Myanmar Automated CargoClearance System EDI Specifications

September 2015

Myanmar Customs

Table of contents

[DRAFT] Appendices

[MACCS-EDI message – EDIFACT message common]

[EDIFACT message relation]

1. Data processing mode and Connection type

1. Data processing mode and Connection type

1.1 Data processing mode

MACCS uses interactive processing mode and delayed processingmode as the data processing mode. Figure1-1-1 shows the image of those modes.

Interactive processing mode

Service 3	Service 2	Service 1

Send 1st message

Service1

Service 1

Receive 1st message

Service 3	Service 2

Send 2nd message

Service 2

Service 2

Receive 2nd message

Send 3rd message

Service 3

Service 3

Service 3

Receive 3rd message

User

MACCS Center server

Send the processing request for each message, and the processing result for each message will be sent from the center.

Delayed processing mode

Service 3	Service 2	Service 1

Sent 3 messages

Service 1
Service 2
Service 3

Processing on the side of center

Request to fetch

Service 3
Service 2
Service 1

Receive 3 messages

User

MACCS Center server

It is possible to handle several messages and send them. After a fixed period, the user needs to request to fetch the processing result from server.

Figure 1-1-1Interactive processing mode and Delayed processing mode

1.1.1 Interactive processing mode

1.1.1.1 Interactive processing mode

It is the processing mode to connect User system to MACCS center server via TCP/IP on the Network and Transport layers and via HTTPS on the upper layer.

Messages are transmitted one by one.
Hereinafter, this type of processing is referred to as the "interactive processing mode".

Private terminal software for MACCS, which is installed in user's PC, DOES COMPLY with the "Interactive processing mode".

1.1.2 Delayed processing mode

1.1.2.1 Delayed processing mode (using User system)

It is the processing mode to connect User system to MACCS center server via TCP/IP on the Network and Transport layers and via HTTPSON THE UPPER LAYER.

Processing result will be retrieved from the MACCS center server after a certain period of time.

Overview about data processing mode in MACCS is displayed in Figure 1-1-2 as below.
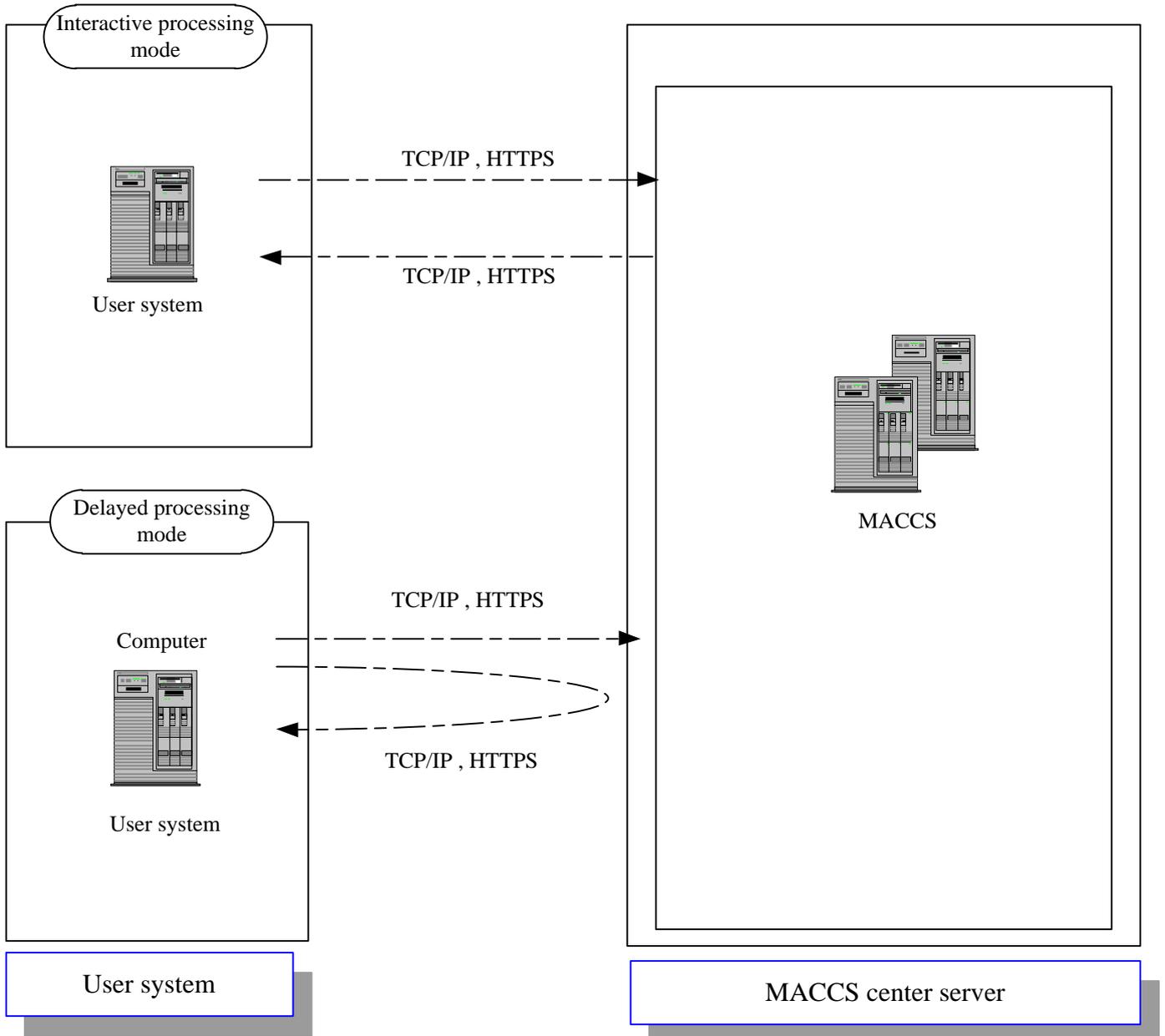
Figure 1-1-2Overview about data processing mode in MACCS

1.2 Connection type

The connection type between MACCS center server and User system has two types: [Private terminal software], and [User system]. Those connection types are applied to Internet. Figure 1-2-1 shows the image of Connection type.

1.2.1 Private terminal software
In this mode, MACCS center server and the user's PC are connected and use the interactive processing modeas a data transmission environment.

It uses Private terminal software - the package software for PC supplied by Myanmar Customs.

Server authentication will be carried out between user's PC and MACCScenter server. As for the transmission, it uses SSL that is the de facto standard to encrypt HTTP to carry out the encryption.

1.2.2 User system
In this mode, MACCS center server and the User system are connected and use the interactive processing mode or mail processing mode as a data transmission environment.

Server authentication will be carried out between User system and MACCScenter server. As for the transmission, it uses SSL that is the de facto standard to encrypt HTTP to carry out the encryption.
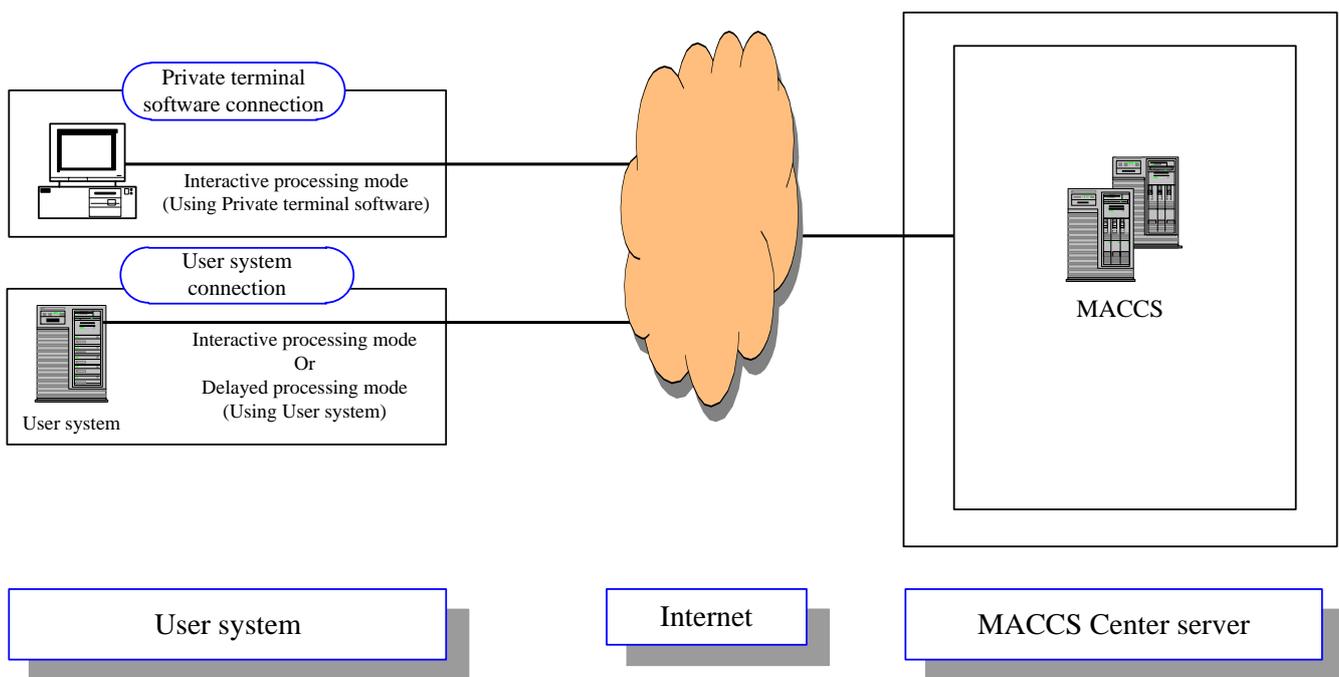
Figure 1-2-1   Connection type

1.3 The relation between Data processing modesand Connection types

The relation between Data processing mode and Connection type in MACCS is displayed in Figure 1-3-1 as below.

Figure 1-3-1Relation between Data processing modesand Connection types

Processing mode	Connection type	Message format	Access line
Interactive processing	Private terminal software	MACCS-EDI message (Chapter 3.1) Attachment file transmission message (Chapter 3.2.2)	Internet
	User system		
Delayed processing	User system	EDIFACT message (Chapter 3.2.1)	

2. Network configuration

2. Network configuration

MACCS users are able to send / receive messages through Internet.

3. Message structure and format

3. Message structure and format

In MACCS, messages are transmitted in the MACCS-EDI standard format (MACCS-EDI message) or the MIME (Multipurpose Internet Mail Extensions) format. MACCS-EDI messages are applicable to all transaction processes prescribed in process specifications and management documents.

Since MACCS will adopt send/receive messages through internet, we will follow RFC2822 (Internet Message Format), which defines limit of characters per line as,(1) "cannot handle more than 998 characters on a line" and (2) "do not accept messages containing morethan 1000 character including the CR and LF per line".

(1) 998 characters on a line and (2) 1000 charactersincluding the CR and LF per line in RFC2822 is based on ASCII characters, which is equivalent to 998 bytes and 1000 bytes alpha numeric and sign characters. Therefore, in case of Myanmar character in MACCS, it is equivalent to (1) 332 Myanmarcharacters on a line and (2) 334 Myanmar characters including the CR and LF per line. It is because MACCS defines one Myanmar character as three bytes. Please refer Table 3-1-3 for details.

3.1 MACCS-EDI message

3.1.1 MACCS-EDI message structure

The MACCS-EDI message structure implements the variable-length delimiter format. This structure takes dual advantages of the variable-length format, which is easily implemented in systems, and of the variable-length format, which makes system designs flexible.

A CRLF character set is used as a delimiter. "CR" is hex '0D' and "LF" is hex '0A'. See "3.5 Code system" for details.

Also note that in this document, <CRLF> denotes a CRLF character set, and ⌴denotes single-byte space.

3.1.2 MACCS-EDI message format

A MACCS-EDI message transmitted between a user system and the MACCS center server consists of the "input (output) common segment" at the header part of the message and the "servicespecific segment" at the data part.

Maximum allowable transmission size of a MACCS-EDI message is 500,000 bytes of data.

Figure 3-1-1 describes the MACCS-EDI message format.
In actual transmission process, additional segments such as a protocol header are added to a MACCS-EDI message.
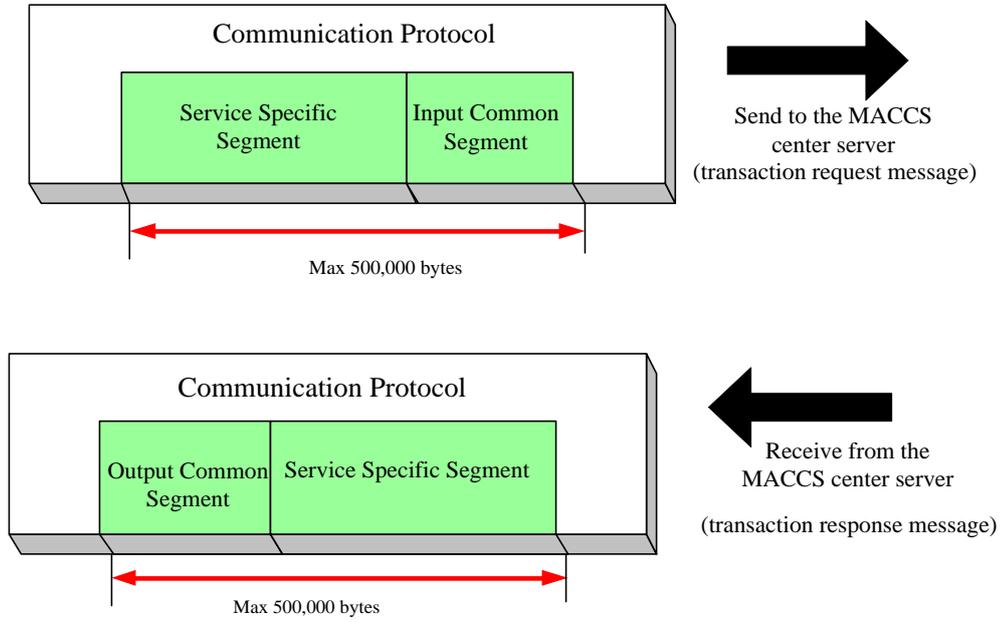
Figure 3-1-1MACCS-EDI message format

3.1.2.1 Input common segment (transaction request message)

The total size of the input common segment is fixed-length of 398 bytes.
Note that the actual size including a two-byte delimiter becomes 400 bytes.
Table 3-1-1describe elements of the input common segment.

