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Exchange of Hal E-Bank Documents with Accounting Systems in S.W.I.F.T. Format (Implementation on Slovene Market)



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SWIFT Hal E-Bank Standard/Version for Slovenia

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1 Introduction

This document defines the content and the format of messages, which can be exchanged between Hal E-Bank solutions (Hal E-Bank/Personal, Hal E-Bank/Corporate and Hal E-Bank/B2B) and accounting systems, which users of Hal E-Bank systems can adopt for payment order processing and posting of transactions on their bank accounts.

The following messages in SWIFT format are given in this document¹:

- MT101 Request for transfer enables the bank customer to submit payment orders to the bank; the customer prepares payment orders in its systems and loads them into Hal E-Bank system (the same format is used in Hal E-Bank/Personal and Hal E-Bank/Corporate also for exporting archived orders, which is usually used for preparation of new orders in the Hal E-Bank system; these orders can of course also be transferred this way to other systems);
- MT940 Customer statement includes a recap and individual statement lines of the bank statement and is used for taking over the statements; the customer exports them from the Hal E-Bank system and transfers them into its systems;
- MT941 Balance report, which includes current balance on account; the client exports them from Hal E-Bank system and moves them to its back-office systems;
- MT942 Interim transaction report in Hal E-Bank is used for taking over the data on payments made (evidence transactions) and information regarding cancelled or rejected orders; the customer exports them from Hal E-Bank and transfers them into its systems.

These messages are used for all payment channels (domestic, to abroad and abroad). The content and format of messages in other formats are defined in a separate document. To some extent, descriptions in this document represent part of SWIFT rules, as we don't need and don't use all fields—that are standardized in SWIFT. On the other hand, this document defines use of SWIFT messages in a way that enables giving all required data and ensures higher level of data structure and automation of processing.

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¹ The content and format of messages in other standards are given in separate documents.



The document is in the first place dedicated to the developers, who are building the exchange between Hal E-Bank and clients' back-office systems.

1.1 Payment Channels and Payment Orders

Hal E-Bank supports three different payment channels:

- DPS/PPD² Domestic Payment System (domestic account)
- FPS/PPT² Foreign Payments System (domestic foreign account)
- ICM payments system abroad (account in a bank abroad -International Cash Management)

In the above payment channels the following payment orders are used:

- 1. in PPD domestic payment system (domestic account)
 - a. DPS/PPD payment (in Slovenia BN01)
- 2. in PPT foreign payments system (domestic foreign account)
 - a. FPS/PPT payment (in Slovenia VP70) or
 - b. FPS/PPT transfer (in Slovenia it can have two forms; "ordinary" foreign currency transfer between accounts in Slovenia or transfer of the counter-value amount between accounts in Slovenia)
- 3. in ICM payments system abroad (account in a bank abroad)
 - a. ICM payment (payment order within so called International Cash Management, which is a subgroup of the SWIFT message MT101)

In Hal E-Bank there are also special formats of basic payment orders (e.g. in Slovenia payment slip), which are separately defined in this document.

1.2 Message Content

Key element in information transfer is the message text, which is used in all messages described in this document and which contains practically all content

information regarding orders, transactions and statements.

Text of the message begins with string ''{4:<CLRF>'' and ends with ''<CLRF>-}''. Between the beginning and ending string there are several fields. Each field begins with the field identifier between colons (e.g. '':32A: '') and continues with appropriate content, which ends with the string ''<CLRF>''. The field may contain

² Besides English abbreviation, Slovene one is also given to preserve the relation with the original document in Slovene language.



more than one line, which ends with ''<CLRF>''. String <CLRF> is written as "0D0A" in hexadecimal form, where <0D> means "end of line" (CR = carriage return) and <0A> means "new line" (LF = line feed).

Example of a message text representing domestic request for transfer = payment PPD (in the example the beginning and ending of the message as well as separators between the lines are marked in bold; field marks are added on the right for each line, starting with "):

4:<CRLF>

:20:GROUP1232<CLRF>

:28D:1/1<CLRF>

:50H:/SI56020100000020045<CLRF>

PAYER'S NAME<CLRF>

PAYER'S ADDRESS<CLRF>:30:050602<CLRF>

:21:TR050602-12<CLRF>

:32B:EUR10000,00<CLRF>

:59:/100006666666679<CLRF>

RECEIVER'S NAME<CLRF>

RECEIVER'S ADDRESS<CLRF>

RECEIVER'S CITY<CLRF>

:70:/SIB/05/1100157<CLRF>

INVOICE DECEMBER 2005<CLRF>

:77B:/SI/A3012<CLRF>

:71A:SHA<CLRF>

-}

"beginning of the message

"message reference

"sequence number

"payer data

"value date

"transaction reference number

"currency, amount

"beneficiary data

"remittance information

"details of charges "end of the message

1.3 Specific Comments

IBAN or BBAN account format

In principle, in domestic payment processing only IBAN transaction account structure should be used. Within Single European Payment Area (SEPA) the use of IBAN is encourages by the directive, which prescribes more favorable conditions for transactions within the EU, which enable straight though processing.

Statistics in domestic payment orders

Because of the above mentioned SEPA directive, which defines more favorable conditions for SEPA transactions, which enable automatic processing (the so called STP- Straight Through Processing), the stating of the statistics data will not be mandatory any more (following a transition period).



Address

Due to money laundry prevention stating the recipient's address will become mandatory sooner or later. Therefore it makes sense to define the recipient's address as mandatory in all new solutions. This is also considered in this document.

Statistics in payment orders abroad

The Bank of Slovenia is preparing to simplify direct statistical reporting regarding payment orders abroad after 1st January 2007. Until then, the existing rules apply.

