X-pand into the Future

e u r e x *circular 102/01*

Date: Frankfurt, 16 October, 2001
Recipients: All Eurex members and vendors
Authorized by: Jürg Spillmann

High Priority

1. Further Examples of Trade Adjustments in Eurex Release 5.0
2. Correction of Eurex Release 5.0 Theoretical Price File Layout

Related Eurex Circulars: 098/01

Contact: Functional Member Readiness: Tel: +49 69-2101-1700

Content may be most important for:	**Attachments:**
➲ Middle + Back Office ➲ IT / System Administration ➲ Auditing / Security Coordination	1. 'Trade Adjustments and Enhanced Trade Reversals' 2. Theoretical Price File Layout

1. Further Examples of Trade Adjustments in Eurex Release 5.0

The Final Release Notes for Eurex 5.0 were published with Circular 098/01. In response to customer inquiries relating to the changes described in section 2.8 of the Functional Release Notes (Increased Number of Trade Adjustments) Eurex is providing an attachment to this circular which contains additional examples with detailed descriptions. These examples should serve to simplify the task of members and vendors in modifying third party applications in the area of trade adjustments.

Please note that with the introduction of Eurex Release 5.0, the VALUES requests affected by the increased number of trade adjustments will **not** be backwards compatible to the Eurex 4.1 versions. Full details can be found in section 2.2.4.4 of the Technical Release Notes.

2. Correction of Eurex Release 5.0 Theoretical Price File Layout

In the layout of the Theoretical Price File in the Eurex 5.0 Technical Release Notes, the field lengths of the last two fields were defined incorrectly. The corrected version is provided as Attachment 2. The web-site copy of the Technical Release Notes published with Circular 098/01 has been updated with the corrected layout.

Eurex Deutschland
D-60485 Frankfurt am Main
www.eurexchange.com

Functional Member Readiness
Tel. +49-69-2101-1700
Fax +49-69-2101-1701

Alternative
Tel. +49-69-9770-1700
Fax +49-69-9770-1701

Management Board:
Rudolf Ferscha (CEO), Jürg Spillmann,
Daniel Gisler, Thomas Lenz,
Peter Reitz, Michael Widmer

Trade Adjustments and Enhanced Trade Reversals

1. Introduction

1.1 Current Situation with Eurex 4.1

The Eurex system currently supports only a limited number of adjustments to a position transaction record. Each trade is tracked by writing an audit trail record. Each adjustment of a position transaction is tracked by writing new records with the same transaction ID as the original record, and new suffix numbers extending the transaction ID for each single detail record describing the adjustment. Each adjustment formats an additional byte of the suffix ID to link the related detail records per adjustment, and to track the sequence of adjustments. This results in a maximum of 5 adjustments per trade, as the suffix ID has a length of 5 bytes.

The following document gives a brief overview about the changes from a functional point. In addition Examples are provided for different types of adjustments as well as for a trade reversal (mistrade). The conversion of the existing Suffix Ids into the new implemented Logic of Release 5.0 is explained as well.

1.2 Increased Number of Trade Adjustments

With the introduction of Eurex 5.0, the Eurex clearing system allows up to 49,999 trade adjustment records. Therefore the system supports a sufficient number of trade adjustments from a functional point of view. The Suffix ID is changed from an alphanumeric 5-field-group to a numeric field containing 5 digits. This Suffix ID is simply increased by 1 with each adjustment (from 1 to 49,999).

To reproduce the sequence of adjustments the original parent suffix ID is additionally stored with the transaction. The parent suffix ID will always be filled with the suffix ID of the transaction it is adjusting. For a historical trade transfer (HITT) this means, that the suffix ID of a record from the previous business day is taken as the parent suffix ID of this HITT record. A parent adjustment cannot be adjusted further, this is indicated by the adjustment/reverse indicator (A/R), where “A” indicates an “adjusted” record, “R” indicates a “reversed” record and “N” indicates that this record is neither adjusted nor reversed. Further adjustments are only possible on records with an adjustment/reverse indicator of “N”.

Another flag (HIT) shows if the adjusted transaction results from a historical trade transfer (HITT) or from a historical give-up. This flag is set to “Y” for both types of historical adjustment and stays “Y” for all further adjustments with this position transaction record. If a position transaction record is based on a trade of the current business day, the HIT flag is set to “N” (non-historical). Historical trade adjustments based on a trade of the previous business day cannot be reversed by a trade reversal. Please note that the flags “Y” and “N” will only be sent in the Trade Confirmations in VALUES-API. On all windows and reports (incl. RAW Data files) the historical transactions will be shown with a value of “H”, current transactions will be shown with “ “. This allows an easier identification of historical transactions.