Table 3-1-1 Input common segment

(For the interactive processing and delayedprocessing mode)

No	Element		Length	Description	Sample Setting
1	Transaction Control Code		3	Set a transaction control code.	SS ␣ (For the interactive processing) ES ␣ (For delayed processing) (␣ denotes single-byte space.)
2	Service code (Service ID)		5	Set a service code (Service ID) for identifying the process. In case of delayed processing mode, Set a service code (Service ID) as "EDIF ␣".	IDA ␣ ␣ (import declaration registration) EDIF ␣ (in case of delayed processing mode)
3	(Reserved area)		21	Always fill with spaces. (*1)	(Always spaces)
4	User ID	User Code	5	Set a user code, user ID and password for identifying a user.	10001
5		ID Number	3		001
6	Password		8		******** (Set password that are assigned from Myanmar Customs.)
7	Terminal ID		6	Set a terminal ID that made this request.	BC001C
8	(Reserved area)		168	Always fill with spaces. (*1)	(Always spaces)
9	Message Tag (*2)		26	Set information for matching a transaction request with a response message.	The sender assigns a unique number. When using Private terminal software, MessageTag data is automatically set.
10	(Reserved area)		8	Always fill with spaces. (*1)	(Always spaces)
11	Input Message ID (*2)		10	A value in this element is transferred to a transaction response message as it is.	The sender assignsany character or key information that sender would like to set..
12	Index Tag (*2)		100	A value in this element is used in case; for example, a series of response messages need to be referred to because a query result is transmitted in multiple messages (sequential transaction processing).	(If sequential transaction processing is taken place, set a value as specified in Index Tag of the returned transaction response message.)
13	(Reserved area)		1	Always fill with a space. (*1)	(Always space)
14	System ID		1	Set a value for identifying a message destination when communicating with other government or agency systems For MACCS process, set 1.	MACCS:1
15	(Reserved area)		27	Always fill with spaces. (*1)	(Always spaces) When using Private terminal software provided by Myanmar Customs, first 3-digits are reserved for "Display Code".
16	Message Length		6	A value indicates the size in bytes of the MACCS-EDI message. (Including the input common segment) The center computer acknowledges the end of the message with this value. Size of attachment files is not included.	000400〜500000 (Max 500,000)
17	Total		398		

(*1) The reserved areas are used to control system.

(*2) See "3.4 Message control elements" for details on Message Tag, Input Message ID and Index Tag

3.1.2.2 Message structure

3.1.2.2.1 Structure of a transaction request message

Using a word processing or text editor tool, a text-format MACCS-EDI message (transaction request message) can be displayed as follows. (Protocol header and trailer fields are omitted from the description.)

XXXXXXXXXX.....XXX<CRLF>	input common segment
XXXX...XXX<CRLF>	servicespecific segment1
<CRLF>	servicespecific segment2 (in case of empty data)
XXXX...XXX<CRLF>	servicespecific segment3···
XXXX...XXX<CRLF>	servicespecific segment-n

1. If an empty data element exists between two non-empty data elements, which contain a non-null value, the empty data element is set ONLY with delimiter <CRLF>and transmitted. (See "(Reference 1) Examples of transaction request message" (Example 1) below.)
2. Spaces after the last non-empty data element should NOT be transmitted. (See "(Reference 1) Examples of transaction request message" (Example 2,3,4,5).)
3. If a negative number is stored, "-" is counted as a part of the significant digit.If a decimal number is stored, "." is counted as a part of the significant digit.

> ! When using Private terminal software provided by Myanmar Customs, MACCS-EDI messages are automatically generated. Therefore, users do not need to manage the message structure.

3.1.2.2.2 Structure of a transaction response message

Using a word processing or text editor tool, a text-format MACCS-EDI message (transaction response message) is displayed as follows. (Protocol header and trailer fields are omitted from the description.)

XXXXXXXXXX.....XXX\<CRLF>	output common segment
XXXX...XXX\<CRLF>	servicespecific segment1
\<CRLF>	servicespecific segment2 (in case of empty data)
XXXX...XXX\<CRLF>	servicespecific segment3···
XXXX...XXX\<CRLF>	servicespecific segment-n

1. If an empty data element exists between two non-empty data elements, the empty data element is set ONLYdelimiter \<CRLF>and transmitted. (See "(Reference 2) Examples of transaction response message" (Example 6).)

2. If only empty data elements follow after a non-empty data element, these empty elements are set ONLYdelimiter \<CRLF> and transmitted until the last element specified in the process specification. (See "(Reference 2) Examples of transaction response message" (Example 7, 8).)

3. If multiple empty repeat groups exist at the end of a message,the first repeat group isset ONLYdelimiter \<CRLF>and transmitted. (See "(Reference 2) Examples of transaction response message) (Example 9).).

4. If multiple repeat groups exist at the end of a message, empty elements in a repeat group are set ONLYdelimiter \<CRLF> and transmitted until the last element of the repeat group. (See "(Reference 2) Examples of transaction response message" (Example 10, 11).)

(Note) Concept of (1) "Common part", (2) "Detail part" and (3) "Repeat group"

APART FROM EDI, from Business domain point of view, BOTH transaction request message AND transaction response message consist of (1) "Common part", (2) "Detail part" and (3) Repeat group. These terminologies will be used in following reference(s);

(Reference 1) Examples of transaction request message (outbound from User system to MACCS)

(Reference 2) Examples of transaction response message (inbound from MACCS to User system)

- There is ONLY ONE (1) Common part in each message.
- Multiple (2) Detail part may exist in each message, depending on detail design of each business service in MACCS.
- Multiple (3) Repeat group may exist inside of both (1) and (2), depending on detail design of each business service in MACCS.

```
XXXXXXXXXX.....XXX<CRLF>  input or output common segment
XXXXX<CRLF>               service specific segment1
XXXXX<CRLF>               service specific segment2
XXXXX<CRLF>               service specific segment3
XXXXX<CRLF>               service specific segment4-[1]      (1) Common part
XXXXX<CRLF>               service specific segment4-[2](3) Repeat group
XXXXX<CRLF>               service specific segment4-[3]
XXXXX<CRLF>               service specific segment5

XXXXX<CRLF>               service specific segment01-6
XXXXX<CRLF>               service specific segment01-7
XXXXX<CRLF>               service specific segment01-8-[1]      (2)Detail part
XXXXX<CRLF>               service specific segment01-8-[2](3) Repeat group
XXXXX<CRLF>               service specific segment01-8-[3]
XXXXX<CRLF>               service specific segment01-9

XXXXX<CRLF>               service specific segment02-6
XXXXX<CRLF>               service specific segment02-7
XXXXX<CRLF>               service specific segment02-8-[1]      (2) Detail part
XXXXX<CRLF>               service specific segment02-8-[2](3) Repeat group
XXXXX<CRLF>               service specific segment02-8-[3]
XXXXX<CRLF>               service specific segment02-9
```

(Reference 1) Examples of transaction request message (outbound from User system to MACCS)

In this section, various patterns of MACCS-EDI messages (transaction request) are presented. Note that the input common segment is omitted from the following descriptions.

(Example 1: transaction request message) Element1, 2, 3, 4 are input elements and only element1 and 4 contain a value

If the size of element1 to 4 is 8, and a value in element1 is 'USA' and element4 is 'LA', a text-format MACCS-EDI message is displayed as follows on a word processing or text editor tool.
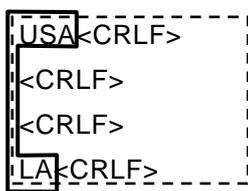
USA\<CRLF\>	servicespecific segment1
\<CRLF\>	servicespecific segment2(empty data)
\<CRLF\>	service specific segment3 (empty data)
LA\<CRLF\>	service specific segment4

Common part

(Note: ␣ denotes single-byte space)

(Note: denotes maximum input available characters)

(Note: denotes actual input characters in this case)

In the above case, element2 and 3, which are placed between non-empty elements, need to be set ONLY delimiters\<CRLF\>. Therefore, size of the message may vary with input data pattern.

? Question

If only element1 and 4 are not empty, why do element2 and 3 need to set delimiter \<CRLF\>?

Answer

It is because MACCS-EDI message structure implements the variable-length delimiter format. It is position of data element from beginning of the service specific segment that specify certain service specific segment.
If empty element2 and 3 are excluded from the message on transmission, the message becomes invalid, or a transaction error may occur because the server wrongly recognizes and processes a value in element4 as a value for element2.

(Example 2: transaction request message) Element1, 2, 3, 4 are input elements and only element1 and 3 contain a value

If the size of element1 to 4 is 8, and a value in element1 is 'USA' and element3 is 'LA', a text-format MACCS-EDI message is displayed as follows on a word processing or text editor tool.

```
USA<CRLF>
<CRLF>
LA<CRLF>
```
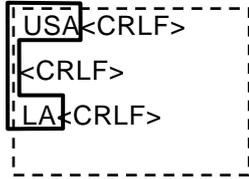
servicespecific segment1

service specific segment2 (empty data)

service specific segment3

service specific segment4 (empty data) ← Not transmitted

Common part

(␣ denotes single-byte space)

(Note: denotes maximum input available characters)

(Note: denotes actual input characters in this case)

If only data empty elements exist after a non-empty data element until the end of the message, the empty elements should not be transmitted.

(Example 3: transaction request message) Element1, 2, 3, and 4 are input elements and element3 forms a repeat group (the number ofrepeats is 3)

If size of element1 to 4 is 5digits, and a value in element1 is 'US', element3-[1] is 'CA', element3-[2] is 'NY' and element4 is 'UK', a text-format MACCS-EDI message is displayed as follows on a word processing or text editor tool.

US<CRLF>	servicespecific segment1
<CRLF>	servicespecific segment2 (empty data)
CA<CRLF>	service specific segment3-[1]
NY<CRLF>	service specific segment3-[2] repeat group
<CRLF>	service specific segment3-[3] (empty data)
UK<CRLF>	servicespecific segment4

Common part

(⌴ denotes single-byte space)

(Note: denotes maximum input available characters)

(Note: denotes actual input characters in this case)

In the above case, even if only 3-[1] and 3-[2] in the repeat group contain a value, element3-[3] needs to be set ONLY with delimiter<CRLF>.

? Question

If only element1, 3-[1], 3-[2] and 4 contain a value, why do element2 and 3-[3] need to be set ONLY with delimiters <CRLF>?

Answer

It is becauseMACCS-EDI message structure implements the variable-length delimiter format. It is position of data element from begging of the service specific segment that specify certain service specific segment.
If empty element2 and 3-[3] are excluded from the message on transmission, the message becomes invalid, or a transaction error may occur because the server wrongly recognizes and processes a value in element3-[1], 3-[2] and 4 as a value for element2, 3-[1] and 3-[3] respectively.

(Example 4: transaction request message) Element1, 2, 3, and 4 are input elements and element4 forms a repeat group (the number of repeats is 3)

If the size of element1 to 4 is 5, and a value of element1 is 'US', element4-[1]is 'CA' and element4-[2]is 'NY' (i.e.The last element in the repeat group is empty), a text-format MACCS-EDI message is displayed as follows on a word processing or text editor tool.

```
US<CRLF>
<CRLF>
<CRLF>
CA<CRLF>
NY<CRLF>
```

servicespecific segment1
servicespecific segment2   (empty data)
service specific segment3   (empty data)   Common
service specific segment4-[1]   part
service specific segment4-[2] repeat group
service specific segment4-[3](emptydata)Not transmitted
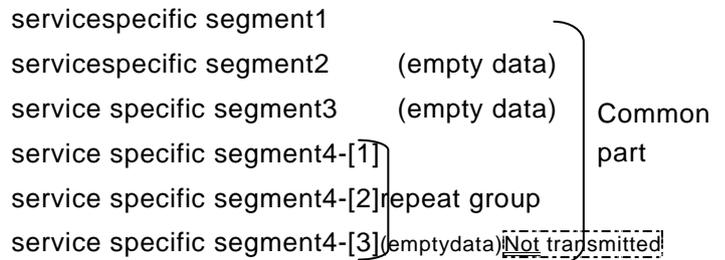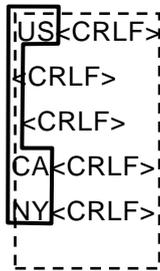
(⌴ denotes single-byte space)

(Note: denotes maximum input available characters)

(Note: denotes actual input characters in this case)

(Example 5: transaction request message) Element1, 2, 3, 4, and 5 are input elements and element3, 4 and 5 are members of a repeat group (the number of repeats is 3)

If the size of element1 to 5 is 5, and
a value of element1 is 'US', element3-[1] is 'IN',
element4-[1] is 'CA', element5-[1] is 'NY',
element3-[2] is 'MI', element4-[2] is 'FL', (i.e. A repeat group ends with an empty data element), a text-format MACCS-EDI message is displayed as follows on a word processing or text editor tool.

```
US<CRLF>
<CRLF>
IN<CRLF>
CA<CRLF>
NY<CRLF>
MI<CRLF>
FL<CRLF>
```

servicespecific segment1
service specific segment2   (empty data)   Common
service specific segment3-[1]   part
service specific segment4-[1]   repeat group
service specific segment5-[1]
service specific segment3-[2]
service specific segment4-[2]   repeat group
service specific segment5-[2] (empty data) Not transmitted
service specific segment3-[3] (empty data) Not transmitted
service specific segment4-[3] (empty data) Not transmitted
service specific segment5-[3] (empty data) Not transmitted

(⌴ denotes single-byte space)

(Note: denotes maximum input available characters)

(Note: denotesactualinputcharactersinthiscase)

3-1-10
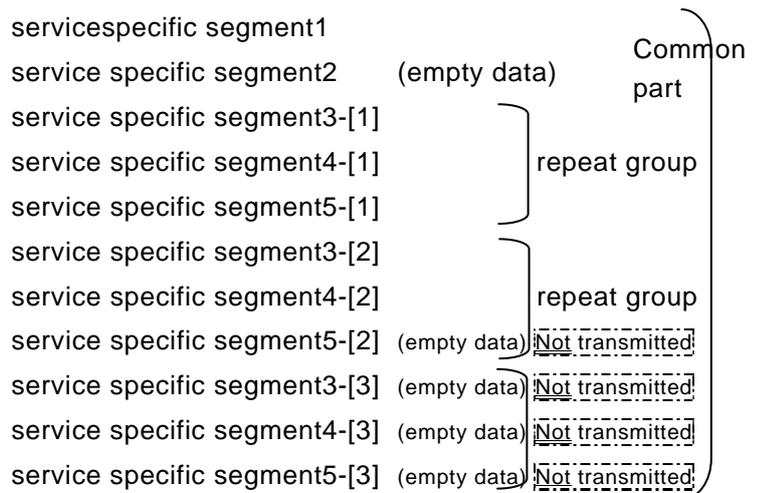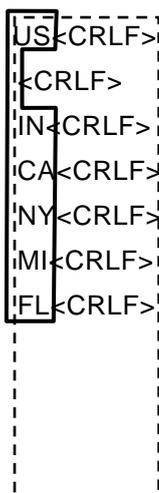
(Reference 2) Examples of transaction response message (inbound from MACCS to User system)

In this section, various patterns of MACCS-EDI messages (transaction response) are presented. Note that the output common segment is omitted from the following descriptions.

(Example 6: transaction response message) Element1, 2, 3, 4 are output elements and only element1 and 4 contain a value

a. Size of element1 to 4 is 8.
b. Element1 to 4 contains a value for acommon part.
   (The message consists only of the common part.)
c. A value in element1 is 'USA' and element4 is 'LA'.

