X-p.nd into the Future

e u r e x *circular 014/01*

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Recipients: All Eurex members and vendors
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⚠ **High Priority**

Introduction of a/c/e 2.0 (Eurex Release 5.0)

Related Eurex Circulars: 019/00, 003/01, 006/01

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Content may be most important for:	**Attachments:**
➲ All Departments	1. a/c/e 2.0 (Eurex Release 5.0) Information Schedule 2. Processing of Trade Adjustments in a/c/e 2.0 (Eurex Release 5.0)

Summary:

On 01 October, 2001 Eurex plans to introduce a new version of the front end software with the release of a/c/e 2.0 (Eurex Release 5.0). The release simulation is scheduled for the period 13 August – 21 September, 2001.

This circular provides initial information on the following areas which could possibly result in major changes on the members' side:

1. **UD/MISS Migration**
2. **Withdrawal of support for IBM AIX front ends**
3. **Upgrade of SUN Solaris operating systems**
4. **Withdrawal of support for UDP-Broadcast**
5. **Replacement of the Eurex Trading application X-ceed by @X-ceed**
6. **Extension to the Trade Adjustment Facility**

Detailed information on the changes planned with a/c/e 2.0 (Eurex Release 5.0) will be provided with the Preliminary Functional and Technical Release Notes.

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The planned publication date of the Preliminary Release Notes, as well as the schedule for other documents related to the release can be found in the attached a/c/e 2.0 (Eurex Release 5.0) Information Schedule (Attachment 1).

1. UD/MISS Migration

With the introduction of a/c/e 2.0 (Eurex Release 5.0), the switch from User Devices to MISS technology will be complete. Members who still use User Devices exclusively and who have not yet informed Eurex of their migration plans are urged to contact us as quickly as possible.

Furthermore we would like to remind you that withdrawal of support for User Devices will also mean that the MEMPI (BOF, PMI and TRAD) and ORPI programmable interfaces will no longer be available. Applications which are still based exclusively on these interfaces must also be converted to the VALUES API by the introduction of a/c/e 2.0 (Eurex Release 5.0).

We recommend all members to complete their migration to the MISS architecture by 01 August, 2001 in order to separate the migration exercise from the release change and take full advantage of the release simulation period.

2. Withdrawal of Support for IBM AIX Front Ends

As announced in Circular 019/00, with the introduction of the new release, Eurex will also withdraw support for front ends based on the IBM AIX platform, including MISS-based front ends. We therefore also request members with IBM AIX systems to inform us in good time of their migration plans.

3. Upgrade of SUN Solaris Operating Systems

Associated with the introduction of a/c/e 2.0 (Eurex Release 5.0), Eurex is planning to upgrade the Operating System software for SUN Solaris front ends. With the new release, the installation of SUN Solaris 8 is mandatory for all SUN MISSs and Workstations. To provide members with an opportunity to perform an early upgrade, from the Summer of 2001 the current Eurex Release 4.1 will be supported on Solaris 2.6 as well as Solaris 8. Further information on this subject will be provided in good time.

4. Withdrawal of support for UDP-Broadcast

As announced in Circular 003/01, the new release a/c/e 2.0 (Eurex Release 5.0) will be based on a new version of the GATE communications software (GATE Release 3.0). This version of the software will only support IP-Multicast. Support for UDP-Broadcast will be withdrawn, and the Broadcast Bridge software will consequently become obsolete. On 23 February, 2001 members had the opportunity to attend a workshop in Frankfurt on the use of IP-Multicast in relation to GATE 3.0. The slides of the presentation delivered at that workshop are now available on our web-site "www.eurexchange.com" in the area "info for members > special > a/c/e 2.0".

5. Replacement of the Eurex Trading Application X-ceed by @X-ceed

The Galaxy-based trading application X-ceed will be replaced by the Java-based application @X-ceed made available at the end of February, 2001. As announced in Circular 006/00, the Galaxy-based X-ceed will therefore no longer be provided with a/c/e 2.0 (Eurex Release 5.0).

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6. Extension to the Trade Adjustment Facility

With a/c/e 2.0 (Eurex Release 5.0), an extension to the Trade Adjustment facility is one of the new functions to be made available to Eurex members. Instead of the previous limit of five adjustments, 49,999 modifications will theoretically be possible in future. However, Eurex reserves the right to set a lower limit on the actual permitted number of Trade Adjustments.

This extension requires a fundamental new logic to the implementation of the Transaction ID suffix, and no backward compatibility for functions which use it can be provided. Please check as soon as possible whether any of your established applications need to be modified as a result of the change. A detailed description of the changes to the Transaction ID suffix can be found in Attachment 2.