1.3 Enhanced Trade Reversal

In case of a trade reversal (mistrade) on a trade that is already adjusted, all trade adjustments of the tree have to be considered for possible reversal bookings. If one of the trade adjustments of the tree is designated for give-up, first the designation has to be cancelled and broadcast. For open/close-adjustments and trade separations no reversal trade adjustments are written, since these types of transactions do not change the net position, so nothing has to be changed back. The adjustment indicator for these transactions is set from “N” to “A”, so that it is not available for further adjustments.

For trade account transfers and give-up/take-up transactions additional reversal trade adjustments have to be written, the net positions are then re-posted to the original account. These new trade reversal adjustments have the new transaction type “007” and adjustment/reverse indicators of “R” for

the negative side of the re-posting transaction and “A” for the positive side of the transaction. The parent suffix is filled with the same parent suffix as the adjustment it is reversing, so the adjustments and their reversals are grouped together under the same parent suffix ID.

2. Examples

The following examples detail how the changes to the Position Transaction dataset in Eurex 5.0 (“Increased number of trade adjustments”) impact on Trade Adjustment operations. In addition, a description of the new Enhanced Trade Reversal functionality is provided.

In these examples, **bold type** indicates values that are changed as a result of a particular transaction. The last two columns of the example records are not part of the Position Transaction record data but are intended to indicate whether the data is broadcast as either a ‘Trade Confirmation’ broadcast (TC Bcast) or as a ‘Give-up-Take-up’ broadcast (GUTU Bcast).

Example 1. Initial Trade Posting

Date	ClgMbr	ExchMbr	Acct	OrderNo	Tran Id	Suffix Id	Par. Sfx Id	HIT	A/R/N	B/S	O/C	TranType	GUStatus	Long Qty	Short Qty	TC Bcast	GUTU Bcast
15-Nov-00	**CBKFR**	**CBKFR**	**P1**	**277163393**	**000030**	**00000**	**00000**		**N**	**B**	**O**	**000**		**+100**	**0**	Yes	No
	…..																
15-Nov-00	**PIEFR**	**PIEFR**	**A1**	**277163394**	**000030**	**00000**	**00000**		**N**	**S**	**O**	**000**		**0**	**+100**	Yes	No

A ‘Buy to Open’ order by CBKFR (P1 account) is matched by a ‘Sell to Open’ order from PIEFR (A1 account). Both of the resulting positions are broadcast via the ‘Trade Confirmation’ broadcast stream. The ‘Transaction Id Suffix’ is initialized to 00000 for both sides of the trade.

Example 2. Trade Account Transfer

Date	ClgMbr	ExchMbr	Acct	OrderNo	Tran Id	Suffix Id	Par. Sfx Id	HIT	A/R/N	B/S	O/C	TranType	GUStatus	Long Qty	Short Qty	TC Bcast	GUTU Bcast
15-Nov-00	CBKFR	CBKFR	P1	277163393	000030	00000	00000		**A**	B	O	000		+100	0	No	No
15-Nov-00	**CBKFR**	**CBKFR**	**P1**	**277163393**	**000030**	**00001**	**00000**		**R**	**B**	**O**	**004**		**-100**	**0**	Yes	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163393**	**000030**	**00002**	**00000**		**N**	**B**	**O**	**004**		**+100**	**0**	Yes	No
	…..																
15-Nov-00	PIEFR	PIEFR	A1	277163394	000030	00000	00000		N	S	O	000		0	+100	No	No

CBKFR executes a ‘Trade Account Transfer’ adjustment to transfer his position from the P1 to the A1 account. The ‘Adjustment Status’ (A/R/N) of the original position is set to ‘A’ and two new transactions are created. The first new position record removes the position from the P1 account. This position has an ‘Adjustment Status’ of ‘R’ indicating that it is reversing a previous position. The second record increases the position in the A1 account. This position has an ‘Adjustment Status’ of ‘N’ indicating that further adjustments are allowable. The new position records are sent as ‘Trade Confirmation’ broadcasts. An updated Trade Confirmation for the original record (Suffix 00000) is not published again via broadcast. However this can be easily identified using the ‘Reversal’ record and reference back to the original trade using the Parent Suffix ID.