(The last element in the common part is not empty.)

Under conditions a to c, a text-format transaction response message (MACCS-EDI message) is displayed as follows on a word processing or text editor tool.

```
USA<CRLF>              servicespecific segment1
<CRLF>                 service specific segment2 (empty data)    Common part
<CRLF>                 service specific segment3 (empty data)
LA<CRLF>               service specific segment4
```

(Note: ␣ denotes single-byte space)
(Note: denotes maximum output available characters)
(Note: denotes actual output characters in this case)
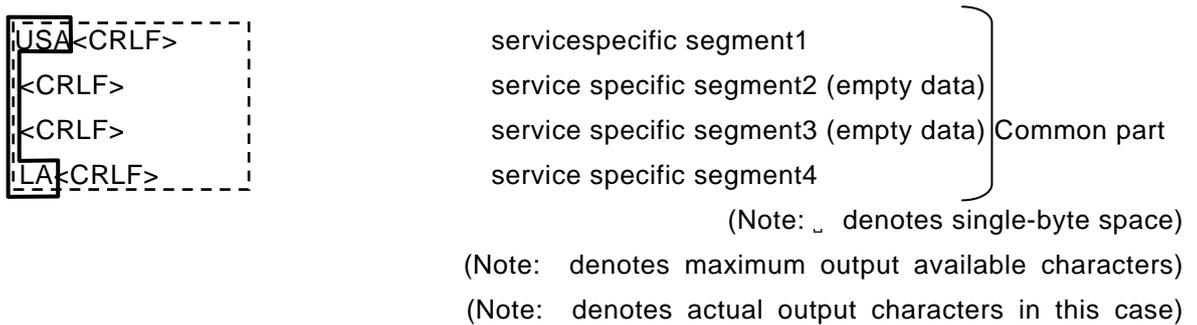
In the above case, element2 and 3, which are placed between non-empty data elements, need to be set ONLY with delimiter <CRLF>. Therefore, size of the message may vary with output data pattern.

? Question

If only element1 and 4 are not empty, why do element2 and 3 need to be set ONLY with delimiters <CRLF>?

Answer

It is becauseMACCS-EDI message structure implements the variable-length delimiter format. It is position of data element from begging of the service specific segment that specify certain service specific segment.
If empty element2 and 3 are excluded from the message for transmission, the message becomes invalid, or a transaction error may occur because the server wrongly recognizes and processes a value in element4 as a value for element2.

(Example 7: transaction response message) Element1, 2, 3, 4 are output elements and only element1 and 3 contain a value

 a. Size of element1 to 4 is 8.
 b. Element1 to 4 contains a value for a common part.
    (The message consists only of the common part.)
 c. A value in element1 is 'USA' and element3 is 'LA'.

  (The common part ends with an empty element.)

  Under conditions a to c, a text-format transaction response message (MACCS-EDI message) is displayed as follows on a word processing or text editor tool.

USA<CRLF>	service specific segment1
<CRLF>	service specific segment2(empty data)
LA<CRLF>	service specific segment3
<CRLF>	service specific segment4(empty data)←Transmitted

Common part

(⎵ denotes single-byte space)
(Note: denotes maximum output available characters)
(Note: denotes actual output characters in this case)
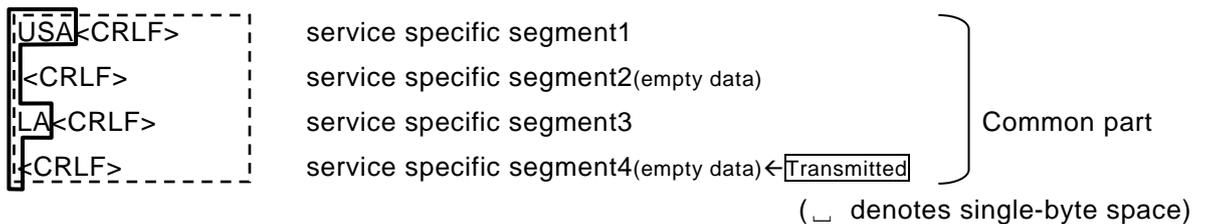
  If only empty elements exist after a non-empty element until the end of the message, the empty elements are set ONLY with delimiter(s) <CRLF>until the last element specified in the process specification (i.e. the end of the common part) and transmitted.
  In the above case, both element2, which is placed between non-empty data elements, and the last element4 are set ONLY with delimiters <CRLF>. Therefore, size of the messagemay vary with output data pattern.

(Example 8: transaction response message) Element1, 2, 3, and 4 are output elements and element3 forms a repeat group (the number of repeats is 3)

a. Size of element1 to 4 is 5.
b. Element1 to 4 contains a value for a common part.
 (The message consists only of the common part.)
c. A value in element1 is 'US' and element2 is 'CA'.

(A repeat group exists in the common part, and the common part ends with an empty element.)

Under conditions a to c, a text-format transaction response message (MACCS-EDI message) is displayed as follows on a word processing or text editor tool.

|		
US<CRLF>	servicespecific segment1	common part
CA<CRLF>	servicespecific segment2	
<CRLF>	servicespecific segment3-[1] (empty data)← Transmitted	repeat group
<CRLF>	service specific segment3-[2] (empty data)← Transmitted	
<CRLF>	service specific segment3-[3] (empty data)← Transmitted	
<CRLF>	service specific segment4 (empty data)← Transmitted	

(␣ denotes single-byte space)
(Note: denotes maximum output available characters)
(Note: denotes actual output characters in this case)
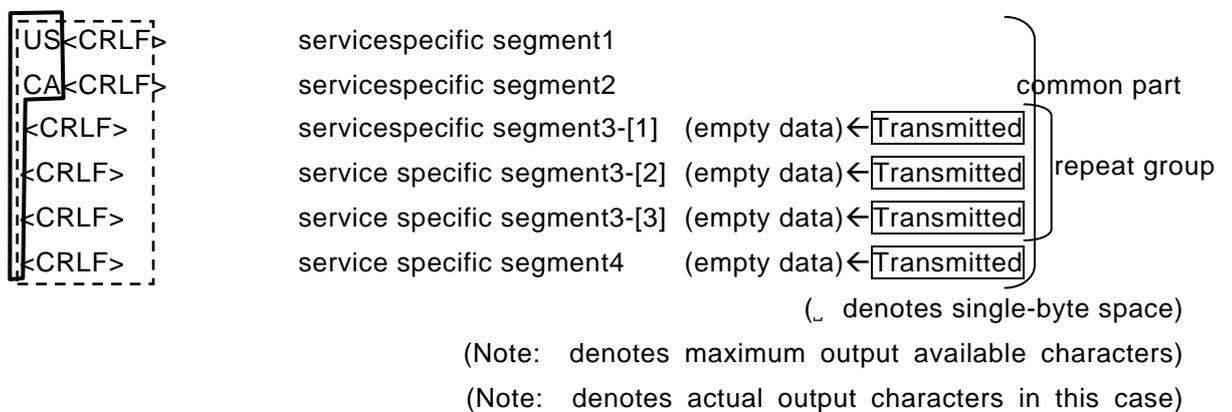
If only empty elements exist after a non-empty element until the end of the message, the empty elements are set ONLY with delimiter(s) until the last element specified in the process specification (i.e. the end of the common part) and transmitted.

(Example 9: transaction response message) Element1, 2, 3, and 4 are output elements and element4 forms a repeat group (the number of repeats is 3)

a.   Size of element 1 to 6 is 5.

b.   Element1 to 3contains a value for a common part, and element4,5,6 form a detail part.

c.   A value in element1 is 'U.S.A' and element2 is 'NY'.

(The message ends with a multiple-element detail parts, and all elements in the detail parts are empty.)

Under conditions a to c, a text-format transaction response message (MACCS-EDI message) is displayed as follows on a word processing or text editor tool.

```
U.S.A<CRLF>          servicespecific segment1            ⎫
NY<CRLF>             servicespecific segment2common part  ⎬ common part
<CRLF>               servicespecific segment3      ←Transmitted ⎭

                     servicespecific segment4-[1]←Not transmitted  ⎫
                     servicespecific segment5-[1]←Not transmitted  ⎬ detail part
                     servicespecific segment6-[1]←Not transmitted  ⎭

                     service specific segment4-[2]←Not transmitted  ⎫
                     service specific segment5-[2]←Not transmitted  ⎬ detail part
                     service specific segment6-[2] ←Not transmitted ⎭

                     service specific segment4-[3]←Not transmitted  ⎫
                     service specific segment5-[3]←Not transmitted  ⎬ detail part
                     service specific segment6-[3] ←Not transmitted ⎭
```
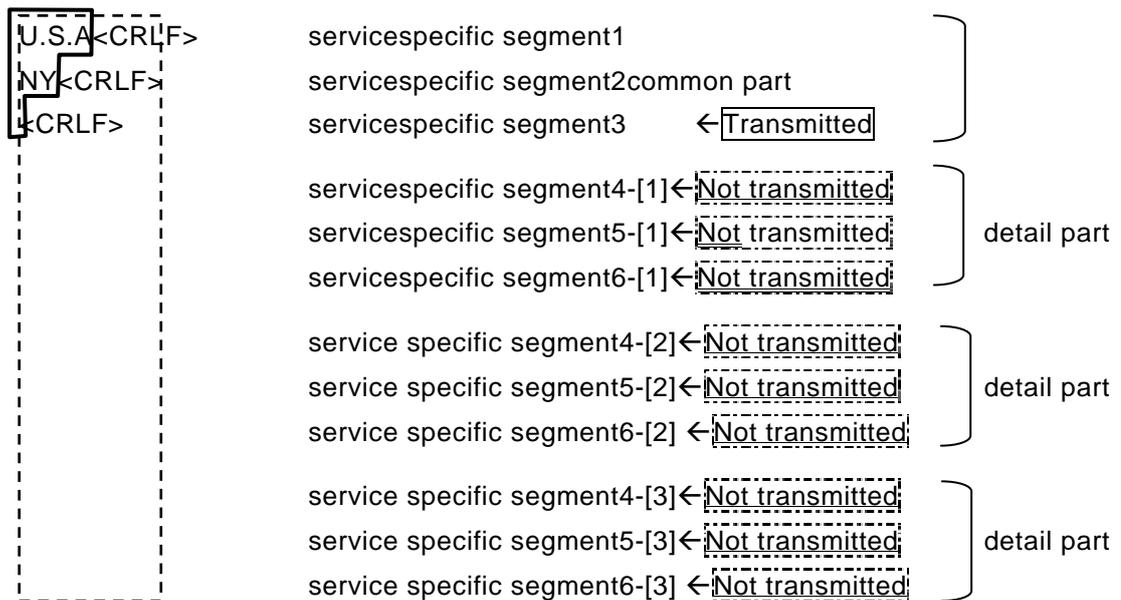
(␣ denotes single-byte space)

(Note: denotes maximum output available characters)

(Note: denotes actual output characters in this case)

If empty elements exist after a non-empty element until the end of the common message, the empty elements are set ONLY with delimiter(s) until the last element specified in the process specification (i.e. the end of the common part) and transmitted.

If ALLelements in the detail parts at the end of the message are empty, NONE OF the detail part is transmitted.

(Example 10: transaction response message) Element1, 2, 3, 4, and 5 are output elements and element3, 4 and 5 are members of a repeat group (the number of repeats is 3)

a. Size of element1 to 5 is 5.
b. Element1 and 2 contain a value for a common part, and element3 to 5 forms detail parts.
c. A value in element1 is 'U.S.A',
element3-[1] is 'IN', element4-[1] is 'CA', element5-[1] is 'NY',
element3-[2] is 'MI' and element4-[2] is 'FL'.

(The last part of the message contains multiple-elementdetail parts, and one of the detail parts ends with an empty element.)

Under conditions a to c, a text-format transaction response message (MACCS-EDI message) is displayed as follows on a word processing or text editor tool.

U.S.A<CRLF>	servicespecific segment1	common part
<CRLF>	servicespecific segment2	
IN<CRLF>	servicespecific segment3-[1]	
CA<CRLF>	servicespecific segment4-[1]	detail part
NY<CRLF>	servicespecific segment5-[1]	
MI<CRLF>	servicespecific segment3-[2]	
FL<CRLF>	servicespecific segment4-[2]	detail part
<CRLF>	servicespecific segment5-[2] ←Transmitted	
	servicespecific segment3-[3] ←Not transmitted	
	servicespecific segment4-[3] ←Not transmitted	detail part
	servicespecific segment5-[3] ←Not transmitted	

(␣ denotes single-byte space)

(Note: denotes maximum output available characters)

(Note: denotes actual output characters in this case)

If the last part of the message forms multiple detail parts, all empty elements in the detail part that contains the last non-empty element are set ONLY with delimiters <CRLF> and transmitted.

(Example 11: transaction response message) Element1 to 9 are output elements and element4 and 8 forms a repeat group (the number of repeats is 3)

 a. Size of element 1 to 9 is 5.

 b. Element1 to 5 contains a value for a common part, and
    Element6 to 9 contains a value for a detail part.
    Element4 is a repeat group inside a common part.
    Element8 is a repeat group inside a detail part.

 c. A value in element1 is 'U.S.A'; element3 is 'IN',
    element4-[1] is 'CA', element4-[2] is 'NY',
    element01-6 is 'MI' element01-7 is 'FL', and
    element01-8-[1] is 'OR'.

(The last part of the message contains detail parts (element6 to 9) with repeat groups (element8), and one of the repeat groups ends with an empty element.)

Under conditions a to c, a text-format transaction response message (MACCS-EDI message) is displayed as follows on a word processing or text editor tool.

```
U.S.A<CRLF>     service specific segment1
<CRLF>                  service specific segment2
IN<CRLF>                service specific segment3
CA<CRLF>                service specific segment4-[1]  ┐                    common part
NY<CRLF>                service specific segment4-[2]  │ repeat group
<CRLF>                  service specific segment4-[3]  ┘
<CRLF>                  service specific segment5

MI<CRLF>                service specific segment01-6    ← Transmitted
FL<CRLF>                service specific segment01-7    ← Transmitted
OR<CRLF>                service specific segment01-8-[1]← Transmitted  detail part
<CRLF>                  service specific segment01-8-[2]← Transmitted
<CRLF>                  service specific segment01-8-[3]← Transmitted
<CRLF>                  service specific segment01-9    ← Transmitted

                        service specific segment02-6    ← Not transmitted
                        service specific segment02-7    ← Not transmitted
                        service specific segment02-8-[1]← Not transmitted  detail part
                        service specific segment02-8-[2]← Not transmitted
                        service specific segment02-8-[3]← Not transmitted
                        service specific segment02-9    ← Not transmitted
```

(␣ denotes single-byte space)

(Note: denotes maximum output available characters)

(Note: denotes actual output characters in this case)

If the last part of the message has detail parts, <u>all empty elements in the detail part that contains the last non-empty element are set ONLY with delimiters <CRLF>and transmitted.</u>

(Example 12: transaction response message) Element1 to 7 are output elements and

element4 and 6 forms a repeat group WITHIN common part (the number of repeats is 3)

a. Size of element 1 to 7 is 5.
b. Element1 to 7 contains a value for a common part, and
Element4, 5, 6 is a repeat group inside a common part.
c. A value in element1 is 'U.S.A'; element3 is 'IN',
element4-[1] is 'CA', element5-[1] is 'NY'.