Frankfurt 08 March, 2001

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a/c/e 2.0 (Eurex Rel. 5.0) Information Schedule

	2001
Release Announcement & Information Schedule	08.03.2001
Preliminary Technical & Functional Release Notes	02.04.2001
Member Front End Development Guide - Planning Version	02.04.2001
Member Front End Development Guide - Programming Version	18.06.2001
Final Version of Technical & Functional Release Notes	18.06.2001
Sizing Guidelines	30.07.2001
Member Simulation Guide	30.07.2001
Member Manuals - Simulation Version	30.07.2001
Member Front End Development Guide - Final Version	30.07.2001
Update of Technical & Functional Description	07.08.2001
Simulation Kit & Notes	07.08.2001
Member Manuals - Final Version	24.09.2001
Production Kit & Notes	24.09.2001

Processing of Trade Adjustments In a/c/e 2.0 (Eurex Release 5.0)

1 Current Situation

The Eurex system currently supports only a limited number of adjustments to a trade. 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, plus 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 position as the suffix ID has a length of 5 bytes. The following figure shows the current situation:

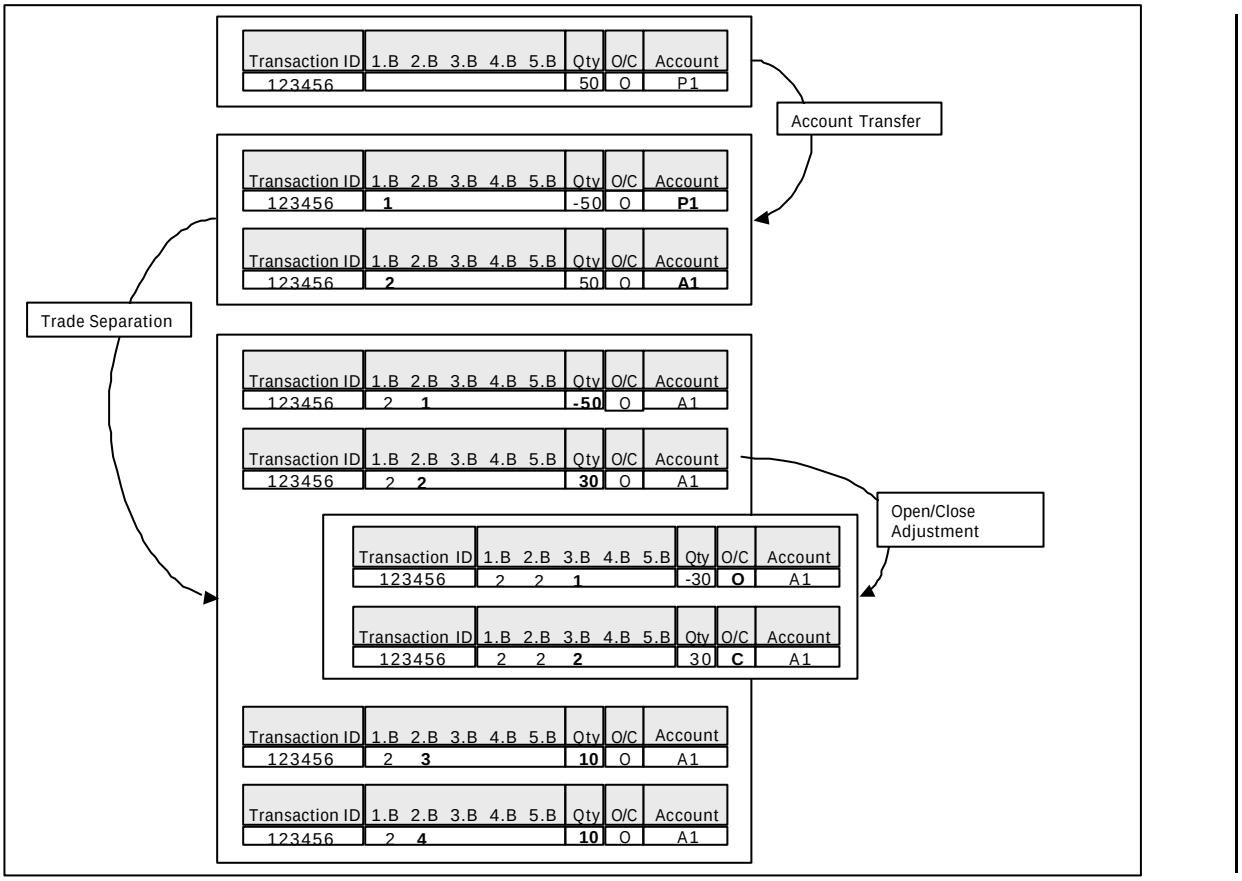


Figure: Current Situation

2 Future Situation

In future the Eurex Clearing System will allow a theoretical maximum number of trade adjustments up to 49,999. So the system supports from a technical and functional point of view a sufficient number of adjustments.