NOTE: Positions marked with an ‘Adjustment Status’ of ‘A’ or ‘R’ are not available for further adjustment. This is a general rule applied by the Eurex system. Whenever an adjustment to a trade position occurs, the ‘Suffix Id’ of the originating position is loaded into the ‘Parent Suffix Id’ field of all newly created position records. This link provides a relationship between ‘parent’ and ‘child’ positions.

Example 3. Trade Separation

Date	ClgMbr	ExchMbr	Acct	OrderNo	Tran Id	Suffix Id	Par. Sfx Id	HIT	A/R/N	B/S	O/C	TranType	GUStatus	Long Qty	Short Qty	TC Bcast	GUTU Bcast
15-Nov-00	CBKFR	CBKFR	P1	277163393	000030	00000	00000		A	B	O	000		+100	0	No	No
15-Nov-00	CBKFR	CBKFR	P1	277163393	000030	00001	00000		R	B	O	004		-100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00002	00000		**A**	B	O	004		+100	0	No	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163393**	**000030**	**00003**	**00002**		**R**	**B**	**O**	**006**		**-100**	**0**	Yes	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163393**	**000030**	**00004**	**00002**		**N**	**B**	**O**	**006**		**+20**	**0**	Yes	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163393**	**000030**	**00005**	**00002**		**N**	**B**	**O**	**006**		**+20**	**0**	Yes	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163393**	**000030**	**00006**	**00002**		**N**	**B**	**O**	**006**		**+30**	**0**	Yes	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163393**	**000030**	**00007**	**00002**		**N**	**B**	**O**	**006**		**+30**	**0**	Yes	No
	…..																
15-Nov-00	PIEFR	PIEFR	A1	277163394	000030	00000	00000		N	S	O	000		0	+100	No	No

CBKFR separates the position in the A1 account (Suffix ID 00002) into four parts. The ‘Adjustment Status’ (A/R/N) of the original position is set to ‘A’ and new positions are created for the separated parts. The first new position record reverses the original position movement and is marked with an ‘Adjustment Status’ of ‘R’. New position records are created (with an ‘Adjustment Status’ of ‘N’) for the requested separated amounts. The new position records are sent as ‘Trade Confirmation’ broadcasts.

Example 4. Give-up and Take-up

NOTE: This example shows one possible scenario for a full Give-up-Take-up transaction only. Many other ‘GU Status’ state transitions are possible however these are beyond the scope of this explanation.

Date	ClgMbr	ExchMbr	Acct	OrderNo	Tran Id	Suffix Id	Par. Sfx Id	HIT	A/R/N	B/S	O/C	TranType	GUStatus	Long Qty	Short Qty	TC Bcast	GUTU Bcast
15-Nov-00	CBKFR	CBKFR	P1	277163393	000030	00000	00000		A	B	O	000		+100	0	No	No
15-Nov-00	CBKFR	CBKFR	P1	277163393	000030	00001	00000		R	B	O	004		-100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00002	00000		A	B	O	004		+100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00003	00002		R	B	O	006		-100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00004	00002		**A**	B	O	006	**M**	+20	0	No	Yes
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00005	00002		N	B	O	006		+20	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00006	00002		N	B	O	006		+30	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00007	00002		N	B	O	006		+30	0	No	No
	…..																
15-Nov-00	PIEFR	PIEFR	A1	277163394	000030	00000	00000		N	S	O	000		0	+100	No	No

CBKFR gives up one of the separated trade positions to member HAUFR. At this stage HAUFR has not accepted the ‘given-up’ trade. The position is marked as ‘Adjusted’ and the ‘Give-up Status’ is set to ‘M’ (Give-up Accepted). No new ‘Trade Confirmation’ broadcasts are sent however the change in the ‘Give-up Status’ of the position will be reported via the ‘Give-up-Take-up’ broadcast stream.

