but the maximum cumulative requirements quantity does not decrease.

	Ref.	Data				
	Des.	Element	<u>Name</u>		Att	<u>ributes</u>
M	ATH01	672	Resource Authoriz	zation Code	M	ID 3/3
			Code identifying the commit to	e resource which the buyer is authorizing	the s	eller to
			FI	Finished (Labor, Material, and Overhea	d/Bu	rden)
			MT	Material		
			PQ	Previous Quantity Authorized		
	ATH02	373	Date		X	DT 8/8
			Date expressed as C	CCYYMMDD		
			Authorization throu	gh date		
	ATH03	380	Quantity		X	R 1/15
			Numeric value of qu	uantity		
			Authorization cumu	llated quantity		
	ATH05	373	Date		X	DT 8/8
			Date expressed as C	CCYYMMDD		
			Start date for cumul	lative quantity authorization		

${\bf Segment:} {\bf SDP} \ {\bf Ship/Delivery\ Pattern}$

Position: 678

Loop: LIN Mandatory

Level: Detail
Usage: Mandatory
Max Use: 1000

Purpose: To identify specific ship/delivery requirements

Syntax Notes: Semantic Notes: Comments:

Notes:

Data Element Summary

M	Ref. <u>Des.</u> SDP01	Data Element 678	Name Ship/Delivery Code	Attributes ANSI / BW Features M ID 1/2
			Code which specifies the delivery pattern	
			N As Directed	
	SDP02	678	Ship/Delivery Code	X ID 1/2

Code which specifies the routine delivery pattern

Segment: FST Forecast Schedule

Position: 410

Loop: FST Optional

Level: Detail Usage: Optional

Max Use:

Purpose: To specify the forecasted dates and quantities

Syntax Notes: 1 If either FST06 or FST07 is present, then the other is required.

If either FST08 or FST09 is present, then the other is required.

Semantic Notes: 1 If FST03 equals "F" (indicating flexible interval), then FST04 and FST05 are

required. FST04 would be used for the start date of the flexible interval and FST05

would be used for the end date of the flexible interval.

Comments: 1 As qualified by FST02 and FST03, FST04 represents either a discrete forecast date,

the first date of a forecasted bucket (weekly, monthly, quarterly, etc.) or the start date

Attributes

of a flexible interval.

2 FST06 qualifies the time in FST07. The purpose of the FST07 element is to express the specific time of day in a 24-hour clock to satisfy "just-in-time" requirements. As an alternative, the ship/delivery pattern segment (SDP) may be used to define an

approximate time, such as a.m. or p.m.

Data Element Summary

	Ref.	Data			AN	SI /
	Des.	Element	<u>Name</u>		\mathbf{BW}	<u>Features</u>
M	FST01	380	Quantity		\mathbf{M}	R 1/15
			Numeric value of q	quantity		
M	FST02	680	Forecast Qualifier	•	M	ID 1/1
			associated with a fo	e sender's confidence level of the forecast precast	data	or an action
			С	Firm		
			D	Planning		
M	FST03	681	Forecast Timing (Qualifier	M	ID 1/1
			Code specifying in	terval grouping of the forecast		
			C	Daily		
			D	Discrete		
			F	Flexible Interval (from Date X through	Date	Y)
			M	Monthly Bucket (Calendar Months)		
			Q	Quarterly (Calendar Quarters)		
			T	Four week bucket (13 buckets per year))	
			W	Weekly Bucket (Monday through Sund	lay)	
			X	Weekly Bucket (7 day interval)		
M	FST04	373	Date		M	DT 8/8
			Date expressed as 0	CCYYMMDD		
			Scheduled date			

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${\bf Segment:} {\bf SHP} \ {\bf Shipped/Received \ Information}$

Position: 470
Loop: SHP
Level: Detail
Usage: Used
Max Use: 2

Purpose: To specify shipment and/or receipt information.

Syntax Notes: Semantic Notes: Comments:

Notes:

			Attributes
Ref.	Data		ANSI /
Des.	Element	Name	BW Features
SHP01	673	Quantity Qualifier	O ID 2/2
		Code which specifies the type of quantity	
		01 Discrete Quantity	
		O2 Cumulative Quantity	
SHP02	380	Quantity	X R 1/15
		Numeric Value of Quantity	
SHP03	374	Date/Time Qualifier	X ID 3/3
		Code which specifies the type of date.	
		O11 Shipped	
		O51 Cumulative Quantity Start	
SHP04	373	Date	O DT 8/8
		Date received (011) or	
		Cumulative Quantity Start Date (CCYYMMDD)	
SHP06	373	Date	O DT 8/8
5111 00	313	- ****	O D10/0
		Cumulative Quantity End Date (CCYYMMDD)	

Segment: REF Reference Numbers

Position: 480
Loop: SHP
Level: Detail
Usage: Used
Max Use: 2

Purpose: To specify indentifying information

Syntax Notes: Semantic Notes: Comments:

Notes:

			<u>-</u>	
				Attributes
Ref. Data			ANSI /	
Des.	Element	<u>Name</u>		BW Features
SHP01	128	Reference Qual	lifier	$\overline{\mathbf{M}}$ $\overline{\mathbf{ID}}$ $2/2$
		Code qualifying	the reference ID	
		SI	Shipper	
SHP02	127	Reference ID		X AN 1/30

Segment: CTT Transaction Totals

Position: 010

Loop:

Level: Summary Usage: Optional

Max Use:

Purpose: To transmit a hash total for a specific element in the transaction set

Syntax Notes:

1 If either CTT03 or CTT04 is present, then the other is required.

2 If either CTT05 or CTT06 is present, then the other is required.

Semantic Notes:

Comments:

1 This segment is intended to provide hash totals to validate transaction completeness and correctness.

M	Ref. <u>Des.</u> CTT01	Data Element 354	Name Number of Line Items Total number of line items in the transaction set	Attributes M N0 1/6
			Total number of LIN segments	

Segment: **SE** Transaction Set Trailer

Position: 020

Loop:

Level: Summary Usage: Mandatory

Max Use:

Purpose: To indicate the end of the transaction set and provide the count of the transmitted

segments (including the beginning (ST) and ending (SE) segments)

Syntax Notes: Semantic Notes:

Comments: 1 SE is the last segment of each transaction set.

M	Ref. Des. SE01	Data Element 96	Name Number of Included Segments	Attı M	ributes N0 1/10
			Total number of segments included in a transaction set inclusegments	ding S	ST and SE
M	SE02	329	Transaction Set Control Number	\mathbf{M}	AN 4/9
			Identifying control number that must be unique within the tra- functional group assigned by the originator for a transaction		ion set