The Suffix ID will be changed from an alphanumeric 5-field-group to a numeric field containing 5 digits. The Suffix ID will be shown separately since in the current situation the Suffix ID is displayed together with the Transaction ID, simply divided by a dot.

To reproduce the sequence of adjustments the Parent Suffix ID has to be inherent. An additional field in the transaction information for the adjusted records displays the Suffix ID of the source record. This linking permits the functionally correct grouping of related records in reports, screens and windows. So each adjusted trade inherits the Suffix ID of the Parent Suffix ID from the source record.

In future there will be a different order methodology, namely a Transaction ID - Suffix ID - Parent ID priority. Other order priorities remain the same. Thus the adjustments will be ordered first by their Transaction ID, second by their Suffix ID and third by their Parent ID.

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 reversal record and N indicates that this record is neither adjusted nor reversed. Further adjustments are solely feasible to records with an Adjustment/Reverse Indicator of N.

If an adjustment is a historical one, the indication will be displayed in a separate column - HIT (which is different to HiTT Historical Trade Transfer).

The following diagram shows the future situation:



Figure: Future Situation

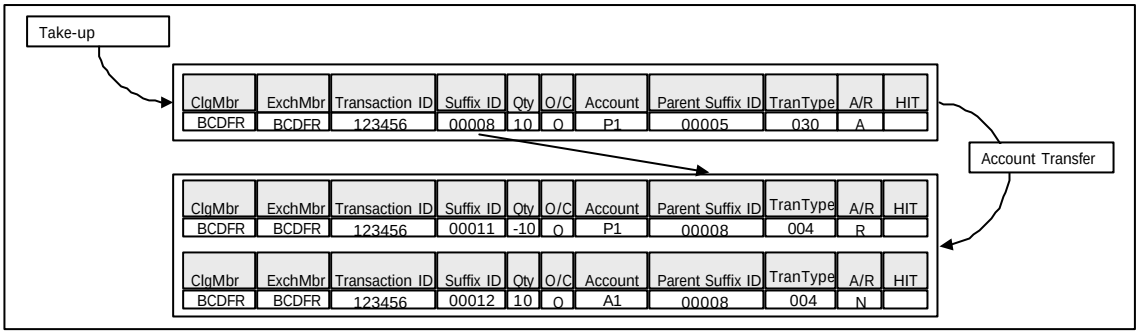


Figure: Future situation (Take-up plus Account Transfer)

3 Affected Reports

The following list of reports will be modified as a result of the new processing of Trade Adjustments. Full details will be provided in the Preliminary Release notes.

- RPTCB010 - Position Detail
- RPTCB110 - Account Transfer Exception
- RPTCB102 - Cash Settled Contracts
- RPTCB130 - Give-Up Trade History
- RPTCB140 - Accepted Give-Up Trades
- RPTCB150 - Take-Up Trade History
- RPTCB160 - Accepted Take-Up Trades

- RAWCB010 - Position Detail (Raw Data)

4 VALUES Changes

4.1 Concept of Change/Summary

The present (Eurex Release 4.1) concept of handling trade adjustments (Trade Separation, Open/Close Adjustment etc.) involves the five-byte field trnIdSfxNo, using one byte to signify each adjustment that the trade has already undergone. Consequently, trades that have undergone no adjustment at all have this field blanked out. The concept does not allow for a sequence of more than five adjustments to one trade.

In the enhanced concept to be introduced with a/c/e 2.0 (Eurex Release 5.0), trnIdSfxNo will hold a numeric, consecutive value that uniquely identifies one transaction within the set of all transactions originating from the same trade. It will be possible to identify the “parent” transaction by evaluating the new field trnIdSfxNoPnt, which holds the parent transaction’s trnIdSfxNo. Please note that several transactions may share the same parent.

The original trade has trnIdSfxNo=”00000”; since it does not have a parent transaction the trnIdSfxNoPnt field does not hold meaningful data.

In addition, two new fields will be introduced: The first one indicates if a transaction has been subject to a Historical Trade Transfer, the other one specifies if the transaction has already been adjusted, if it is a trade reversal, or if it is still available for adjustment.

4.2 Changed/new VALUES data fields

4.2.1 trnIdSfxNo (changed)

Description: This field indicates the trade suffix assigned to a trade adjustment transaction (i.e. open/close adjustment, historical trade transfer (HITT), account transfer, trade separation, give-up, take-up, etc.) which allows the Exchange to associate an adjustment to the original trade. This suffix uniquely identifies a transaction in the set of transactions originating from the same trade.

Type	Size	Format
char*	TRN_ID_SFX_NO_LEN(5)	numeric

4.2.2 trnIdSfxNoPnt (new)

Description: This field specifies the “parent” of a trade adjustment transaction. It holds the trnIdSfxNo of the transaction that was adjusted and thus produced the given transaction.