1.4 Reference Documentation

- > SWIFT User Handbook, 2005
- ➤ Hal E-Bank User Manual



2 Terminology and Denotation

2.1 Data Format Description

Denotations for field formats are specified similarly to the SWIFT definitions.

Field length

nn maximum length

nn-nn minimal and maximal length

nn! fixed length

nn*nn maximal number of lines * maximal length

Data type

n numerical (0	-9)
----------------	-----

a capital letter (A to Z)

x any character from the so called "SWIFT X character set" (see below)

c alphanumerical (capital letters and numbers)

h hexadecimal

s sign +/-

b emply field or space

A small or capital letter (a to z, A to Z)

B alphanumerical (small or capital letters and numbers)

/ sign "/" - sign "-"

Symbols and signs

()	for	mark	king	varia	ble	parameters

(n-m) means: last string before this structure can be repeated n to m times

< > for marking valid field names

{ } for marking message segment and punctuation marks between field

names

[] for marking optional values

Example: bank BIC code is defined by the format

4!a2!a2!c[3!c]

where

- 4!a mandatory 4 capital letters (A to Z), defining the bank
- 2!a mandatory 2 capital letters (A to Z), defining the country



- 2!c mandatory 2 alphanumerical signs (capital letters and numbers), assigned by SWIFT
- [3!c] optional 3 alphanumerical signs (capital letters only), defining bank branch

2.2 Character Set

In all SWIFT messages presented in this document the so called SWIFT X character ser is used. They contain the following:

a b c d e f g h i j k l m n o p q r s t u v w x y z

A B C D E F G H I J K L M N O P O R S T U V W X Y Z

0123456789

/ - ? : () . , ' + { }

CR LF Space

2.3 Mandatory / Optional Fields

Letters M and O define whether data fields are mandatory (M) or not (O). M defines mandatory data; whereas O defines optional data. The same letters are used also for defining whether a line inside a field is mandatory or optional.

2.4 Bank Accounts Numbers

In this document the following bank account formats are used:

- Transaction account (TRR) in BBAN format (for payment processing in Slovenia):
 - o Bank routing code (5 digits)
 - 0 "-"
 - Bank account number (8 digits)
 - o Control number (2 digits)

Example: 02045-0019618829

• Transaction account (TRR) in IBAN format (for payment processing in Slovenia) (ISO 13616: 2003):



- Country code (ISO 3166 alpha-2 country code for Slovenia = SI)
- o Control number (2 digits; Slovenia = 56)
- o Bank routing code (5 digits)
- Bank account number (8 digits)
- o Control number (2 digits)

In the files the electronic IBAN format is used (data is listed successively without separators).

Example: SI56020450019618829

- General domestic account (can also be transaction account in BBAN or IBAN format), opened at the payer's bank in home country. In principle, transaction accounts of the receiver should always be used in payments transfer between two different entities.
 - On payer's side however and for cash transfers between accounts of the same entity, banks may allow also the use of internal accounts according to their internal rules. In this case the payment order must contain also the bank's data (since from the internal accounts it is not possible to determine, at which bank they are kept).
- General foreign bank account In case of accounts at one of the foreign banks, the account structure is not generally defined. The payment order must contain also the bank's data, since from the accounts abroad it is usually not possible to determine, at which bank they are kept.
- **IBAN account** is the account opened in any bank and set-up in the structure defined by ISO 13616: 2003:
 - o Country code (ISO 3166 alpha-2 country code)
 - o Control number (2 digits)
 - Bank account number (country specific, see http://www.ebcs.org/iban.htm for Europe)

In the files the electronic IBAN format is used (data is listed successively without separators).



3 Request for Transfer - Message MT101

Payment orders are submitted by the bank customer to the bank in form of MT101 message. The table below shows field structure in the text of MT101 message (the table also contains original SWIFT description of the fields):

Status	Field	Description	Format/Options				
> beginning of sequence A							
M 20 Sender's reference 16x							
М	28D	Message Index/Total	5n/5n				
М	50H	Ordering customer	/34x				
			4*35x				
0	52A	Account servicing institution	4!a2!a2!c[3!c]				
М	30	Requested execution date	6!n				
end	of sequer	nce A					
> beg	inning of r	repeated sequence B					
М	21	Transaction reference	16x				
0	21F	F/X deal reference	16x				
> beg	inning of r	repeated field 23E					
O 23E Instruction code 4!c[/30x]							
> end of repeated field 23E							
М	32B	Currency / Transaction amount	3!a15d				
0	56a Intermediary A, C or D						
O 57a Account with institution A, C or D							
М	59	Beneficiary	[/34x]				
			4*35x				
М	70	Remittance information	5*35				
0	77B	Regulatory reporting	3*35				
0	33B	Currency / Original ordered amount 3!a15d					
М	71A	Details of charges 3!a					
0	25A	Charges account	/34x				
0	36	Exchange rate	12d				
end	end of repeated sequence B						

Table 1: MT101 message format

3.1 Field Description

3.1.1 Field 20: Sender's Reference

Format: 16x

The field may not start or end with "/" and must not contain "//"

Status: mandatory field



Definition: Reference defined by the sender, which uniquely identifies the

message

Usage rules in Hal E-bank: The field content is not important.

3.1.2 Field 28D: Message Index / Total

Format: 5n/5n (message number/message total)

Status: mandatory field

Definition: Message sequence number and the message total unify more MT101

messages into one file.

Usage rules in Hal E-Bank:

The field content is important only for file completeness check.

3.1.3 Field 50H: Ordering Customer

Format: /34x (account)

4*35x (name and address)

Status: mandatory field

Definition: Includes ordering party data (name and address) and the account,

which will be debited for all transactions in sequence B.