(The last part of the message contains detail parts (element6 to 9) with repeat groups (element8), and one of the repeat groups ends with an empty element.)

Under conditions a to c, a text-format transaction response message (MACCS-EDI message) is displayed as follows on a word processing or text editor tool.

```
U.S.A<CRLF>   service specific segment1
<CRLF>            service specific segment2
IN<CRLF>          service specific segment3
CA<CRLF>          service specific segment4-[1] ┐
NY<CRLF>          service specific segment5-[1] │ repeat group
<CRLF>            service specific segment6-[1] ┘           ←Transmitted
<CRLF>            service specific segment4-[2] ┐           ←Transmitted
<CRLF>            service specific segment5-[2] │ repeat group ←Transmitted
<CRLF>            service specific segment6-[2] ┘           ←Transmitted
<CRLF>            service specific segment4-[3] ┐           ←Transmitted
<CRLF>            service specific segment5-[3] │ repeat group ←Transmitted
<CRLF>            service specific segment6-[3] ┘           ←Transmitted
<CRLF>            service specific segment7                 ←Transmitted
```
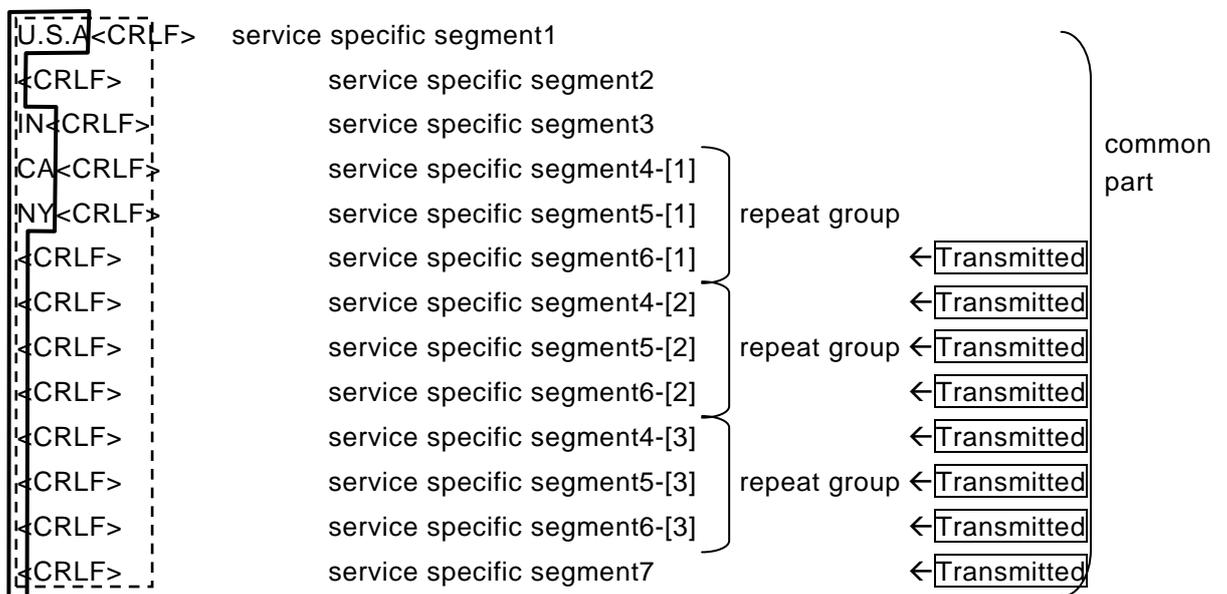
common part

(␣ denotes single-byte space)

(Note: denotes maximum output available characters)

(Note: denotes actual output characters in this case)

If the message consist of ONLY with common part, and last part of the message has empty elements, <u>all empty elements in the common part are set ONLY with delimiters <CRLF> and transmitted.</u>

3.1.2.3 Entry rule of the servicespecific segment

Since MACCS-EDI message structure implements the variable-length delimiter format, each element has a variable-length.

Table 3-1-2 describes the entry rule of the process specific segment.

Table 3-1-2 Entry rule of the service specific segment

Element	Notation	Attribute	Condition
Servicespecific segment (Each service and data elements are defined in servicespecification)	n	Single-byte numeric	A value shorter than a specified length can be entered, followed by delimiter <CRLF>.
	an	Single-byte alpha numeric and sign character	A value shorter than a specified length can be entered, followed by delimiter <CRLF>. Only alphabet capital characters are allowed. Please refer Chapter 3.5.1.1-(1) for details.
	w	Myanmar character and alpha numeric or sign character	Each character will be specified in 3bytes or less by length, depending on code definition at UTF-8. A value shorter than a specified length can be entered, followed by delimiter <CRLF>. Both capital and small Myanmar characters are allowed. Please refer Chapter 3.5.1.1-(2) for details. [Example A] In case user input ကမ္ဘာတ (which means "world"). When user input ကမ္ဘာတ user will type 5characters, which are က, မ, ္,ဘ,and တ. Therefore MACCS consider THIS WORD AS 5DIGITS, although it appears to be 4 digits on the screen. [Example B] In case user input မြန်မာတ (which means "Myanmar"). When user input မြန်မာတ user will input မ, ြ, န, ်, မ and တ. Therefore MACCS consider THIS WORD AS 6DIGITS, which is SAME as it appears on the screen (6 digits).

> **!** Private terminal software provided by Myanmar Customsautomatically format messages (by adding necessary spaces) when a value shorter than the specified size is entered.

Please refer Exapmle1 and Example2 for how to input numbers with decimal point in attribute "n".

(Example 1) When '12.3' is entered under the following conditions: "up to two digits of decimal part","attributes n8", one of the following input patternsis acceptable, followed by delimiter <CRLF>.

1. `12.3<CRLF>`
2. `12.30<CRLF>`

(␣ denotes single-byte space)

(Note: denotes maximum output available characters)

(Note: denotes actual output characters in this case)

(Example 2) When '12.00' is entered under the same condition above, one of the following input patterns is acceptable, followed by delimiter <CRLF>.

1. `12<CRLF>`
2. `12.0<CRLF>`
3. `12.00<CRLF>`

(␣ denotes single-byte space)

(Note: denotes maximum output available characters)

(Note: denotes actual output characters in this case)

3-1-19

3.1.2.4 Output common segment (transaction response message)

The total size of the output common segment is a fixed-length of 398 bytes.
Note that the actual size including a two-byte delimiter becomes 400 bytes.
Table 3-1-3describe elements of the output common segment.

Table 3-1-3 Output common segment

(For the interactive processing mode and delayed processing mode)

No	Element		Length	Description	Sample Setting
1	(Reserved area)		3	(*1)	
2	ServiceCode (Service ID)		5	Set a servicecode (Service ID) (*2)	IDA␣␣ (import declaration registration)
3	Output Message Code (Output information ID)		7	Set an output message code (Output information ID). It is advisable to use this element for identifying the message.	AAE0010 *AIDA␣␣
4	Message Receive Date		14	Set a date of receiving the message(*3) (yyyymmddhhmm)	200812101430␣␣
5	User Code		5	Set a user code that receives this message.	10001
6	(Reserved area)		11	(*1)	
7	Terminal ID		6	Set a terminal ID to receive message.	BC001C
8	(Reserved area)		64	(*1)	
9	Subject		64	Set servicespecific data (ex. custom declaration number).	10123456710...
10	RTP Tag		30	Use this element when sending a transmission acknowledgement message (?A2). (See "3.6.4.1 Process flow of #REP1 transaction" for details.)	When using Private terminal software provided by Myanmar Customs, users do not need to manage this element because a transmission acknowledgement message (?A2) is automatically generated and transmitted.
11	(Reserved area)		10	(*1)	
12	Message Tag		26	Use a value in this element for matching a series of transaction responses with a request message. (See 3.4.2)	
13	Message Control Information	Division Sequence Number	3	Use a value in this element for matching a series of transaction responses with a request message.	000～001
14		Termination	1	Use a value in this element for matching a series of transaction responses with a request message.	Set 'E' to the final message. Otherwise, set a space.
15		Message Class	1	Indicate a message class.	Set 'R' for a transaction response message.
16	(Reserved area)		3	(*1)	
17	Input Message ID		10	A value as specified in the request message. For EXC type messages, spaces are filled in.	(A value in the transaction request message)
18	Index Tag		100	Set a value in this element if multiple response messages are generated as a result of a query transaction (sequential transaction processing).	(Information for sequential transaction processing)
19	Message Destination Control Code		1	Set a message destination control code. (See 5.1)	INQ type: 'Q' EXZ type: 'Z' EXC type: 'C'
20	(Reserved area)		28	(*1)	
21	Message Length		6	Indicate the size in bytes of the MACCS-EDI message	000400～500000 (Max 500,000)
22	Total		398		

(*1) The reserved areas are used to control system.

(*2) There is no guarantee that a value in Service Code (Service ID) in the output common segment is identical to a value of the same element in the input common segment. A value in Service Code (Service ID)in the output common segment may be different from a value specified in the corresponding transaction request message.
It is advisable to use Output Message Code segment to distinguish a message.

(*3) In case of critical error like input message corruption, there is no guarantee that a value in Message Receive Date is set in output common segment.

3.2   MIME format message

EDIFACT messages (only inMACCS) and attachment file transmission messages are transmitted in the MIME format. In this section, their message structures and formats are described.

3.2.1 EDIFACT message

3.2.1.1   EDIFACT message structure

The EDIFACT message structure in MACCS is defined as follows.

3.2.1.1.1   Syntax rule

The syntax rule of EDIFACT message used in MACCS complies with Chapter2.1"Syntax version" in part 1 of Message implementation guidelines for messages used in MACCS.

3.2.1.1.2   Message version

The message version of EDIFACT message used in MACCS complies with Chapter 2.2"Message version" in part 1 of Message implementation guidelines for messages used in MACCS.

3.2.1.1.3   Character set

EDIFACT messages transmitted in MACCS use the Level A character set, "@", and "#". Appendix E-4 describes the Level A character set.

3.2.1.2 EDIFACT message format

When transmitting an EDIFACT message, the Delayed processing mode is used as a data transmission method. In this mode, communication protocol header and trailer are added to the EDIFACT message.

Figure 3-2-1 describes the EDIFACT message format.
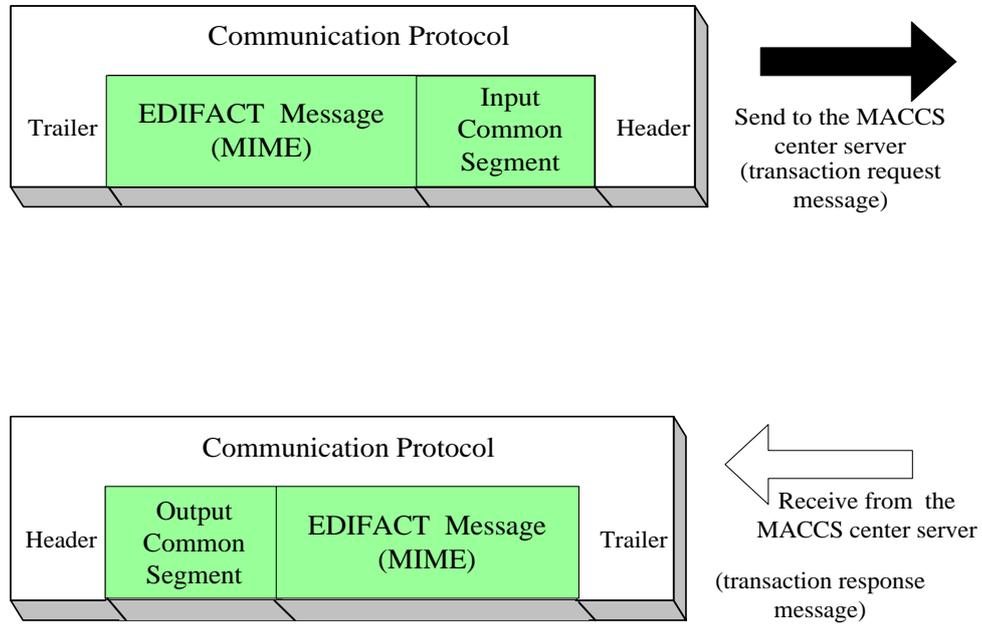
Figure 3-2-1 EDIFACT message format

3.2.1.2.1 Input (output) common elements

Input (output) common elements included in the EDIFACT message format are as follows. Allocation of the elements in an EDIFACT message is described in Part 1 of Message implementation guidelines for messages used in MACCS (Mapping tables for each service).

※Part 1 of Message implementation guidelines for messages used in MACCS:
Refer to "Part 1 of Message implementation guidelines for messages used in MACCS" for details on the format, segments, and data elements and the code system supported by the UN/EDIFACT standard format used in MACCS.

(1) Input display common elements (transaction request message)
Please refer to "Table 3-1-1 Input common segment(For the interactive processing and delayed processing mode)" chapter 3.1.

(2) Output common elements (transaction response message)
Please refer to "Table 3-1-3 Output common segment (For the interactive processing mode and delayed processing mode)" chapter 3.1.

3.2.1.2.2 Message format

3.2.1.2.2.1 Transaction request message

An EDIFACT message for transaction request can handle multiple function groups or message bodies in a transaction request message.

In addition, multiple B/Ls and containers can be stored in a multi-consignment message.

Note that maximum allowable message transmission size is about 1MB (1,000,000 bytes) of data.

In case that a single transaction message contains multiple function groups or message bodies, or a multi-consignment message contains multiple B/Ls or containers, the message is separated into individual MACCS-EDI messages in the EDIFACT server.

EDIFACT messages are transmitted in the Delayed processing mode. Communication protocol header and trailer are added to a message on the transmission.