Date	ClgMbr	ExchMbr	Acct	OrderNo	Tran Id	Suffix Id	Par. Sfx Id	HIT	A/R/N	B/S	O/C	TranType	GUStatus	Long Qty	Short Qty	TC Bcast	GUTU Bcast
15-Nov-00	CBKFR	CBKFR	P1	277163393	000030	00000	00000		A	B	O	000		+100	0	No	No
15-Nov-00	CBKFR	CBKFR	P1	277163393	000030	00001	00000		R	B	O	004		-100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00002	00000		A	B	O	004		+100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00003	00002		R	B	O	006		-100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00004	00002		A	B	O	006	**T**	+20	0	No	Yes
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00005	00002		N	B	O	006		+20	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00006	00002		N	B	O	006		+30	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00007	00002		N	B	O	006		+30	0	No	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163393**	**000030**	**00008**	**00004**		**R**	**B**	**O**	**020**	**T**	**-20**	**0**	Yes	Yes
	…..																
15-Nov-00	PIEFR	PIEFR	A1	277163394	000030	00000	00000		N	S	O	000		0	+100	No	No
	…..																
15-Nov-00	**HAUFR**	**HAUFR**	**A1**	**277163393**	**000030**	**00009**	**00004**		**N**	**B**	**O**	**030**		**+20**	**0**	Yes	Yes

HAUFR takes up the trade into his A1 account. The original position (belonging to CBKFR) is marked with a ‘Give-up Status’ of ‘T’ (Take-up Accepted) and two new positions are created. The first position reverses CBKFR’s position. This position is marked with an ‘Adjustment Status’ of ‘R’ and a ‘Give-up Status’ of ‘T’. The second record completes the movement of the position into HAUFR’s A1 account. This position has an ‘Adjustment Status’ of ‘N’ thus allowing further adjustments to be made. The two new records are broadcast via the ‘Trade Confirmation’ broadcast stream and also result in broadcasts to the ‘Give-up-Take-up’ stream.

Example 5. Open/Close Adjustment

Date	ClgMbr	ExchMbr	Acct	OrderNo	Tran Id	Suffix Id	Par. Sfx Id	HIT	A/R/N	B/S	O/C	TranType	GUStatus	Long Qty	Short Qty	TC Bcast	GUTU Bcast
15-Nov-00	CBKFR	CBKFR	P1	277163393	000030	00000	00000		A	B	O	000		+100	0	No	No
15-Nov-00	CBKFR	CBKFR	P1	277163393	000030	00001	00000		R	B	O	004		-100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00002	00000		A	B	O	004		+100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00003	00002		R	B	O	006		-100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00004	00002		A	B	O	006	T	+20	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00005	00002		**A**	B	O	006		+20	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00006	00002		N	B	O	006		+30	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00007	00002		N	B	O	006		+30	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00008	00004		R	B	O	020	T	-20	0	No	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163393**	**000030**	**00010**	**00005**		**R**	**B**	**O**	**002**		**-20**	**0**	Yes	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163393**	**000030**	**00011**	**00005**		**N**	**B**	**C**	**002**		**0**	**-20**	Yes	No
	…..																
15-Nov-00	PIEFR	PIEFR	A1	277163394	000030	00000	00000		N	S	O	000		0	+100	No	No
	…..																
15-Nov-00	HAUFR	HAUFR	A1	277163393	000030	00009	00004		N	B	O	030		+20	0	No	No

CBKFR carries out an 'Open/Close Adjustment' operation on the position marked as Suffix Id 00005. The original position is marked with an 'Adjustment Status' of 'A' and two new positions are created to move the position from the account long quantity to the account short quantity. The first position records reduces the original long quantity and is marked with an 'Adjustment Status' of 'R'. The second new record applies the position movement to the short quantity and is marked with an 'Adjustment Status' of 'N' thus allowing further adjustments to be made. The two new records are broadcast via the 'Trade Confirmation' broadcast stream.