Usage rules in Hal E-Bank:

Since data in Hal E-Bank is additionally structured, the ordering party data (name and address) as well as debited account must be presented in the following way:

Format	M/O	Content and form
/34x	M	The account is mandatory and depends on the payment order type ³ :
		DPS/PPD payment: account in BBAN or IBAN format
		FPS/PPT payment: account in BBAN or IBAN format
		FPS/PPT transfer: account in BBAN or IBAN format
		ICM payment: general account, opened in a bank abroad
35x	M	Name
35x	M	Address
35x	0	City
2!a[-32a]	M/O	Country ⁴ where:
		2!a - ISO 3155 alpha-2 country code of the ordering customer
		32a - optional country name of the ordering customer
		Country is mandatory in all Payment FPS/PPT and optional in all others.

Table 2: Field 50H structure

³ The described rule is valid (common) for all banks. Some banks define additional rules for special cases (those rules are given by specific bank).

⁴ Regardless whether the City is stated, the Country information is in the last line of the field.



Example (included account in IBAN format and all mandatory field lines):

:50H:/SI56020100000020045

Halcom d.d. Trzaska 118 SI-Slovenija

3.1.4 Field 52A: Account Servicing Institution

Format: 4!a2!a2!c[3!c] (BIC - ISO 9362)

Status: optional field

Definition: Data of the bank servicing the debited account given in field 50H

Usage rules in Hal E-Bank:

The field is mandatory only in <u>ICM payments</u>, where it is generally not possible to recognize the servicing bank from the debited account number.

<u>In all other payment orders</u> the field is optional and is used only when it is not possible to recognize the servicing bank from the debited account.

3.1.5 Field 30: Requested Execution Date

Format: 6!n (YYMMDD)

Status: mandatory field

Definition: Date, when the bank servicing the payer's account should start

performing the transactions in sequence B. By definition this should

start on the date defined in field 50H.

Usage rules in Hal E-Bank:

In DPS/PPD payments the execution date is always equal to the value date.

In <u>FPS/PPT transfers</u> and <u>FPS/PPT payments</u> ome banks in Slovenia take the given date as execution date and the others as value date (date of payment abroad). Bank customers must take this into consideration when preparing the transfer requests for a specified bank.

In ICM payments the content of this field is fully in accordance with SWIFT rules.

3.1.6 Field 21: Transaction Reference

Format: 16x

Status: mandatory field



Definition: Reference defined by the sender, which uniquely identifies the

transaction

Usage rules in Hal E-Bank:

In case the user's systems provide that this field uniquely identifies the transaction, users can configure Hal E-Bank/B2B in a manner that all feedback information (e.g. evidence and book transactions) regarding the transaction includes this user defined transaction identifier.

3.1.7 Field 21F: F/X Deal Reference

Format: 16x

Status: conditionally mandatory according to table:

Field 36	Field 21F
Existing	Mandatory
Not existing	Optional

Definition: Reference to the agreement on F/X exchange rate between the

ordering customer and the servicing bank.

Usage rules in Hal E-Bank:

The field is not used in <u>DPS/PPD payments</u>.

In <u>FPS/PPT transfers</u> and <u>FPS/PPT payments</u> it is mandatory and contains "NONREF" in cases, where the coverage currency is different from the transaction currency. Technically this means that currencies in fields 32B and 33B are different and that according to SWIFT field 36 is then mandatory.

In <u>ICM payments</u> the meaning of this field is fully compliant with the SWIFT rules (also when reference number is not known and this field is filled with fixed text "NONREF").

3.1.8 Field 23E: Instruction Code

Format: 4!c[/30x] (code/additional information)

Status: optional field

Definition: Additional coded instructions (for the particular transaction) for the

bank, where the debited account is opened.

Usage rules in Hal E-Bank:

In <u>DPS/PPD payments</u> the field is used for urgent transactions:

:23E:URGP



In <u>FPS/PPT transfers</u> this field is used for identification of counter-value amount transfers (the amount given is the amount of debiting). Counter-value amount transfers include the field:

:23E:OTHR/EQVAL

In <u>FPS/PPT payments</u> this field is used for statistics data. For each statistics item (maximum 8 items) two "23E fields" are filled out. The first field with code OTHR contains:

:23E:OTHR/SI/3!n/1!c/11d[/12n]

where variable data is the following (separated by "/" sign):

3!n = basic statistics code

1!c = sign of the amount (C = positive, D = negative amount)

= amount of the statistics line

12n = optional loan code

In the second field with code OTHR the description of statistics code is written (up to 27 characters) in the format:

:23E:OTHR/SO/27x

Example for one statistic item:

:23E:OTHR/SI/106/C/1235,

:23E:OTHR/SO/ADVANCE FOR GOODS

In <u>ICM payments</u> it is possible to use several "E23 fields" (in accordance with SWIFT rules). The possible codes to be used can be found in Hal E-Bank/Personal or Hal E-bank/Corporate dialog and may be dependent on the bank.

This field is used also to mark special order types in the following format:

:23E:OTHR/PAYTYP/3!c

where 3!c denotes the order type code. The special order types are defined in paragraph 3.2.

3.1.9 Field 32B: Currency and Transaction Amount

Format: 3!a15d (ISO 4217 alpha-3 currency code/amount)

The integer of the amount must contain at least one position. Decimal comma is mandatory and is included in maximum length. Number of



positions after the comma may not exceed the maximum length for

the currency.

Status: mandatory field

Definition: Amount and currency of the transaction

Usage rules in Hal E-Bank:

In <u>all payments except in counter-value PPF/PPT transfers</u> this field is used in accordance with SWIFT rules and represents the amount credited the beneficiary when the ordering party is covering the charges. If the charges are split or they are paid by the beneficiary the amount is accordingly reduced (see also field 71A).