The EDIFACT message format for transaction request processing is described in Figure 3-2-2.
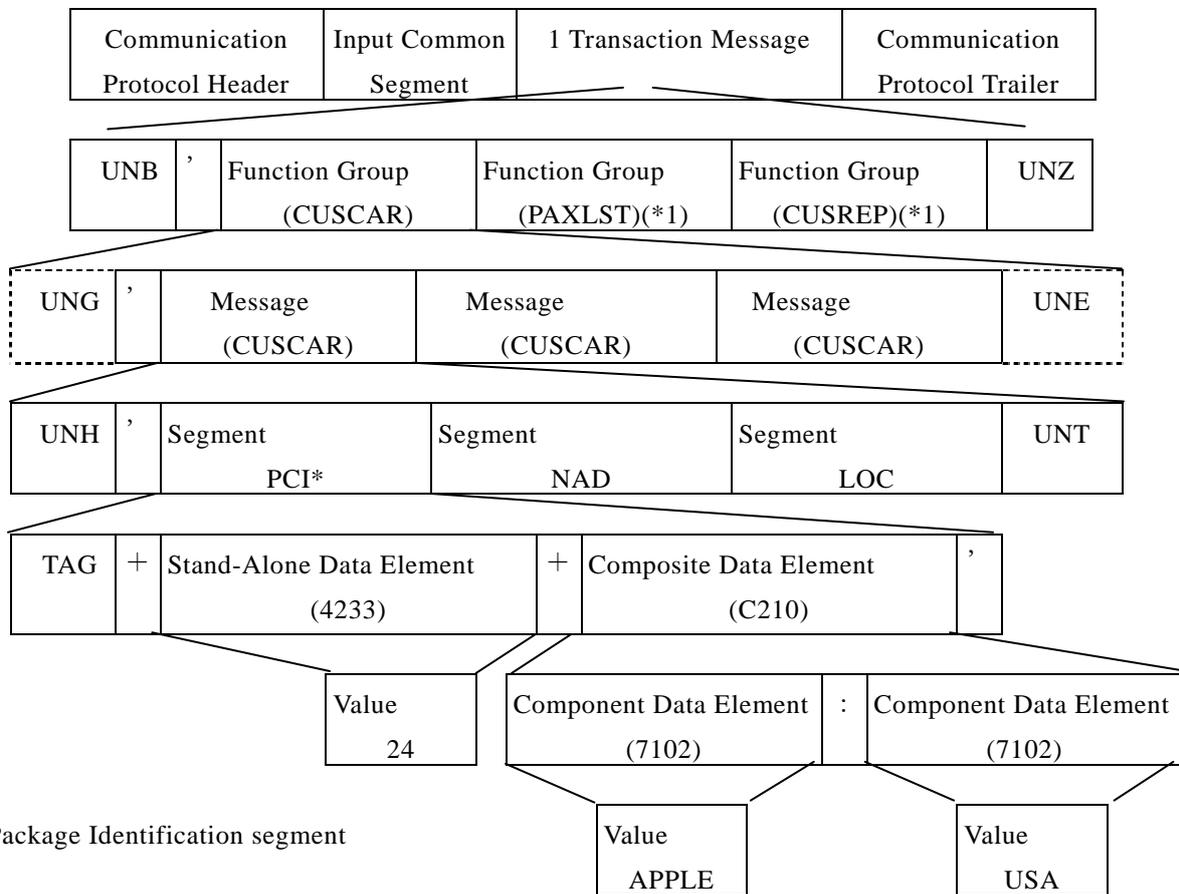
*PCI:Package Identification segment

(Note) Usage of Function Group Header (UNG) and Function Group Trailer (UNE) are optional.

Figure 3-2-2 Transaction request message format

(*1) MACCS does NOT support PAXLST and CUSREP messages.

However, as Syntax rule in UN/EDIFACT, which will support in MACCS, single transaction message allows to contain multiple function groups or message bodies.

To explain this syntax rule, we show an example which includes PAXLST and CUSREP message.

※Example: The following figure describes multiple CUSCAR, PAXLST and CUSREP message bodies in a single transaction message.
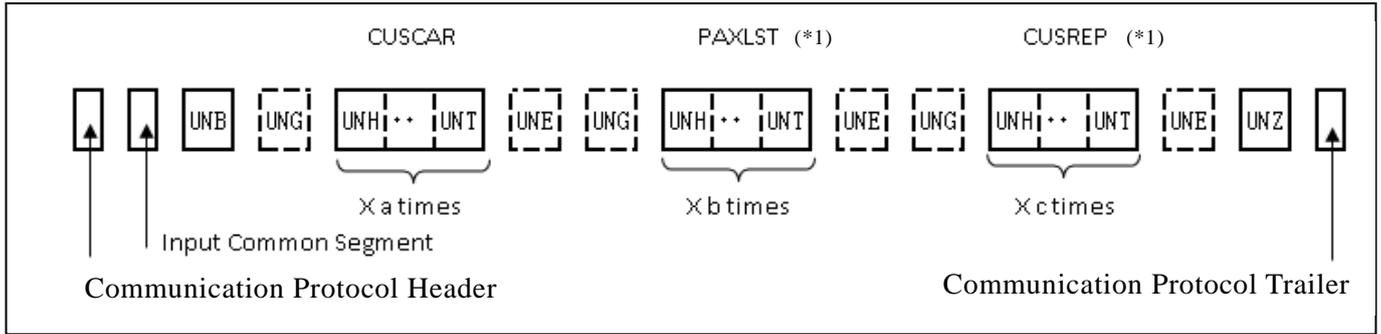
(*1) MACCS does NOT support PAXLST and CUSREP messages.

However, as Syntax rule in UN/EDIFACT, which will support in MACCS, single transaction message allows to contain multiple function groups or message bodies.

To explain this syntax rule, we show an example which includes PAXLST and CUSREP message.

3.2.1.2.2.2 Transaction response message

In MACCS, a single body message, B/L or container is processed in a single transaction, and a transaction status noticemessage and a transaction output message per processed message body, B/L or container is generated.

In other words, the response message format consists of a single body message.

EDIFACT messages are transmitted in the Delayed processing mode. Communication protocol header and trailer are added to a message on transmission.

The EDIFACT message format for transaction response processing is described in Figure 3-2-3.

Communication Protocol Header	Output Common Segment	1 Transaction Message	Communication Protocol Trailer

UNB	'	1 Message (CUSRES)	UNZ

UNH	'	Segment NAD*	Segment GIS	Segment MEA	UNT

TAG	+	Stand-Alone Data Element (3035)	+	Composite Data Element (C058)	'

Value CA

Component Data Element (3124)	:	Component Data Element (3124)

Value AAA CORP.

Value TOKYO

*NAD:Name And Address segment

Figure 3-2-3 Transaction response message format

※ Example: The following figure describes a single CUSRES message body in a single transaction message.

CUSRES

		UNB	UNH ┊ ··· ┊ UNT	UNZ	

×1 time

Output Common Segment
CommunicationProtocol Header

Communication Protocol Trailer
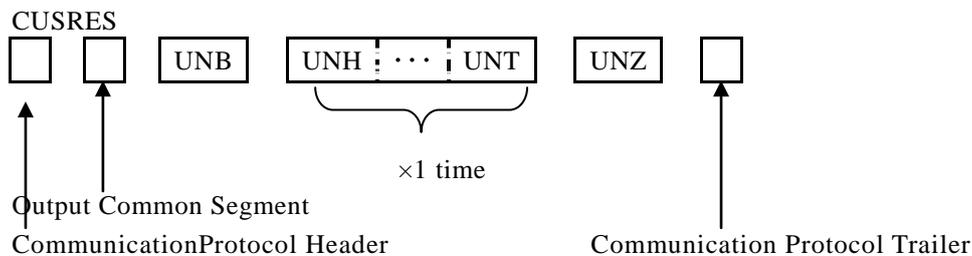
(Acronyms)

UNB: Interchange Header (mandatory)
　　　An EDIFACT transaction message must start with this segment.

UNG: Function Group Header (optional)
　　　If multiple message bodies are stored in a message, this segment is used to distinguish each message body.

UNH: Message Header (mandatory)
　　　A message body must start with this segment.

UNT: Message Trailer (mandatory)
　　　A message body must end with this segment.

UNE: Function Group Trailer (optional)
　　　A function group ends with this segment.

UNZ: Transmission Trailer (mandatory)
　　　A transaction message must end with this segment.

3.2.1.2.3 Messaging procedure

3.2.1.2.3.1 Messaging procedure of a singlebody message

Figure 3-2-4 describes a process flow of a single body message stored in an EDIFACT transaction message (singlebody message).

User System	MACCS Center Server	
	Data translation Server	Main Processor
The user sends one EDIFACT message body in a single EDIFACT transaction message through a single transmission.	The Data translation server converts the EDIFACT transaction message to a MACCS EDI message and transfers it to the main processor.	The main processor executes a transaction for the message tranferred from the EDIFACT server (one transaction per message) .

Figure 3-2-4 Process flow of a single body message

3.2.1.2.3.2　Messaging procedure of a multi-body message

In MACCS, multiple EDIFACT message bodies can be stored in a single EDIFACT transaction message (multi-body message). Note that when transmitting a multi-body message, the maximum allowable number of EDIFACT message bodies stored in a single EDIFACT message is 99 due to the capacity of the MACCScenter server.

Figure 3-2-5 describes a process flow of a multi-body message.
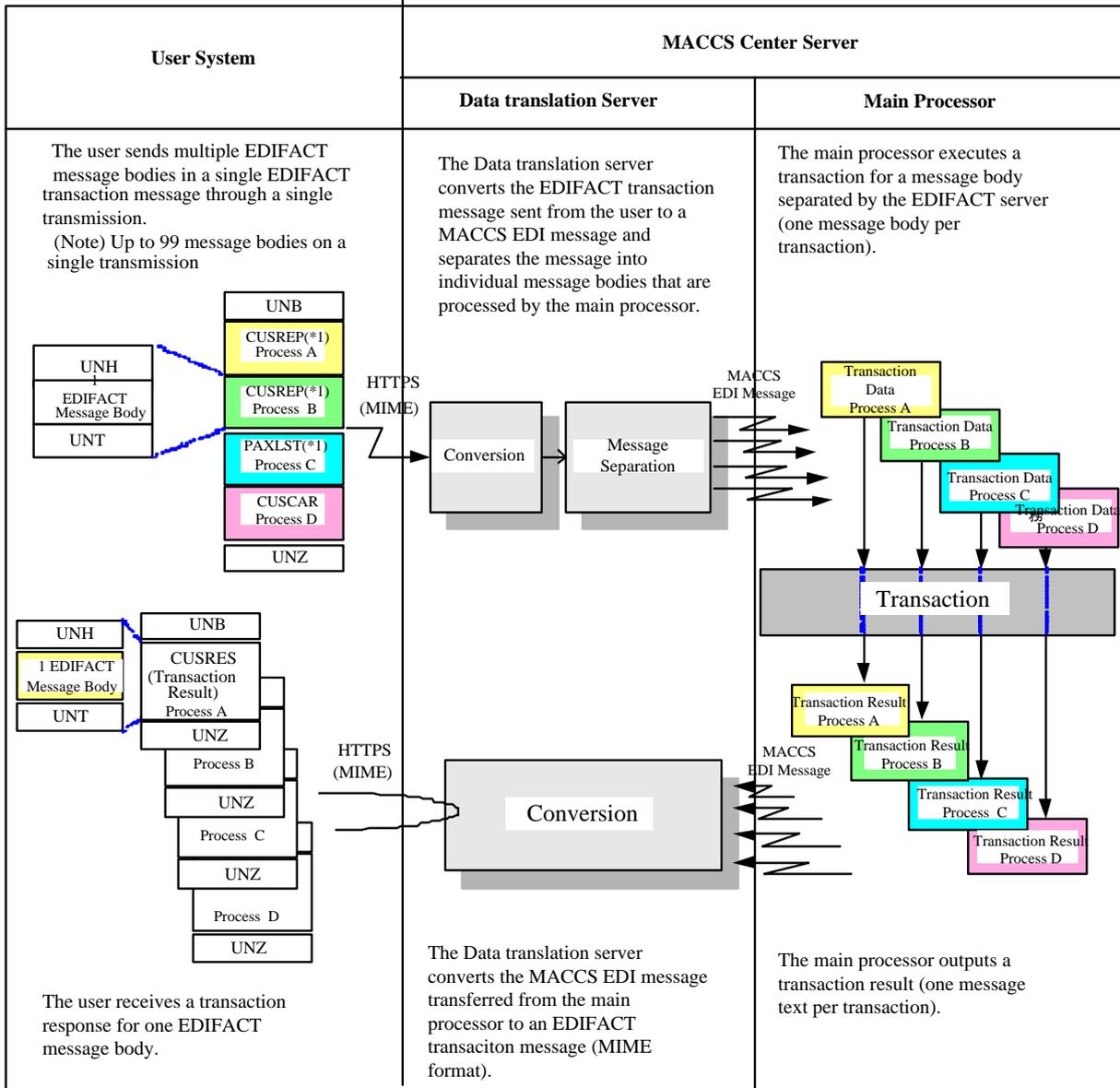
Figure 3-2-5 Process flow of a multi-body message

(*1) MACCS does NOT support PAXLST and CUSREP messages.
However, as Syntax rule in UN/EDIFACT, which will support in MACCS, single transaction message allows to contain multiple function groups or message bodies.
To explain this syntax rule, we show an example which includes PAXLST and CUSREP message.

3.2.1.2.3.3 Messaging procedure of a multi-consignment message

In MACCS, multiple B/Ls and containers can be stored in a single CUSCAR message (multi-consignment message), which is transmitted in Manifest Information Registration (MFR). Note that a multi-consignment message is transmitted only on a single body message due to the capacity of the MACCScenter server.Please also note that service ID (BGM-C002-1000) of the first message body must be set into input common segment (Please refer Chapter 3.1 Table 3-1-2 for more details).