Example 6. Enhanced Trade Reversal

Date	ClgMbr	ExchMbr	Acct	OrderNo	Tran Id	Suffix Id	Par. Sfx Id	HIT	A/R/N	B/S	O/C	TranType	GUStatus	Long Qty	Short Qty	TC Bcast	GUTU Bcast
15-Nov-00	CBKFR	CBKFR	P1	277163393	000030	00000	00000		A	B	O	000		+100	0	No	No
15-Nov-00	CBKFR	CBKFR	P1	277163393	000030	00001	00000		R	B	O	004		-100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00002	00000		A	B	O	004		+100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00003	00002		R	B	O	006		-100	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00004	00002		A	B	O	006	T	+20	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00005	00002		A	B	O	006		+20	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00006	00002		**A**	B	O	006		+30	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00007	00002		**A**	B	O	006		+30	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00008	00004		R	B	O	020	T	-20	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00010	00005		R	B	O	002		-20	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163393	000030	00011	00005		**A**	B	C	002		0	-20	No	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163393**	**000030**	**00012**	**00000**		**R**	**B**	**O**	**007**		**-100**	**0**	Yes	No
15-Nov-00	**CBKFR**	**CBKFR**	**P1**	**277163393**	**000030**	**00013**	**00000**		**A**	**B**	**O**	**007**		**+100**	**0**	Yes	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163393**	**000030**	**00015**	**00004**		**A**	**B**	**O**	**007**		**+20**	**0**	Yes	No
15-Nov-00	**CBKFR**	**CBKFR**	**P1**	**277163401**	**000034**	**00000**	**00000**		**R**	**S**	**C**	**010**[1]		**0**	**+100**	Yes	No
	…..																
15-Nov-00	PIEFR	PIEFR	A1	277163394	000030	00000	00000		**A**	S	O	000		0	+100	No	No
15-Nov-00	**PIEFR**	**PIEFR**	**A1**	**277163402**	**000034**	**00000**	**00000**		**R**	**B**	**C**	**000**		**0**	**-100**	Yes	No
	…..																
15-Nov-00	HAUFR	HAUFR	A1	277163393	000030	00009	00004		**A**	B	O	030		+20	0	No	No
15-Nov-00	**HAUFR**	**HAUFR**	**A1**	**277163393**	**000030**	**00014**	**00004**		**R**	**B**	**O**	**007**		**-20**	**0**	Yes	No

Market supervision reverses the original trade (between CBKFR and PIEFR) upon which the example set of trade adjustments is based. The set of position records relating to this trade is checked and any positions that have an 'Adjustment Status' of 'N' are set to a status of 'A' (to prohibit any further adjustments). This activity can be seen for suffix Ids 00006, 00007 and 00011 (CBKFR's trade side) and for suffix Id 00000 (PIEFR's trade side).

[1] **NOTE: The 'reversing' trade position for CBKFR (Transaction Id 00034) is booked as a transaction type '010'. This is a 'Trade with Closing Error'. This situation arises whenever a position movement is detected that would cause the member's clearing balance (on either the long or short side) to become negative. In these cases, the long and short position movements are modified such that the net position change is the same (i.e. in this case, the original – 100 long movement is changed to a +100 short movement) and the transaction type is changed from '000' (Normal Trade) to '010' (Trade with Closing Error).**

Any 'Trade Account Transfer' or 'Give-up-Take-up' transactions are reversed by the creation of new 'Transaction Type 007' records. These records 'negate' the position movement that resulted from the original adjustment and they share a common 'Parent Suffix Id' with the adjustment records that they are reversing. For instance, suffix Ids 00012 and 00013 (CBKFR's trade side) reverse the 'Trade Account Transfer' that resulted in the creation of suffix Ids 00001 and 00002. All four records share the same 'Parent Suffix Id' of 00000. The first type '007' record is marked with an 'Adjustment Status' of 'R' and reduces the position in the target account of the original transaction. The second type '007' record is marked with an 'Adjustment Status' of 'A' and restores the position back to the original source account.

A similar action is applied to 'Give-up-Take-up' transactions. The records identified by suffix Ids 00014 and 00015 reverse the 'Give-up-Take-up' transaction that resulted in the creation of suffix Ids 00008 and 00009. The first record reduces the position that was originally taken up by HAUFR (suffix Id 00014) and is marked with an 'Adjustment Status' of 'R'. The second record restores the position back to CBKFR (suffix Id 00015) and is marked with an adjustment status of 'A'.

In addition, to the reversal of adjusted positions, the original trade itself needs to be 'negated'. This is achieved by the booking of a new trade against the original trade participants (but with opposite movements in positions). This is represented by the new positions created with a 'transaction Id' of 00034.

All new position records created by the 'Enhanced Trade Reversal' process will be broadcast via the 'Trade Confirmation' broadcast stream.

Upon completion of all 'Trade Reversal' activity, all position records associated with the original trade will be set to an 'Adjustment Status' of either 'A' or 'R'. This means that no further adjustments can be carried out upon any part of the trade. The net position movements for all trade participants will be zero.

Note: When a 'Trade Reversal' is carried out, only 'Trade Account Transfer' and completed 'Give-up-Take-up' transactions result in the creation of 'reversing' type 007 transactions. 'Trade Separations' and 'Open/Close' adjustments do no imply any net position movements and thus they do not require any explicit actions in order to reverse them apart from the change of the 'Adjustment Status' from 'N' to 'A' .