In <u>counter-value PPF/PPT transfers</u> this field contains the crediting currency, while the amount (given only to fulfill the SWIFT syntax requirements) is the amount of coverage / debiting (see also fields 33B, 36 and 23E).

3.1.10 Field 56a: Intermediary

Format: option A

[/34x] (identifier = account or clearing code)

4!a2!a2!c[3!c] (BIC)

option C

/34x (clearing code)

option D

[/34x] (account or clearing code)

4*35 (name and address)

If the first line starts with "/", the account is given in the line. If the first line begins with "//", then country code and bank clearing code

are givenin the line.

Status: optional

Definition: Intermediary bank in case the transaction cannot be performed

directly between the bank of the ordering customer and the bank of

the receiver.

Usage rules in Hal E-bank:

In payments between domestic banks (<u>DPS/PPD payments</u> and <u>FPS/PPT transfers</u>) this field has no meaning.

In FPS/PPT payments options A and D are allowed.

In ICM payments options A, C and D are allowed.



3.1.11 Field 57a: Account with Institution

Format: option A

[/34x]

4!a2!a2!c[3!c] (BIC)

option C

/34x (clearing code)

option D

[/34x] (account or clearing code)

4*35 (name and address)

If the first line starts with "/", the account is given in the line. If the first line begins with "//", then country code and bank clearing code

are givenin the line.

Status: conditionally mandatory according to table:

Field 56a	Field 57a
Existing	Mandatory
Not existing	Optional

Definition: Information on the bank of the requesting customer, when the MT101

receiver is not also holding the debiting account

Usage rules in Hal E-Bank:

For <u>DPS/PPD payments</u> this field has no meaning.

In <u>FPS/PPT transfers</u> the field is mandatory, when debiting account is not the transaction (TRR) account (see field 59 description) which has BBAN or IBAN structure.

In FPS/PPT payments options A and D are allowed.

In ICM payments options A, C and D are allowed.

3.1.12 Field 59: Beneficiary

Format: [/34x] (account)

4*35 (name and address)

Status: mandatory field

Definition: Beneficiary data (name, address and account)

Usage rules in Hal E-Bank:

Since data in Hal E-Bank is additionally structured, the beneficiary information (name and address) as well as the optional crediting account must be presented in the following way:



Format	M/O	Content and form		
/34x	M/O	The account depends on DPS/PPD payment: FPS/PPT payment: FPS/PPT transfer: ICM payment:	the payment order type: mandatory TRR account in BBAN or IBAN format optional general bank account, usually opened in a bank abroad mandatory general bank account or TRR account (IBAN/BBAN format), opened in a domestic bank optional general bank account, usually opened in a bank abroad	
35x	М	Name		
35x	М	Address		
35x	0	City		
2!a[-32a]	M/O	Country where: 2!a - ISO 3155 alpha-2 country code of the beneficiary 32a - optional country name of the beneficiary Country is mandatory in all <u>FPS/PPT payments</u> and optional in all other payments.		

Table 3: Field 59 structure

Example of FPS/PPT payment (contains optional account and all other field lines):

	,
:59:/2075 3800 0048 71	
SETEC	OY
P.O. BOX 31	
VANTAA	
FI-FINLAND	

3.1.13 Field 70: Remittance Information

Format: 4*35

Status: mandatory field

Definition: Information about the payment from the payer to the receiver

Usage rules in Hal E-Bank:

The field is mandatory and structured in the following way:

Format	M/O	Content and form		
/ROC/30x O		Payer's reference according to SWIFT rules (ROC) or		
or		domestic payments processing rules (SIO).		
/SIO/2!n/13n[-12n[-12n]]		SIO marks domestic payments system rules, where:		
		2!n = payment reference model		
		13n[-12n[-12n]] = reference ⁵		
/IPI/2!n18x ⁶	0	Receiver's reference according to SWIFT rules (IPI, RFB or		

⁵ Reference is given in standard format with one, two or three pieces of data (P1-P2-P3). Data is separated with the hyphen "-". The length of the first piece of data is up to 13 digits, while the other two pieces of data are limited to 12 digits; all three data together don't exceed 20 digits, regardless of the number of used hyphens (one or two).



Format	M/O	Content and form
/RFB/18x		INV) or domestic payments processing rules (SIB).
/INV/30x		SIB marks domestic payments, where:
or		2!n = payment reference model
/SIB/2!n/13n[-12n[-12n]]		13n[-12n[-12n]] = reference
35x	М	Details of payment (one line is mandatory, the other is
[3*35x]		optional, where total number of lines in the field does not
		exceed 4)

Table 4: Field 70 structure

The table above is valid for <u>DPS/PPD payments</u>, <u>FPS/PPT transfers</u>, <u>FPS/PPT payments</u> and ICM payments. When importing data, certain references from this field are transferred in specially designated structured fields of the payment order.

The example of a <u>DPS/PPD payment</u> (with domestic receiver's reference according to model 05 and one line with details of payment):

:70:/SIB/05/1100157

Payment of December invoice

The example of a <u>FPS/PPT payment</u> (contains domestic payer's reference according to model 00, receiver's reference and one line with details of payment):

:70:/SIO/00/1330

/INV/INVOICE NR. 123431

Smart cards

3.1.14 Field 77B: Regulatory Reporting

Format: 3*35

Status: optional

Definition: Statistical information, requested in payer's or receiver's country

Usage rules in Hal E-Bank:

In <u>DPS/PPD payments</u> the field is mandatory and contains so called transaction type, structured in the following way:

/SI/1!a4!n

where:

1!a = group of transaction type (A, S, B, F or M)

⁶ IPI model contains first a check according to model 97 and then reference from numbers and restricted letters (<u>www.ecbs.org</u>).