Figure 3-2-6 describes a process flow of a multi-consignment message.
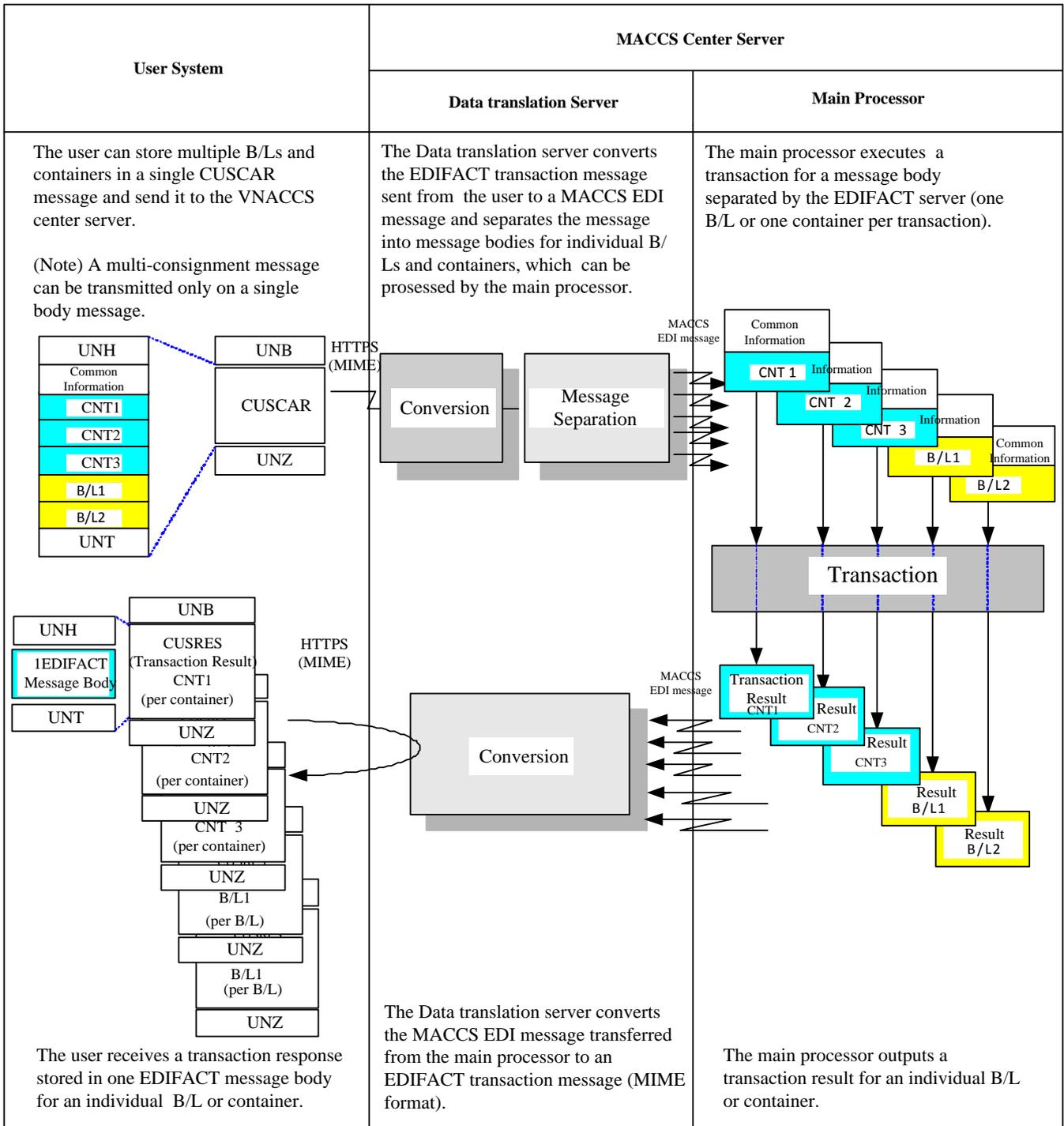
Figure 3-2-6 Process flow of a multi-consignment message

3.2.1.3   Acknowledgement of EDIFACT message transmission

3.2.1.3.1   Timing of acknowledgement

There are three possible procedures for confirming receipt of an EDIFACT message at the MACCScenter server. An acknowledgement is sent to the user:

1. After receiving the message at the EDIFACT server in the MACCS center server.
2. After completing conversion of the EDIFACT message to an MACCS-EDI message at the EDIFACT server in the MACCS center server.
3. After completing a transaction at the main processor in the MACCScenter server.

In case 1., the acknowledgement indicates the fact that the EDIFACT message is stored in the EDIFACT server. However, if an error occurs during a subsequent message conversion process, a transmission error message is sent to the user according to the method 2..

In case 3., there is no reason to send an acknowledgement to the user at this stage because a "transaction response" is returned to the user on completion of a transaction.

Thus, MACCS implements the procedure 2. and sends an acknowledgement to the user on completing conversion of an EDIFACT message to a MACCS-EDI message. (*)

(*) This timing of acknowledgement transmission is not in line with legal requirements.

3.2.1.3.2   Procedure of acknowledgement transmission

In MACCS, a CONTRL message is used as a method to acknowledge a transmission of an EDIFACT message sent by a user.

Use of this acknowledgement method is optional. If a user sets '1' to "Acknowledgement Request Indicator" in the UNB segment in an EDIFACT message (transaction request), a CONTRL message is returned as an acknowledgement.

Note that a CONTRL message is used not only for a positive acknowledgement, but also for notifying syntax errors in the EDIFACT message (transaction request) sent by the user. (A CONTRL message for notifying errors is sent to the user even if "Acknowledgement Request Indicator" does not contain a value of '1'.)

(See "Appendix E-2 Error handling procedures for EDIFACT messages")

3.2.1.3.3   Delivery of acknowledgement

CONTRL messages are stored in Message storage table located in the EDIFACT server.

Therefore, users need to retrieve a CONTRL message to confirm a completion of a transmission.

3.2.2 Attachment file transmission message

3.2.2.1   Attachment file transmission message format

The attachment file transmission message is MIME format message.
Encoding format is Base64.

3.2.2.2   Attachment file transmission message structure
The format structure of attachment file transmission process is described as follow.
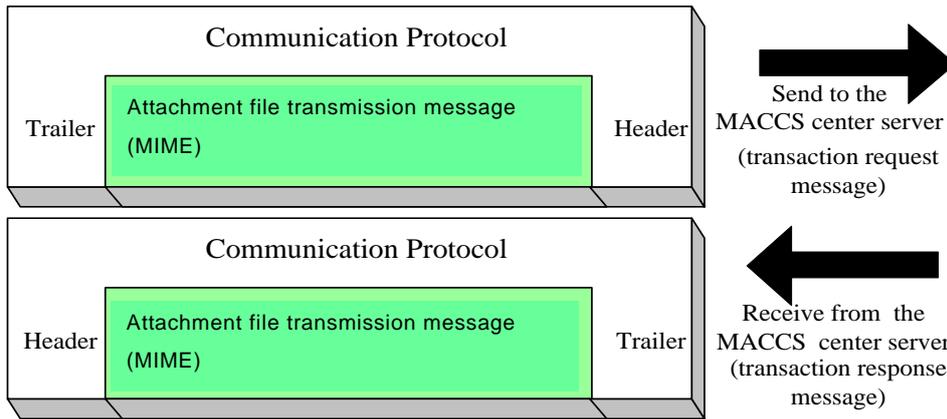
Figure 3-2-7Attachmentfile transmission message format
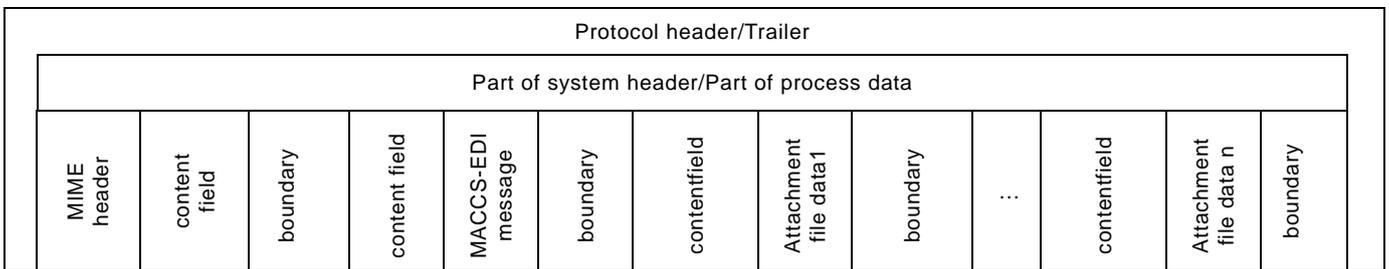
Figure 3-2-8Attachment file transmission message (MIME format)

3.2.2.3   Implementationmethod

Data sending and receiving process modes which can correspond with attachment file are interactive processing mode.

1. Services which use attachment files at outbound from User system to MACCS are as follows (upload from User system to MACCS);

   MSB (Attachment files registration)
   HYS (Application by attached electronic file)
   HYE (Correction of application by attached electronic file)
   MSX (Declaration documents attachment registration)
   MSY (Declaration documents attachment correction)
   IOA (OGA test application with attached file)
   IOE (Correction of OGA test application with attached file)
   OOA (Registration of attached file of OGA test approval)

2. Services which use attachment files at inbound from MACCS to User system are as follows (downloadfrom MACCS to User system);

   IOR (Reference of OGA test application with attached file)
   IOO (Reference of OGA test approval with attached file)
   MSC (Attachment files retrieval)
   MSZ(Declaration documents attachment acquisition)
   ?GTN (Get request for the Statistic report)
   ?GTP(Re-get request for the Statistic report)

   For details of ?GTN service and ?GTP service, please refer Appendix 6 (How to get Statistic report from MACCS) of EDI specification.

This sequence DOES NOTapply to Delayed processing mode because "Service for attachment file"IS NOT applied to Delayed processing mode.

When sending attachment files, it should comply with BOTH following rules (1),   (2) and (3).
(1) Number of attached file per transaction request/response message SHOULD NOT EXCEED the maximum number (10 files). **(Notice)**
That is, if number of files exceeds the maximum number, user must divide the file into several parts so that the number of files does NOT exceed the maximum number.

(2) When **User sends** attachment files(upload from User system to MACCS), it is requested that file size of each attached file is less than or equal to maximum file size (500,000 bytes). **(Notice)**

(3) Attached file per transaction request message (upload from User system to MACCS) SHOULD NOT EXCEED the maximum length (3,000,000 bytes). **(Notice)**
That is, if a file whose length exceeds the maximum length, user must divide the file into several parts so that the file's length does NOT exceed the maximum length.

   Notice:We will set other rule apart from EDI specification how much of attachment file each user is able to send, because this will effect on bandwidth of Customs WAN.

The image of sending divided attachment files is described as follows.

Example of (1)
(If being sent in 1 message, it will exceed the maximum length).

| MIME header, etc | MACCS-EDI message | attachment file date 1 | Attachment file data 2 | Attachment file data 3 | Attachment file data 4 | Attachment file data 5 | Attachment file data 6 | Attachment file data 7 |

→ If 7 files are attached in 1 message, whichfiles are 500,000byte each, message will exceed the maximum length(500,000byte*7=3,500,000byte).
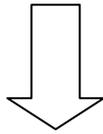
Divide the attachment file into several messages to send so that 1 message will not exceed the maximum length. (For example, divide 5 files into 3 files and 2 files).

(Message1 should attach4 files so that it willNOTexceed the maximumlength).

| MIME header, etc | MACCS-EDI message | Attachment file data 1 | Attachment file data 2 | Attachment file data 3 | Attachment file data 4 |

(Message 2 should attach3 files so that it willNOTexceed the maximum length).

| MIME header, etc | MACCS-EDI message | Attachment file data 1 | Attachment file data 2 | Attachment file data 3 |

Example of (2)
(If being sent in 1 message, it will exceed the maximum number of files).

| MIME header, etc | MACCS-EDI message | attachment file date 1 | Attachment file data 2 | ……. | Attachment file data 9 | Attachment file data 10 | Attachment file data 11 |
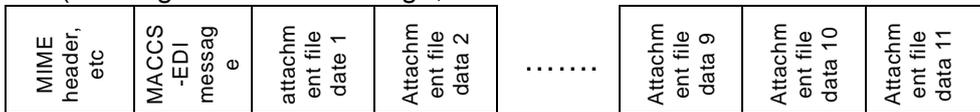
→ If 11 files are attached in 1 message, the message will exceed the maximum number of files.
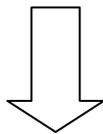
Decrease number of the attachment file by 10 files or less so that number of attached file per transaction request/response message SHOULD NOT EXCEED the maximum number. (For example, decrease number of files from 11 to 10.

(Message 1 should attach 10 files or less so that it will not exceed the maximum number of files).

| MIME header, etc | MACCS-EDI message | attachment file data 1 | Attachment file data 2 | ……. | Attachment file data 9 | Attachment file data 10 |
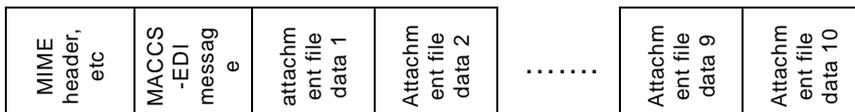
Figure 3-2-9Image of sending divided attachment files

3.2.2.4 Sequence of message process for attachment file

3.2.2.4.1 Interactive processing mode

Figure 3-2-10 describes the interactive processing mode (using Private terminal software) for attachment file. Figure 3-2-11 describes the interactive processing mode (using User system) for attachment files.
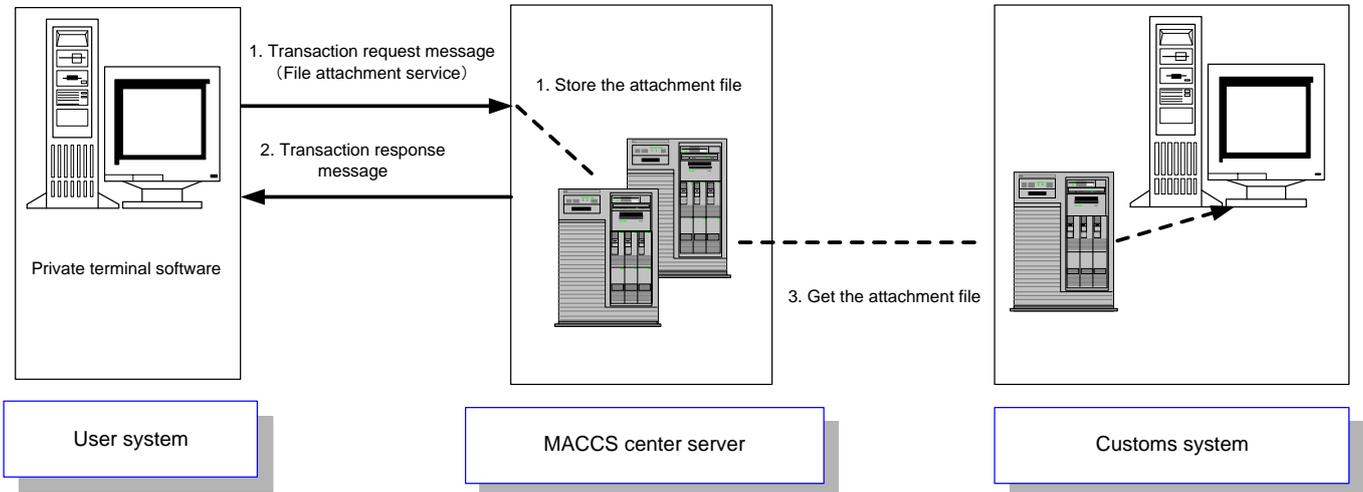
Figure 3-2-10 Interactive processing mode (usingPrivate terminal software) for attachment file
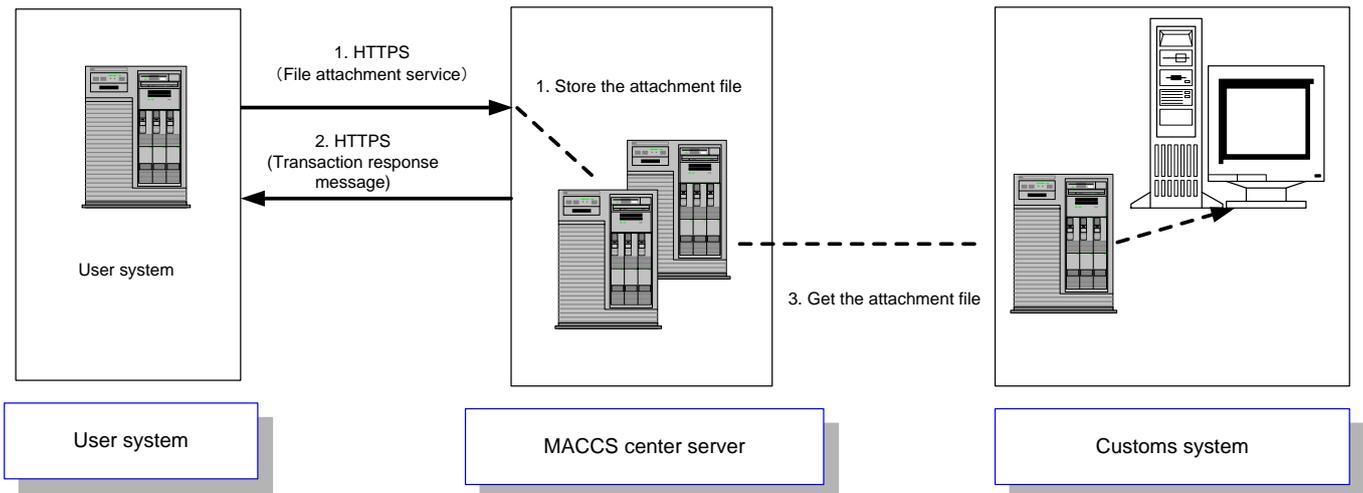
Figure 3-2-11 Interactive processing mode (using User system) for attachment file

1. User sends the message with attachment file to MACCS Center server through "Service for attachment file".
   MACCS issues "Attached file retrieval (registration) number", and stores (1) attachment file and (2) transaction output message with "Attached file retrieval (registration) number".