Example 7. Historic Trade Transfer (HiTT)

If the following position records exist for the previous day's trading,…

Date	ClgMbr	ExchMbr	Acct	OrderNo	Tran Id	Suffix Id	Par. Sfx Id	HIT	A/R/N	B/S	O/C	TranType	GUStatus	Long Qty	Short Qty
14-Nov-00	CBKFR	CBKFR	P1	277163500	000040	00000	00000		A	B	O	000		+100	0
14-Nov-00	CBKFR	CBKFR	P1	277163500	000040	00001	00000		R	B	O	006		-100	0
14-Nov-00	CBKFR	CBKFR	P1	277163500	000040	00002	00000		N	B	O	006		+50	0
14-Nov-00	CBKFR	CBKFR	P1	277163500	000040	00003	00000		N	B	O	006		+30	0
14-Nov-00	CBKFR	CBKFR	P1	277163500	000040	00004	00000		N	B	O	006		+20	0
	…..														
14-Nov-00	PIEFR	PIEFR	A1	277163501	000040	00000	00000		N	S	O	000		0	+100

…then, an 'Historic Trade Transfer' (or HiTT) operation can be carried out to move the position into the current day's trading window. This will result in the following changes to the position data.

Date	ClgMbr	ExchMbr	Acct	OrderNo	Tran Id	Suffix Id	Par. Sfx Id	HIT	A/R/N	B/S	O/C	TranType	GUStatus	Long Qty	Short Qty	TC Bcast	GUTU Bcast
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00000	00000		A	B	O	000		+100	0	No	No
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00001	00000		R	B	O	006		-100	0	No	No
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00002	00000		**A**	B	O	006		+50	0	No	No
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00003	00000		N	B	O	006		+30	0	No	No
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00004	00000		N	B	O	006		+20	0	No	No
	…..																
14-Nov-00	PIEFR	PIEFR	P1	277163501	000040	00000	00000		N	S	O	000		0	+100	No	No
	…..																
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163500**	**000040**	**00005**	**00002**	**H**	**R**	**B**	**O**	**003**		**-50**	**0**	Yes	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163500**	**000040**	**00006**	**00002**	**H**	**N**	**B**	**O**	**003**		**+50**	**0**	Yes	No

The original position (in the previous day's dataset) is marked with an 'Adjustment Status' of 'A' and two new positions are created (in the current day's dataset) to make the position available for further operations. The first position records reduces the original quantity and is marked with an 'Adjustment Status' of 'R'. The second new record reapplies the position movement and is marked with an 'Adjustment Status' of 'N' thus allowing further adjustments to be made. Both records are marked with an 'Historic Adjustment Indicator' (HIT) of 'H' to show that they were positions transferred from a previous day's trading. Setting this flag to 'H' will prohibit any further HiTT or 'Historic Give-up' operations on subsequent trading days. The two new records are broadcast via the 'Trade Confirmation' broadcast stream.

NOTE: Reversal of trades that contain historic adjustments (either HiTT or Historic Give-up/Take-up) are not allowed by the Eurex system.

Example 8. Historic Give-up-Take-up

Date	ClgMbr	ExchMbr	Acct	OrderNo	Transaction Id	Suffix Id	Par. Sfx Id	HIT	A/R/N	B/S	O/C	TranType	GUStatus	Long Qty	Short Qty	TC Bcast	GUTU Bcast
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00000	00000		A	B	O	000		+100	0	No	No
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00001	00000		R	B	O	006		-100	0	No	No
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00002	00000		A	B	O	006		+50	0	No	No
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00003	00000		**A**	B	O	006	**M**	+30	0	No	Yes
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00004	00000		N	B	O	006		+20	0	No	No
	…..																
14-Nov-00	PIEFR	PIEFR	P1	277163501	000040	00000	00000		N	S	O	000		0	+100	No	No
	…..																
15-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00005	00002	H	R	B	O	006		-50	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00006	00002	H	N	B	O	006		+50	0	No	No

CBKFR gives up a trade position from the previous day's dataset to member HAUFR. At this stage HAUFR has not accepted the 'given-up' trade. The position is marked as 'Adjusted' and the 'Give-up Status' is set to 'M' (Give-up Accepted). No new 'Trade Confirmation' broadcasts are sent however the change in the 'Give-up Status' of the position will be reported via the 'Give-up-Take-up' broadcast stream.