4!n = number of transaction type (according to the register)

Example (sponsorship expenditure):

:77B:/SI/A3012

In FPS/PPT transfers the field is not used.

In <u>FPS/PPT payments</u> the field is mandatory and contains 3 lines, structured in the following way:

/SI/1!n/1!n //7!n //7!n

where:

1!n = Bank of Slovenia (BS) instrument (values 1-8)

1!n = way of payment (0 = check, 1 = money transfer, 2 = daily allowance)

7!n = payer's register number

7!n = payer's bank register number

Example (BS instrument equals 1 = payments; Way of payment equals 1 = money transfer)

:77B:/SI/1/1 //5556511 //5860571

In ICM payments the field is used in accordance with the SWIFT rules.

3.1.15 Field 33B: Original Currency and Amount

Format: 3!a15d (ISO 4217 alpha-3 currency code/amount)

The integer of the amount must contain at least one position. Decimal comma is mandatory and is included in maximum length. Number of positions after the comma may not exceed the maximum length for

the currency.

Status: conditionally mandatory according to table:

Field 36	Field 33B
Existing	Mandatory
Not existing	Not allowed

Definition: Information on original currency and amount defined by the payer

Usage rules in Hal E-Bank:



The field is not used in <u>DPS/PPD payments</u>.

In <u>counter-value FPS/PPT transfers</u> the field is mandatory and contains coverage currency and amount (debiting currency and amount; the debiting currency is different from the transaction currency in the field 32B). The appropriate counter-value amount (with consideration of charges) is transferred to the beneficiary in the currency defined in the field 32B.

In <u>normal FPS/PPT transfers</u> and <u>FPS/PPT payments</u> this fields contains the coverage currency only in case, when it differs from the transaction currency in the field 32B. If the field is presented, then it contains the amount equal to the transaction amount in field 32B.

In <u>ICM payments</u> this field is used in accordance with SWIFT rules.

3.1.16 Field 71A: Details of Charges

Format: 3!a (charges payer details - BEN, OUR or SHA)

Status: mandatory

Definition: Defines, who bears the charges of transaction

Usage rules in Hal E-Bank:

In DPS/PPD payments the value is fixed to SHA (shared).

In FPS/PPT transfers the value is fixed to SHA (shared).

In <u>FPS/PPT payments</u> and <u>ICM payments</u> the field is used according to the SWIFT rules:

BEN - transaction charges are borne by the beneficiary

• OUR - transaction charges are borne by the payer

SHA - transaction charges are shared

3.1.17 Field 25A: Charges Account

Format: /34x (account)

Status: optional field

Definition: Contains optional account number, which should be debited for

transaction charges

Usage rules in Hal E-Bank:

Used only in <u>ICM payments</u> (in accordance with SWIFT rules).

In all other orders this field is not used.

3.1.18 Field 36: Exchange Rate

Format: 12d (exchange rate)



The integer of the exchange rate must contain at least one position. Decimal comma is mandatory and is included in maximum length.

Status: conditionally mandatory according to table:

Field 33B	Field 36
Existing	Mandatory
Not existing	Not allowed

Definition: Exchange rate used for conversion between original amount (33B) and

transaction amount (32B).

Usage rules in Hal E-Bank:

The field is not used in <u>DPS/PPD payments</u>.

In <u>counter-value FPS/PPT transfers</u> it is mandatory and contains a fixed value "1,0".

In <u>normal FPS/PPT transfers</u> and <u>FPS/PPT payments</u> the field is mandatory when the field 33B exists - it contains fixed value "1,0" to satisfy SWIFT syntax rules (see also descriptions of 32B and 33B).

In ICM payments this field is used in accordance with SWIFT rules.

3.2 Special Payment Order Types

3.2.1 Preprinted Payment Slip

Preprinted payment slip is a special type of domestic payment. It can be distinguished from an ordinary domestic payment if it contains the field marking special order type (SDP - Special Domestic Payment).

:23E:OTHR/PAYTYP/SDP

In the preprinted payment slip the model 12 is used for the receiver's reference.



4 Customer Statement - Message MT940

The bank sends to customers the statement containing posted entries (message MT940), usually once a day. The statement is valid for specific account and currency. The table below depicts field structure in the text of MT940 message.

Status	Field	Description	Format / Options	
M	20	Transaction reference number	16x	
M	25	Account Identification	35x	
M	28C	Statement number/Sequence number	5n[/5n]	
M	60a	Opening balance	F or M	
→ be	→ beginning of repeated transaction sequence			
0	61	Statement line	* (see description)	
0	86	Information to account owner	6*65x	
< en	end of repeated transaction sequence			
M	62a	Closing balance - Booked funds	F or M	
0	64	Closing available balance - available funds	1!a6!n3!a15d	
0	86	Information to account owner 6*65x		

Table 5: MT940 message format

4.1 Field Description

4.1.1 Field 20: Transaction Reference Number

Format: 16x

Status: mandatory field

Definition: Reference, which uniquely identifies this MT940 message

Usage rules in Hal E-bank: Hal E-bank inserts the Hal E-Bank statement identifier.

4.1.2 Field 25: Account Identification

Format: 34x

Status: mandatory field

Definition: Account, to which this bank statement refers

Usage rules in Hal E-Bank:

This field contains the account bank number, to which the statement refers:

- for domestic accounts (FPS/PPD) it holds transaction account (BBAN or IBAN)
- for foreign accounts (FPS/PPT) it usually holds transaction account (BBAN or IBAN)
- for accounts abroad it hold general account number, held with bank abroad.

⁷ Account holder bank is stated in the message header.