Type	Size	Format
char*	DRIV_TRN_ID_SFX_NO_PNT_LEN(5)	numeric

4.2.3 trnHistAdjInd (new)

Description: This field indicates if a transaction has been subject to a Historical Trade Transfer at any point of its adjustment history.

Type	Size	Format
char	1	alphanumeric

Valid Value	Explicit
EXCH_CONST_YES	'Y'
EXCH_CONST_NO	'N'

4.2.4 trnAdjStsCod (new)

Description: This field specifies if a transaction has been adjusted using a trade adjustment transaction, or if it is a reversal transaction generated by the system. If none of these applies, the transaction can still be adjusted.

Type	Size	Format
char	1	alphanumeric

Valid Value	Explicit
DRIV_TRN_ADJ_STS_COD_ADJUSTED_VV	'A'
DRIV_TRN_ADJ_STS_COD_REVERSAL_VV	'R'
DRIV_TRN_ADJ_STS_COD_NONE_VV	'N'

4.3 Changes to VALUES application requests

The following application requests use the transaction ID suffix and are therefore subject to change:

4.3.1 Sent by end-user application (Request)

Accept Give-Up Transaction

Accept Take-Up Transaction

Delete Give-Up Transaction

Enter Give-Up Transaction

Enter Take-Up Transaction

Modify Give-Up Transaction

Reject Take-Up Transaction

Undesignate Give-Up Transaction

4.3.2 Received by end-user application (Response):

Inquire Give-Up

Inquire Historical Position Transactions

Inquire Position Detail

Inquire Take-Up

Subscribe Give-Up/Take-Up

Subscribe Trade Confirmation

4.3.3 Both (Request and Response):

Enter Historical Trade Transfer

Enter Trade Account Transfer

Enter Trade Open/Close Adjustment

Enter Trade Separation

In Request structures, the old-style trnIdSfxNo will be replaced by two fields, which are the new-style trnIdSfxNo and the trnHistAdjInd.
In Response structures, there will be trnIdSfxNo (new-style), trnIdSfxNoPnt, trnHistAdjInd and trnAdjStsCod.

5 Backward compatibility – Layout compatibility only! Not all Application Requests are covered.

End-user applications developed and compiled for Eurex Release 4.1, and thus sending AVN_041 as application version identifier, can safely assume to use the layouts (byte offsets of data fields) specified with Release 4.1, even when using Application Requests with trnIdSfxNo inside. However, the field trnIdSfxNo itself will not deliver the old-style data available within “native” R4.1. Instead, only minimal information will be supplied: For an original trade, the field will be filled with spaces, otherwise, its will hold a differing value.

Since an end-user application using AVN_041 therefore has no way of knowing the old-style suffix, the following application requests cannot be used in the required way and are not supported at all for end-user applications using R4.1 backward compatibility:

Enter Historical Trade Transfer
Enter Trade Account Transfer
Enter Trade Open/Close Adjustment
Enter Trade Separation
Accept Give-Up Transaction
Accept Take-Up Transaction
Delete Give-Up Transaction
Enter Give-Up Transaction
Enter Take-Up Transaction
Modify Give-Up Transaction
Reject Take-Up Transaction
Undesignate Give-Up Transaction

All end-user applications that cover functionality provided in these application requests have to be changed to implement the new logic, and use the new application version number (AVN_050). In addition, all applications that make use of the field trnIdSfxNo (other than checking for spaces) have to be adapted.

6 Examples of porting to the new logic

1. Example: An application does not make use of the field trnIdSfxNo at all. It is unlikely to require data from any of the newly created fields. A recompilation using the new C-header files should be all that is required to handle the data layout change – apart from writing initialization code for the new fields (when sending requests that have some of the fields, although unused.). Backward compatibility mode should work on the unchanged executable (still using AVN_041).
2. Example: An application uses the trnIdSfxNo only to identify original trades, comparing its contents to “all spaces”. In order to match the new logic, it has to be changed to check for “all zeroes”, initialization code for the new fields has to be added, and compilation against the new header files has to be performed. Even such an application should run unchanged in R41-backward compatibility code, since “all spaces” is supplied in the trnIdSfxNo field with original trades when using backward compatibilty mode.
3. Example: An application uses trnIdSfxNo in a logic that identifies a transaction’s parent. The processing used for this has to be rewritten completely. Backward compatibility of the unchanged program will not work, since the old-style trnIdSfxNo is not delivered even in backward compatibility mode.
4. Example: An application uses trnIdNo plus trnIdSfxNo plus transaction date in order to build a unique database key. The field trnHistAdjInd must be added to the key, otherwise it is no longer safely assumed to be unique. In backward compatibilty mode (AVN_041), trnIdNo plus trnIdSfxNo plus transaction date still make up a unique key, however.