2. User receives transaction response message from MACCS center server. The transaction response message states that the attachment file is stored in MACCS

3. MACCS notify "Attached file retrieval (registration) number" to appropriate Customs officials and the Customs officials retrieve the stored attachment filethrough Customs system.

3.3 Message type

[Message class]

```
─Outbound         ──(1) Transaction request (outbound  from  User
 message             message              system to MACCS)

─Inbound          ──(2) Transaction      ──1. Transaction status ─────────────────────   Screen[R]
 message             response message       notice message                      ⋯
                     (inbound from
                     MACCS to User system)   2. Transaction      ─────────────────           Printer[P]
                                             output message    ┌ For printer        ⋯ i     (Report[P])
                                                               │
                                                               │ For screen         ⋯ ii    Screen[C]
                                                               │ (Non-query result) ⋯ .
                                                               │
                                                               └─────── Normal  ⋯ iii        Screen[M]
                                                                                        .
                                                                 For screen
                                                                 (Query result) └─ Error  ⋯  Screen [R]
```

―

※[Message class] indicates a value specified in Message Control Information in the output
   common segment in a message sent from the MACCS center server to a user system
   (inbound message).

※ Screen and Printer classes specified in a MACCS-EDI message is used to distinguish the
   following output scenarios when using a private terminal software provided by Myanmar
   Customs:

   1. "Printer" for printing a MACCS-EDI message using templates.

   2. "Screen" for displaying a MACCS-EDI message using templates.

In User system connection environments (using User system), attention to these
classifications is not necessary.

(1) Transaction request message

Messages sent by users in order to request transactions in the MACCS center server.

(2) Transaction response message (See "Appendix 1 Details of transaction response message")

1. Transaction status notice message (Screen [R])

This message is used to notify a user whether a transaction request message (excluding query) sent by the user has been processed normally or not.

If the transaction for the message in the main processor ends without errors, a status notice message indicating normal termination is sent; if the transaction ends with an error, a status notice message indicating error termination is sent.

If the error has occurred before the transaction processing in the main processor, another status notice (common errors) is sent. (See "Appendix 2 Code systems" for common errors).

2. Transaction output message

This message is generated after completing transaction processing for a transaction request message sent by a user in the main processor of the MACCS center server.

i. Transaction outputmessage (Printer [P]/ Report[P])

This message type is processed at User system to store as report from MACCS.

Figure 3-3-1 describes a process flow of a transaction outputmessage (for printer).
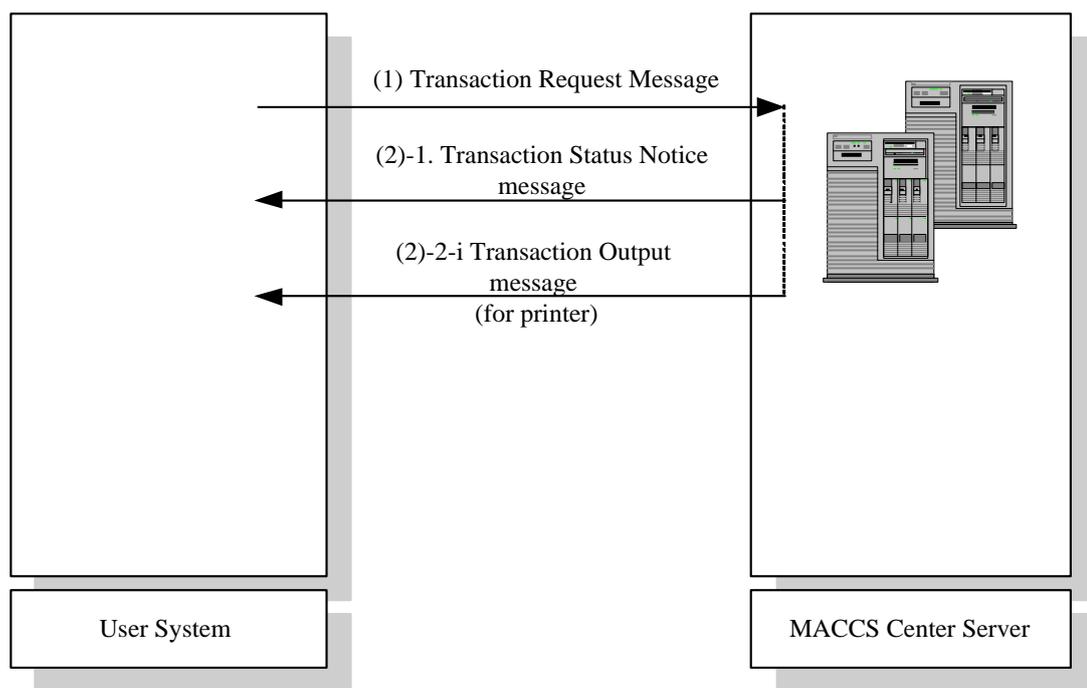
Figure3-3-1Flow of a transaction outputmessage(for printer)

ii.   Transaction output message(non-query result) (Screen [C])

This message type is processed at User system to refer as transaction result from MACCS.

Figure 3-3-2 describes a process flow of a transaction output message(non-query result) (for screen).

(1) Transaction Request Message

(2)-1. Transaction Status Notice message

(2)-2-ii Transaction Output message
(for screen)

User System

MACCS Center Server
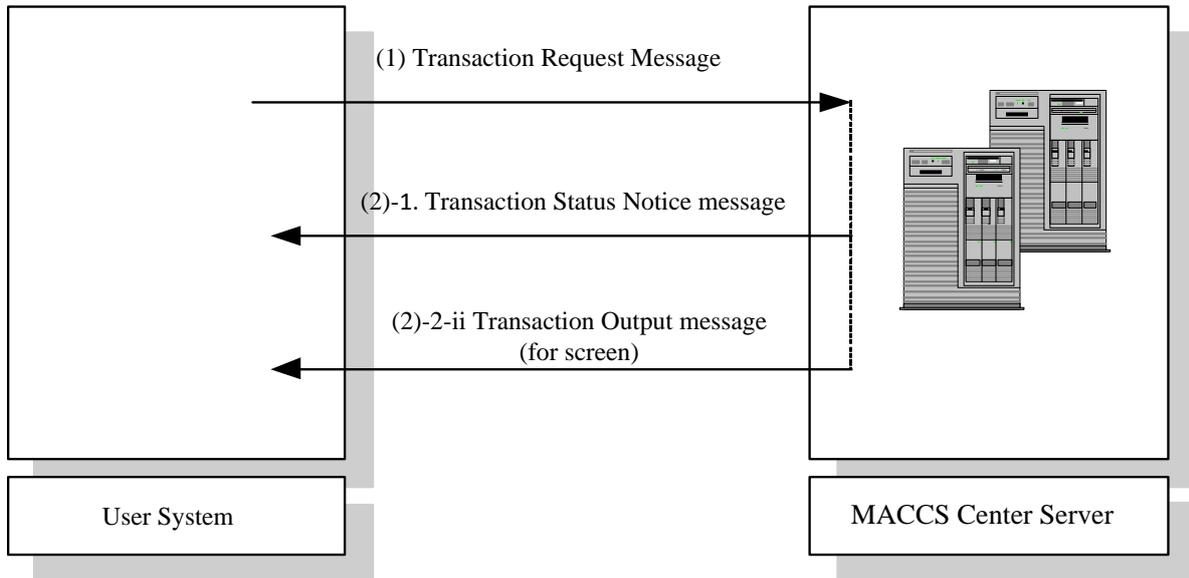
Figure3-3-2Flow of a transaction output message (non-query result) (for screen)

iii.   Transaction outputmessage (query result) (Screen [M], [R])

This message is generated after completing transaction processing for user's query request in the main processor of the MACCS center server. There are two types of query result: one for normal termination and the other for error termination.

If a request for a query transaction ends without errors (message class [M]), a query result message (including a normal termination code) is generated; if transaction processing ends with an error (message class [R]), an transaction response code is transmitted instead of a query result message.

Figure 3-3-3 shows a process flow of a transaction output message (query result) (for screen).

(1) Transaction Request Message

(2)-2-iii Transaction Output message
(query result) (for screen)

User System

MACCS Center Server
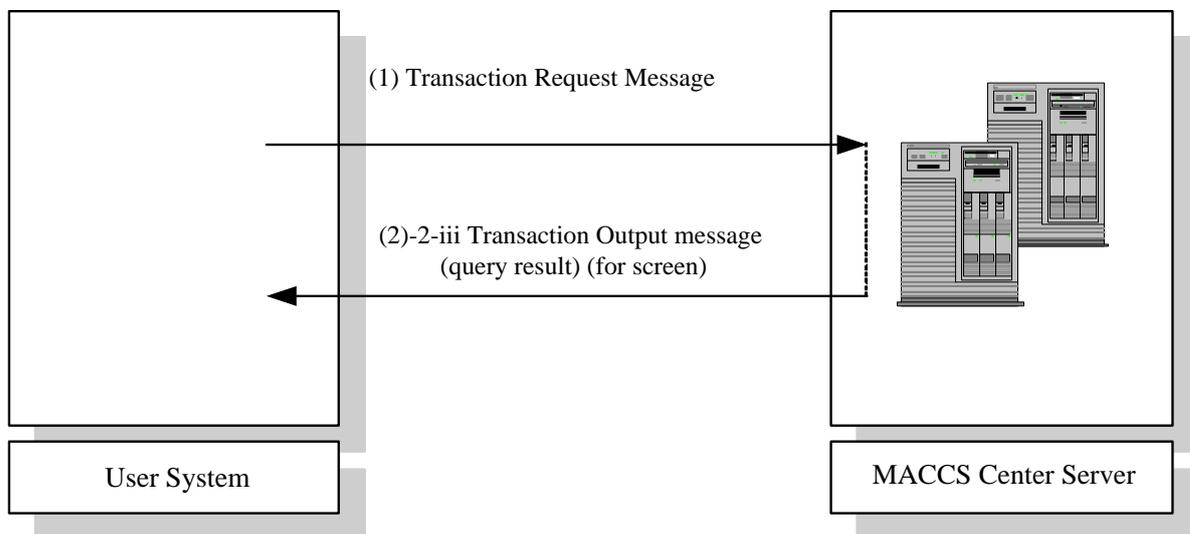
Figure3-3-3Flow of a transaction output message (query result) (for screen)

3.4 Message control elements

In MACCS, the following elements are used to identify correspondence between transaction request and response messages, and to construct messages.
Table 3-4-1summarizes the message control elements.

Table 3-4-1 Summary of message control elements

Name	Description	Usage
Input Message ID	A value as specified in Input Message ID in the corresponding transaction request message.	To identify correspondence between transaction request and response messages.
Message Tag	Set information for matching a transaction request message with a response message.	To identify correspondence between a transaction request and a single transaction response or a series of responses.
Index Tag	The MACCS center server stores a value in this element to indicate existence of a message that exceeds a size limit and is treated as a series of messages. The user who executed the query transaction uses this tag to continuously retrieve entire message with a single request.	Tocontinuously execute transaction processing until entire query results are retrieved. ∗Refer to "Processing to continue" column in Appendix Table2-7 List of output message (List of output information)"

Table 3-4-2 describes correspondence of Input Message ID and Message Tag elements in a transaction request message (Outbound from User system to MACCS) and its response message (Inbound from MACCS to User system).

Table 3-4-2 Correspondence of Input Message ID and Message Tag

Message Class		INQ Type (*1)		EXZ Type (*1)		EXC Type (*1)	
		Input Message ID	Message Tag	Input Message ID	Message Tag	Input Message ID	Message Tag
Transaction status notice message [R]		Y	Y				
Transaction output message	Printer / Report [P]	Y	N	Y	N	N	N
	Non-query result, Printer [C]	Y	Y				
	Query result (normal) [M]	Y	Y				
	Query result (error) [R]	Y	Y				

"Y":　　SAME value is set in the transaction request message.

"N":　　NO value is set in the transaction request message.

＼　　This pattern does not happen

(*1)　For details on INQ type, EXZ type and EXC type, see chapter 5 "Message destination control".

3.4.1 Input messageID

In MACCS, a value specified in Input Message ID in user's transaction request message is automatically transferred to the corresponding transaction response message.

The user can randomly choose a value for Input Message ID. If the user maintains a unique numbering system of Input Message ID for transaction requests in a certain period of time, the user can match a transaction request message with its corresponding transaction response.

However, because spaces are filled in Input Message ID in the EXC type message, another data element in the output common segment or the service specific segment such as AWB number or declaration number element needs to be used for matching a transaction request and its corresponding response message.

Table 3-4-3 shows setting of Input Message ID in a response message.

Table 3-4-3 Setting of Input Message ID in a response message

Message Destination Control Code	Input Message ID
INQ	A value in Input Message ID in the transaction request message is specified.
EXZ	
EXC	Spaces are set.