4.1.3 Field 28C: Statement Number / Sequence Number

Format: 5n[/5n] (statement number/sequence number)

Status: mandatory field

Definition: Statement and sequence number in the MT940 statement, which is

composed of several MT940 messages

Usage rules in Hal E-Bank:

The field is used in accordance with the described format and SWIFT rules.

4.1.4 Field 60a: Opening Balance

Format: 1!a6!n3!a15d (D/C sign) (date) (currency) (amount)

Status: mandatory field

Definition: Defines opening balance (amount and currency) as well as the value

date.

The field must correspond to the field 62a (closing balance) of the previous MT940 message for the same account and currency:

- The first message of the statement includes the field 60F (the first opening balance), which equals the closing balance of the previous statement (62F).
- Other messages contain the field 60M (intermediary "opening" balance), which equals intermediary "closing" balance (62M) of the previous statement.

Usage rules in Hal E-bank:

If closing balance of the previous statement is not in Hal E-bank system, "0" is given in the field 60F.

4.1.5 Field 61a: Statement Line

Format: 6!n4!n2a15d1!a3!c16x[//16x]

[34x]

field	format	meaning
1	6!n	value date (YYMMDD)
2	4!n	posting date (MMDD)
3	2a	posting key (D = debit; C= credit;
		RD = reversal debit; RC = reversal credit)
5	15d	amount
6	1!a3!c	transaction type identifier
7	16x[//16x]	references
8	[34x]	extra information



Status: mandatory field

Definition: describes each transaction debiting or crediting the account

Usage rules in Hal E-Bank:

SWIFT rules are applied to the field, where string "NMSC" is used for transaction type identifier (field 6); the table below applies for fields 7 and 8. The fields 7 and 8 are a bit specific for DPS/PPD and FPS/PPT channels, whereas for ICM channel they follow SWIFT rules.

Channel	Format	Description
DPS/PPD	16x[//16x]	Bank reference
FPS/PPT	[16x]	Unique payment order number - given only when the transaction refers
		to a payment order, which was issued through Hal E-bank
ICM	16x[//16x]	Reference for the account owner and bank reference
	[34x]	Additional information

Table 6: Field 61 structure

4.1.6 Field 86: Information to Account Owner

Format: 6*65x

Status: optional field

Definition: Contains extra information about the transaction, stated in the field

61, intended for the message receiver

Usage rules in Hal E-Bank:

Field 86 contains the following data (max 6 lines with 65 characters):

Channel	Format	Description
PPD,	[/3!c/30x]	Optional payer's reference; code SIO or ROC
PPT,	[/3!c/30x]	Optional receiver's reference; code SIB, RFB, INV or IPI
ICM	[/ACC/34x]	Optional partner's account - in case of inflow this is the payer's
		account, in case of outflow it is receiver's account
	[/PAR/60x	Partner optional data (max 123 characters): name, address, city,
	//63x]	country (if necessary in 2 lines) - the name is separated by two commas,
		all other data with one comma
	[6-65x]	Optional details of the payments (1-6 lines)

Table 7: Field 86 structure

Example of FPS/PPT payment (contains payer's and receiver's reference, one partner data line and a line with details of payments):

:86:/SIO/00/1330

/INV/INVOICE NR. 123431

/PAR/SETEC OY, P.O. BOX 31, VANTAA, FI-FINLAND

Smart cards



4.1.7 Field 62a: Closing Balance

Format: 1!a6!n3!a15d (D/C sign) (date) (currency) (amount)

Status: mandatory field

Definition: Defines the closing balance (amount and currency) as well as the

value date.

The field corresponds to the field 60a (opening balance) of the next MT940 message for the same account and currency:

- The last message of the statement includes the field 62F (last closing balance), which equals the opening balance of the next statement (60F);
- Other messages contain field 62M (intermediary "closing" balance), which equals intermediary "opening" balance (60M) of the next statement.

Usage rules in Hal E-Bank:

In accordance with SWIFT rules.

4.1.8 Field 64: Available Funds

Format: 1!a6!n3!a15d (D/C sign) (date) (currency) (amount)

Status: optional field

Definition: Defines funds, available to the account owner (in case of positive

balance) or funds owed (in case of negative balance).

Usage rules in Hal E-Bank:

In DPS/PPD channel and FPS/PPT channel this field is not used.

In <u>ICM channel</u> the field is filled with the available funds amount in accordance with SWIFT rules, if this data is available.

4.1.9 Field 86: Information to Account Owner

Format: 6*65x

Status: optional field

Definition: Defines additional information regarding the transaction, stated in the

field 61 and are intended for the message recipient

Usage rules in Hal E-Bank:

In DPS/PPD channel and FPS/PPT channel this field is not used.

In ICM channel this field used according to SWIFT rules.



5 Balance Report - Message MT941

The bank sends to its clients report on balance on their account (message MT941) few times per day. The report is valid for specific account and currency.

The table below shows a summary of fields in the text of MT941 message (the table also contains original SWIFT descriptions of fields):

Status	Field	Description	Format / Options
М	20	Transaction Reference Number	16x
М	25	Account Identification	35x
М	28C	Statement Number/Sequence Number	5n[/2n]
0	13D	Date/Time Indication	6!n4!n1!x4!n
0	60F	Opening Balance	1!a6!n3!a15d
М	62F	Closing Balance - Booked Funds	1!a6!n3!a15d
0	64	Closing Available Balance - Available Funds	1!a6!n3!a15d

Table 8: MT941 message format

5.1 Field Description

5.1.1 Field 20: Transaction Reference Number

Format: 16x

Status: mandatory field

Definition: Reference, which uniquely identifies the message sent

Usage rules in Hal E-Bank:

In this field Hal E-Bank writes in date, hour and second of exporting.