Date	ClgMbr	ExchMbr	Acct	OrderNo	Tran Id	Suffix Id	Par. Sfx Id	HIT	A/R/N	B/S	O/C	TranType	GUStatus	Long Qty	Short Qty	TC Bcast	GUTU Bcast
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00000	00000		A	B	O	000		+100	0	No	No
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00001	00000		R	B	O	006		-100	0	No	No
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00002	00000		A	B	O	006		+50	0	No	No
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00003	00000		A	B	O	006	**T**	+30	0	No	Yes
14-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00004	00000		N	B	O	006		+20	0	No	No
	…..																
14-Nov-00	PIEFR	PIEFR	P1	277163501	000040	00000	00000		N	S	O	000		0	+100	No	No
	…..																
15-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00005	00002	H	R	B	O	006		-50	0	No	No
15-Nov-00	CBKFR	CBKFR	A1	277163500	000040	00006	00002	H	N	B	O	006		+50	0	No	No
15-Nov-00	**CBKFR**	**CBKFR**	**A1**	**277163500**	**000040**	**00007**	**00003**	**H**	**R**	**B**	**O**	**021**	**T**	**-30**	**0**	Yes	Yes
	…..																
15-Nov-00	**HAUFR**	**HAUFR**	**A1**	**277163500**	**000040**	**00008**	**00003**	**H**	**N**	**B**	**O**	**031**		**+30**	**0**	Yes	Yes

HAUFR takes up the trade into his A1 account. The original position that belongs to CBKFR (in the previous day's dataset) is marked with a 'Give-up Status' of 'T' (Take-up Accepted) and two new positions are created (in the current day's dataset). The first position reverses CBKFR's historic position. This position is marked with an 'Adjustment Status' of 'R' and a 'Give-up Status' of 'T'. The second record completes the movement of the position into HAUFR's A1 account. This position has an 'Adjustment Status' of 'N' thus allowing further adjustments to be made. Both records are marked with an 'Historic Adjustment Indicator' (HIT) of 'H' to show that they were positions transferred from a previous day's trading. Setting this flag to 'H' will prohibit any further HiTT or 'Historic Give-up' operations on subsequent trading days. The two new records are broadcast via the 'Trade Confirmation' broadcast stream and also result in broadcasts to the 'Give-up-Take-up' stream.

NOTE: Reversal of trades that contain historic adjustments (either HiTT or Historic Give-up/Take-up) are not allowed by the Eurex system.

3. Conversion of transaction executed in Release 4.1

The ‘Transaction Suffix Id’ naming convention (used in Eurex 4.1) will be changed in release Eurex 5.0. The previous convention relied on a system where the ‘Suffix Id’ of the adjusted transaction was post-fixed with an unique character in order to identify the new positions created as a result of the adjustment i.e.

> If a transaction with a ‘Suffix Id’ of ‘22 ‘ was subject to a ‘Trade Separation’ adjustment, whereby the trade was separated into four parts. The newly created position records would be identified as follows:
>
> Suffix Id ‘221 ‘ : This is the inverse record (to reduce the original position)
> Suffix Id ‘222 ‘ : This is the first separated part
> Suffix Id ‘223 ‘ : This is the second separated part
> Suffix Id ‘224 ‘ : This is the third separated part
> Suffix Id ‘225 ‘ : This is the fourth separated part

A similar convention is used for historic transaction (HiTT and Historic Give-up/Take-up), the exception being that the original suffix Id is postfixed with ‘G’ and ‘T’ (for Historic Give-up/Take-up) and ‘H’ and ‘N’ (for HiTT).

On the first day (following release of the Eurex 5.0 software), the existing Eurex 4.1 historic position data will have been converted to use the new suffix naming convention. This will mean that if a member wishes to refer to an historic position (for a HiTT or Historic Give-up/Take-up adjustment), he will need to use the same algorithm ,as used by the conversion process, in order to determine the new style ‘Suffix Id’. A description of this algorithm is provided below:

The algorithm uses a lookup table for the character set that can appear in 4.1 style suffix IDs. This table is as follows:

Character	digitValue
SPACE	0
'1'	1
'2'	2
'3'	3
'4'	4
'5'	5
'6'	6
'7'	7
'G'	1
'T'	2
'H'	1
'N'	2

Starting with a value of newSuffix = 0, then for each character in turn in the old suffix (including the spaces) the following calculation is applied:

newSuffix = (newSuffix * 8) + digitValue

e.g.