5.1.2 Field 25: Account Identification

Format: 34x

Status: mandatory field

Definition: Account for which balance report is created

Usage rules in Hal E-Bank:

The comment is the same as comment for description of field 25 in MT940 message.



5.1.3 Field 28C: Statement Number / Sequence Number

Format: 5n[/2n] (section number)(sequence number of message)

Status: mandatory field

Definition: Message sequence number

Usage rules in Hal E-Bank:

The value of this filed is fixed to »1«.

5.1.4 Field 13D: Date / Time Indication

Format: 6!n4!n1!x4!n (Date)(Time)(Predznak)(Zone)

Status: Optional field

Definition: This field defines date, time and time zone in which the message was

created.

Usage rules in Hal E-Bank:

Date and time, for which the statement is valid, are written in this field during export time. Time zone is given only because of compatibility with the SWIFT rules and is always marked with fixed string »+0000« (does not represent actual data).

5.1.5 Field 60F: Opening Balance

Format: 1!a6!n3!a15d (D/C Sign) (Date) (Currency)(Amount)

Status: optional field

Definition: Defines opening balance (currency and amount) and date.

Usage rules in Hal E-Bank:

It contains the final/closing balance of the last statement.

5.1.6 Field 62F: Closing Balance

Format: 1!a6!n3!a15d (D/C Sign) (Date) (Currency)(Amount)

Status: mandatory field

Definition: Defines closing balance (currency and amount) and date.

Usage rules in Hal E-Bank:

It contains balance which was on account with the bank in a moment designated with the value in the field 13D. If the field 13D doesn't exist, that is the last balance reported by the bank.



5.1.7 Field 64: Closing Available Balance

Format: 1!a6!n3!a15d (D/C Sign) (Date) (Currency)(Amount)

Status: optional field

Definition: This field states funds, which are at disposal to the account's holder (in case

of positive balance) or funds which are subject to negative interest rates (in

case of negative balance).

Usage rules in Hal E-Bank:

This field is not used in PPD channel and PPT channel.

In ICM channel, in accordance with SWIFT rules, available balance is given if the data is reported by the bank.



6 Interim Transactions Report - Message MT942

The bank sends to the customers the interim transaction report (message MT942) usually when the transactions are posted to the account. In Hal E-Bank the same message is used also for rejected or cancelled orders.

The following table depicts the field structure in the text of MT942 message.

Status	Field	Description	Format / Options
М	20	Transaction reference number	16x
М	25	Account identification	35x
M	28C	Statement number / Sequence number	5n[/5n]
M	34F	Floor limit indication	3!a15d
M 13D Date / Time indication		Date / Time indication	6!n4!n1!x4!n
> beginning of repeated sequence on transactions			
М	61	Statement line	*
M 86 Information to account owner 6*65x		6*65x	
< end of repeated sequence on transactions			

Table 9: MT942 message format

6.1 Field Description

6.1.1 Field 20: Transaction Reference Number

Format: 16x

Status: mandatory field

Definition: Reference, which uniquely identifies the message sent

Usage rules in Hal E-Bank:

Hal E-Bank fills this field with date, hour and second of the export.

6.1.2 Field 25: Account Identification

Format: 34x

Status: mandatory

Definition: Account, for which the statement has been created

Usage rules in Hal E-Bank:

The comment equals the comment in the description of field 25 in message MT40.



6.1.3 Field 28C: Statement Number / Sequence Number

Format: 5n[/5n]

Status: mandatory field

Definition: Statement number and sequence number of the message in the statement,

which links several MT942 messages into one uniform statement from

content point of view.

Usage rules in Hal E-Bank:

In the first part of the field, the statement number is filled-in, which is always 1.

6.1.4 Field 34F: Floor Limit Indication

Format: 3!a15d (currency) (amount)

Status: mandatory field

Definition: The field defines the floor limit of the transactions, which are defined in

field 61a (transaction data) of the message.

Usage rules in Hal E-Bank:

In order to provide for compatibility with SWIFT rules, Hal E-Bank writes the following values into this field:

- currency = currency of the reported transactions
- floor limit = fixed at "0"

6.1.5 Field 13D: Date / Time Indication

Format: 6!n4!n1!x4!n (date) (time) (+/- sign) (zone)

Status: mandatory field

Definition: The field defines the date, time and time zone, in which the message was

created.

Usage rules in Hal E-Bank:

At export this field is filled with date and time of export. The time zone is defined only because of compatibility with the SWIFT rules and is always marked with fixed string "+0000" (does not represent actual data).

6.1.6 Field 61a: Statement Line

Format: 6!n4!n2a15d1!a3!c16x[//16x]

[34x]

field	format	meaning
1	6!n	value date (YYMMDD)
2	4!n	posting date (MMDD)
3	2a	posting key (D = debit; C= credit;
		RD = reversal debit: RC = reversal credit)



5 15d amount

6 1!a3!c transaction type identifier

7 16x[//16x] references

8 [34x] extra information

Status: mandatory field

Definition: Describes each transaction debiting or crediting the account

Usage rules in Hal E-Bank:

SWIFT rules are applied to the field, where string "NMSC" is used for transaction type identifier (field 6); the table below applies for fields 7 and 8. The fields 7 and 8 are a bit specific for DPS/PPD and FPS/PPT channels, whereas for ICM channel they follow SWIFT rules. The table also shows how rejected (rejected or cancelled) payment order requests are marked.