For suffix '22G '

Suffix position 1:	Character '2':	digitValue 2:	newSuffix = (0 * 8) + 2	= 2
Suffix position 2:	Character '2':	digitValue 2:	newSuffix = (2 * 8) + 2	= 18
Suffix position 3:	Character 'G':	digitValue 1:	newSuffix = (18 * 8) + 1	= 145
Suffix position 4:	Character ' '	digitValue 0:	newSuffix = (145 * 8) + 0	= 1160
Suffix position 5:	Character ' '	digitValue 0:	newSuffix = (1160 * 8) + 0	= 9280

This calculated value should be quoted with leading zeros as a five digit number i.e. '09280'

4.2 File Interface Layout Change – File FPTHEA

The file FPTHEA contains derivative theoretical prices used for margining.

Listed below is the record layout of the temporary file.

```
01  RMICTHEA-WS-REC.
    10  MGN-CLS-COD-RMICTHEA                PIC  X(5).
    10  SERI-GRP-ID-COD-RMICTHEA.
      15  SECU-ID-COD-RMICTHEA              PIC  X(4).
      15  SERI-CLAS-COD-RMICTHEA            PIC  X(1).
      15  SERI-EXP-DAT-RMICTHEA.
        20  EXPI-YR-DAT-RMICTHEA            PIC  9(2).
        20  EXPI-MTH-DAT-RMICTHEA           PIC  9(2).
      15  EXER-PRC-RMICTHEA                 PIC  9(5).
      15  SERI-VERS-NO-RMICTHEA             PIC  9(1).
    10  CALC-BUC-PRICE-RMICTHEA             PIC  X(9).
    10  CALC-UND-PRICE-RMICTHEA             PIC  X(9).
    10  FORWARD-UND-PRICE-RMICTHEA          PIC  Z(4)9.9(6).
    10  UD-IND-RMICTHEA                     PIC  X(1).
    10  STOCK-PRC-IND-RMICTHEA              PIC  X(1).
    10  THEO-VALUE-RMICTHEA                 PIC  Z(4)9.9(6).
    10  EA-THEO-VALUE-RMICTHEA              PIC  X(9).
    10  SHORT-OPT-THEO-RMICTHEA             PIC  Z(4)9.9(6).
    10  SECU-LST-CLS-PRC-RMICTHEA           PIC  X(10).
    10  INTP-LST-CLS-PRC-RMICTHEA           PIC  X(10).
    10  SERI-LST-STL-PRC-RMICTHEA           PIC  X(10).
    10  MGN-INTERVAL-RMICTHEA               PIC  X(11).
    10  IMPLIED-VOL-RMICTHEA                PIC  Z(2)9.9(2).
    10  INTR-RAT-PCT-RMICTHEA               PIC  9(1).9(4).
    10  YIELD-RAT-PCT-RMICTHEA              PIC  9(1).9(4).
    10  SECU-TRD-UNT-NO-RMICTHEA            PIC  Z(3)9.9(4).
    10  SECU-TIC-SIZE-RMICTHEA              PIC  X(7).
    10  SECU-TIC-VAL-RMICTHEA               PIC  Z(3)9.9(2).
    10  SERI-STS-COD-RMICTHEA               PIC  X(1).
    10  MGN-STYLE-FLG-RMICTHEA              PIC  X(1).
    10  EXER-PRC-DECIMALS-RMICTHEA          PIC  9(1).
    10  CURR-DCML-SHFT-GRP-RMICTHEA.
      15  CURR-TYP-COD-RMICTHEA             PIC  X(3).
      15  DCML-SHFT-NO-RMICTHEA             PIC  9(1).
    10  DAYS-TO-EXP-RMICTHEA                PIC  Z(2)9.
    10  SECU-DIV-IDX-RMICTHEA               PIC  X(1).
    10  SECU-DIV-INFO-RMICTHEA.
      15  SECU-DAYS-TO-DIV-RMICTHEA         PIC  Z(2)9.
      15  SECU-FUT-DIV-AMT-RMICTHEA         PIC  Z9.9(2).
01  RMICTHEA-FILE-INFO-REC REDEFINES RMICTHEA-WS-REC.     (last record)
    05  FILE-END-MARK-RMICTHEA              PIC  X(5).
    05  FILLER                              PIC  X.
    05  FILE-COUNTER-RMICTHEA               PIC  9(8).
    05  FILLER                              PIC  X.
    05  CURR-BUS-DAY-RMICTHEA               PIC  9(8).
    05  FILLER                              PIC  X.
    05  DESCRIPTION-RMICTHEA                PIC  X(92).
    05  FILLER                              PIC  X(70).
```