Channel	Format	Description
DPS/PPD	16x[//16x]	Bank reference
FPS/PPT	[16x] [//REJT]	Unique payment order number - given only when the transaction
		refers to a payment order, which was issued through Hal E-bank, and
		eventual code for rejected payment
ICM	16x[//16x]	Reference for the account owner and bank reference
	[34x] [//REJT]	Additional information and eventual code for rejected payment

Table 10: Field 61 structure

6.1.7 Field 86: Information to Account Owner

Format: 6*65x

Status: optional field

Definition: Defines additional information regarding the transaction, stated in field 61

and are intended for the message recipient

Usage rules in Hal E-Bank:

The comment is the same as the comment of the equivalent field 86 in message MT940.



7 Other Characteristics of SWIFT Messages

7.1 Message Format

7.1.1 MT101 Format

Each MT101 must be provided in input SWIFT format. In the file it starts in a new line (previous message ends with the combination <CR><LF>.

According to SWIFT standard there are different message headers before the message text which contains payment details and starts with "{4:<CLRF>" and ends with "<CLRF>-}. Since these headers do not have any meaning in the context of Hal E-Bank system, it is enough to say that every MT101 message must contain a fixed string before the message text, as follows⁸:

{1:F01HALCOMXXAXXX0000000000}{2:I101HALCOMXXXXXXN}

The example of an entire MT101 message (containing 1 order) - MT101 must not exceed 10.000 characters according to the SWIFT standards (headers are bolded):

$\{1: F01HALCOMXXAXXX0000000000\} \{2: I101HALCOMXXXXXXN\} \{4: I101HALCOMXXXXXXXN\} \}$

:20:GROUP1232

:28D:1/1

:50H:/SI6020100000020045

SENDER NAME

SENDER ADDRESS

:30:050602

:21:TR050602-12

:32B:EUR10000,

:59:/100000666666679

BENEFICIARY NAME

BENEFICIARY ADDRESS

BENEFICIARY CITY

:70:/SIB/05/1100157

INVOICE DECEMBER 2005

:77B:/SI/A3012

:71A:SHA

-}

⁸ In SWIFT standard the first header contains sender's BIC code - 11 digits, where in position 10 letter A is inserted (HALCOMXXAXXX above); the second header contains receiver's BIC code - 11 digits, where in position 10 letter X is inserted (HALCOMXXXXXX above).



7.1.2 MT940, MT941 and MT942 Format

Each MT940, MT941 and MT942 message must be provided in output SWIFT format. In the file it starts in a new line (previous message ends with combination <CR><LF>).

According to the SWIFT standard there are different message headers and footers before the message text (which contains payment details and starts with "{4:<CLRF>" and ends with "<CLRF>-}).

Since these headers and footers have only minimal meaning in the context of Hal E-Bank system (they contain BIC code of the sending bank), it is enough to say that every MT940/MT941/MT942 message must contain a fixed string:

1) before the message text (actual string does not contain a new line)

{1:F21HALCOMAXXX000000000}{4:{177:061212359}{451:0}}{1:F01HALCOMAXXX0000000000}{2:O 9402359061231BICBCOS1ABRA0000000000612312359N}

where only the bolded parts are important:

defines message type (940 for MT940 and 942 for MT942)

BICBCOS1ABRA contains BIC code⁹ of the bank, holding the account defined in

the field 25; this data is important only for payments from

abroad

2) after the message text

 $\{5: \{MAC: 00000000\} \{PAC: 000000000\} \{CHK: 000000000000\} \} \\ \{S: \{SAC: \} \{FAC: \} \{COP: P\} \} \}$

The example of an entire MT940 message (containing the third and the last message of the statement No. 112 in DPS/PPD channel) - MT940 must not exceed 2.000 characters; headers and footers are bolded; in the actual file there is no new line between the first and the second row):

 $\{1:F21HALCOMAXXX0000000000\} \{4:\{177:061212359\} \{451:0\}\} \{1:F01HALCOMAXXX0000000000\} \{2:O9402359061231HALCOMXXAXXX0000000000612312359N\} \{4:D61212359N\} \{4:D6121235N\} \{4:D612123$

:20:17BF6HJS3SKV9M9X

:25:SI56020100000020045

:28C:112/3

:60M:C050921SIT1707572.40

:61:0509210921C14000.00NMSC1127295443

17BF6HJS364LH5DU

⁹ The letter given at the position 10 of BIC should be excluded to get the actual 11 character BIC code of the bank BICBCOS1BRA;



:86:/SIO/00/14-08-2001 /PAR/HALCOM INFORMATIKA D.O.O.,,,LJUBLJANA KOMPENZACIJA

:62F:C050921SIT1707572,40

 $- \} \{5: \{MAC: 00000000\} \{PAC: 000000000\} \{CHK: 00000000000\} \} \{S: \{SAC: \} \{FAC: \} \{COP: P\} \} \}$



8 Characteristics of Files in Hal E-Bank System

Files in Hal E-Bank systems have the following in common:

- In a separate file there can be several independent messages, which however must be of the same type (MT101, MT940 or MT942) and must refer to the same account:
 - o In MT101 messages the optional bank in field 52A and debited account in field 50H are the same in all messages in the file;
 - o In MT940/MT941/MT942 messages all messages of the same sending bank refer to the same account in field 25.
- In MT101 files there must be orders of the same type (only domestic payments, only payments abroad, only transfers abroad or only payments from abroad).
- In the files with payment statements there can be more MT940 messages referring to the same statement (same sending bank, same account in field 25, same currency in field 60a, 61 and 62a, same value date in field 60a and 62a and same statement number in field 28C). In such a case all messages are provided in the same file and follow each other according to ascending sequence number in field 28C.
- In one file with payment statements there can be more statements, referring to the same account (field 25), but refer to different value dates or currencies.
- In one file with interim transactions, there can be statements referring to the same account (same sending bank and same account in field 25), which can however be valid for different value dates and/or different currencies.