Figure 3-4-1describes a sample usage of Input Message ID (10 digits) in MACCS.
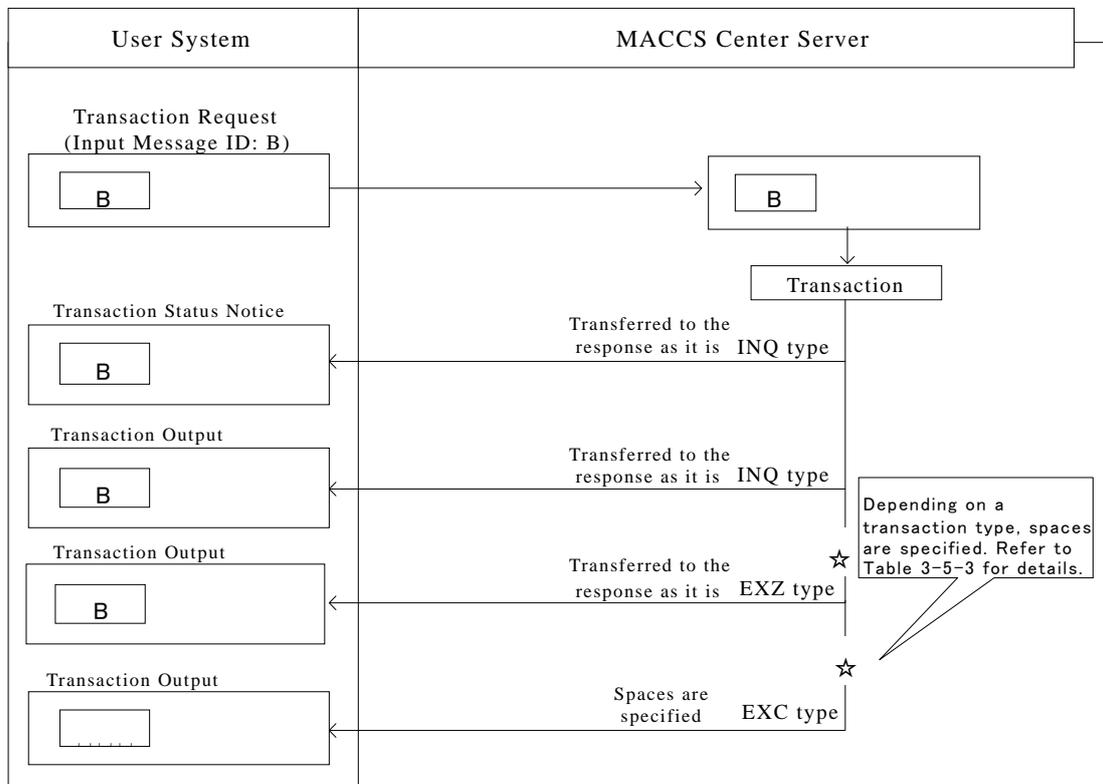
(Note: ⌣ denotes single-byte space)

Figure 3-4-1 Sample usage of Input Message ID

3.4.2 Message Tag, Message Control Information (Division Sequence Number, Termination, Message Class)

Users may receive multiple transaction output messages for a single transaction request. In order to identify the multiple outputs as a group, values in Message Tag and Message Control Information (Division Sequence Number, Termination, Message Class) in the common output segment in a response message are used.

Table 3-4-4 describes Message Tag, and Table 3-4-5 describes Message Control Information (Division Sequence Number, Termination, Message Class). And the numbering rule of Division Sequence Number is described in Table 3-4-6, and a sample usage of Message Tag and Message Control Information is described in Figure 3-4-2.

Table 3-4-4 Message Tag

Message Type	Class	Description
Transaction status noticemessage	[R]	In a transaction response message (Screen [R], [C], [M]), a value in Message Tag in its corresponding transaction request message is specified.
Transaction output message	[C]	If a user maintains a unique numbering system of Message Tag, the user can retrieve a series of transaction response messages. (*1)
	[M]	
	[P]	In a transaction response message (Printer [P]), Message Tag is filled with spaces.

(*1) When using a Private terminal software provided by Myanmar Customs, a unique value is automatically allocated to Message Tag in the input common segment when transmitting a transaction request message. In this case, the value in Message Tag allocated by the software is specified in the corresponding transaction response message (Screen [R], [C], [M]).

Table 3-4-5 Message Control Information

Name	Length	Description	
Division Sequence Number	3	A sequence number for the transaction response message is allocated based on the definitions in Table 3-5-6.	
Termination	1	'E' for the final message; otherwise a space.	
Message Class	1	To indicate a message class.	
		[R] (for screen)	Transaction status notice message, transaction output message(errors in query)
		[P] (for printer)	Transaction output message, management document (fixed-length delimiter format)
		[C] (for screen)	Transaction output message (excluding query result and message for user's own interface)
		[M] (for screen)	Transaction output message (query result)

Table 3-4-6 Numbering rule of Division Sequence Number

Message Type	Message Class	Division Sequence Number	Note
Transaction status notice message	R	000 (fixed)	
Query result (with error)	R		
Other transaction output messages	P, C, M (other than R)	001 (fixed)	

User System	MACCS Center Server
Only a transaction status notice message is generated for a transaction request. **<Transaction Request message>** Message Tag: AAA **<Transaction Status Notice message>** Message Tag: AAA Division Sequence No: 000 Termination: E Message Class: R Output Message Code: *MXXX	**(Main Processor)** **<Transaction Request message>** Message Tag: AAA Transaction
A transaction status notice message, an output for screen and an output for printer (INQ type) are generated for a transaction request. **<Transaction Request message>** Message Tag: BBB **<Transaction Status Notice message>** Message Tag: BBB Division Sequence No: 000 Termination: ␣ Message Class: R Output Message Code: *MXXX01 **<Transaction Output message (Screen)>** Message Tag: BBB Division Sequence No: 001 Termination: E Message Class: C Output Message Code: MAAXXX0 **<Transaction Output message (Printer)>** Message Tag: ␣ ␣ ␣ Division Sequence No: 001 Termination: E Message Class: P Output Message Code: MAAYYY0	**(Main Processor)** **<Transaction Request message>** Message Tag: BBB Transaction

(Note: ␣ denotes single-byte space)

Figure 3-4-2 Sample usage of Message Tag and Message Control Information

3.4.3 Sequential processing (index tag)

In MACCS, there is a service that user continuously repeats transaction request. If user carries out that service, the index tag in transaction response message will be specified in "Input common item" without any change, so that the transaction request will be made again. (Sequential processing)

Besides, if there is no continuous query result, spaces will be specified in the index tag.

If users (whose companies develop software by themselves) carry out the sequential processing service, it is needed to build and add the function for executing the sequential processing.

Output configuration of the sequential processing is described in Table 3-4-7.

Table 3-4-7Output configuration of the sequential processing

		Outline	Specified content of transaction request message sending from the second time		
			Index tag	Service code (Service ID)	Service specific segment
Pattern 1	Reference related service	Because of restrictions in the system load, the information volume which can be retrieved in one reference service is limited, all the necessary information will be retrieved by repeating the transaction request.	Index tag specified in transaction response message from MACCS center server (100 digits) is presented in transaction request message without any change. If the service processing gets faulty, the index tag will not be specified in the error of transaction response message.	Specify the being executed service code (without modification of service code).	Specify the specified content of transaction request message being sent the first time or the previous time without any change.
Pattern 2	Registration related procedure	Call the information incenter server so thatnew information willbe added to thatinformation and will be registered.		The procedurecode whensending the firsttransactionre questmessage isdifferent fromthe one whensending thesecondtransact ionrequestmessag e andthe requestmessage after that.	Set input item in accordance with data elements defined in detail design of each service.

!In case the transaction request result in error;

Pattern 1
Send new transaction request message of the "reference related service" with sameService code (Service ID).
In the "new transaction request message", please set the SAME "index tag"which is received in the last normally completed"reference related service".

Pattern 2
If the error occurs in the first time of registration procedure, there is no need of recalling to carry out the procedure. Please specify (set) the index tag of transaction response message when the call has been normally completed.
If the error occurs after the first time of the registration procedure, specify (set) the index tag of transaction response message which is received when the last registration had been normally completed.

Notice: Refer to the message being subject of sequential processing in "Processing to continue" column of Appendix Table2-7 List of output message (List of output information)".

Output configuration of sequential processing is described in Figure 3-4-3 and Figure 3-4-4.

In Private terminal softwareprovided byMyanmar Customs, the function for executing sequential processing is incorporated.

(Main Processing)

<Transaction request message >
```
Service code            : IDI
Index tag               : ⸤ ⸤ ⸤
Service specific segment : XXXX
```

Service processing
Index tag=AAA

(When executing the calling service, it must be specified in server)

Service specific segment is specified with specified content of transaction request message which was sent the first time or the previous time

<Transaction output message (Query result) >
```
Service code            : IDI
Index tag               : AAA
Service specific segment : YYYY
```

Index tag is specified with specified content of transaction output message (query result) without any change

< Transaction request message >
```
Service code            : IDI
Index tag               : AAA
Service specific segment  : XXXX
```

Service processing
Index tag=BBB

(If there is a continuous data, it will be specified in server)

<Transaction output message (Query result) >
```
Service code            : IDI
Index tag               : BBB
Service specific segment :ZZZZ
```

<Transaction request message>
```
Service code            : IDI
Index tag               : BBB
Service specific segment  : XXXX
```

Service processing
Index tag=⸤ ⸤ ⸤

(No continuous data)

If there is no query result, spaces will be specified in index tag

<Transaction output message (Query result) >
```
Service code            : IDI
Index tag               : ⸤ ⸤ ⸤
Service specific segment  : WWWW
```

User system

MACCS Center Server

（Note: ⸤ denotes one-byte space

Figure 3-4-3 Flow of sequential processing (pattern 1)
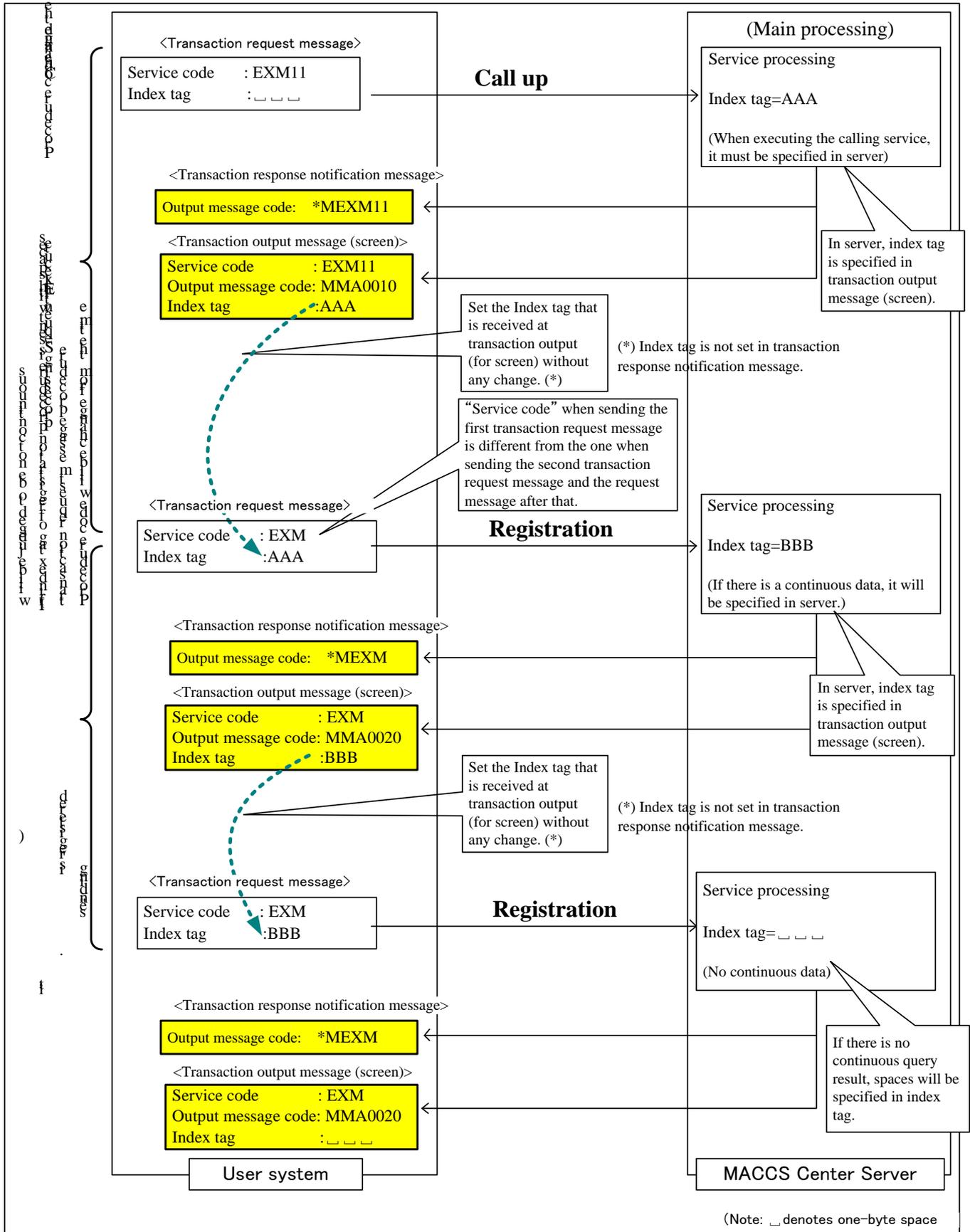
Figure 3-4-4 Flow of sequential processing (pattern 2)

Notice: "Service specific segment" in Pattern 2 omitted in the figure above. However, user should set and send request message to MACCS not only input common segment, but also service specific segment in accordance with data element defined in detail design of each service.

3.5 Code system

3.5.1 Character encoding system

This section describes a character encoding system used in MACCS-EDI messages and MCIS. Note that this encoding system is applicable only to MACCS-EDI messages and MCIS.

This encoding system isNOTapplicable to the communication protocol header and trailer, which are attached for transmission.

3.5.1.1 Character set in outbound messages (transaction request)

(1)Characters can be used for a data element with attribute 'n'

Characters within the bold line in Table 3-5-1are able to usefor a data element with attribute is 'an'in transaction request messages transmitted by users.

Table 3-5-1Character can be used for a data element with attribute'n'

Bit	b7	b6	b5	b4	b3	b2	b1	Row\Column	0	1	2	3	4	5	6	7
									0	0	0	0	1	1	1	1
									0	0	1	1	0	0	1	1
									0	1	0	1	0	1	0	1
				0	0	0	0	0			SP	0	@	P		
				0	0	0	1	1			!	1	A	Q		
				0	0	1	0	2			"	2	B	R		
				0	0	1	1	3			#	3	C	S		
				0	1	0	0	4			$	4	D	T		
				0	1	0	1	5			%	5	E	U		
				0	1	1	0	6			&	6	F	V		
				0	1	1	1	7			'	7	G	W		
				1	0	0	0	8			(	8	H	X		
				1	0	0	1	9			)	9	I	Y		
				1	0	1	0	A	LF		*	:	J	Z		
				1	0	1	1	B			+	;	K	[		
				1	1	0	0	C			,	<	L	\		
				1	1	0	1	D	CR		–	=	M	]		
				1	1	1	0	E			.	>	N	^		
				1	1	1	1	F			/	?	O	_		

Column

（Note）SP denotes a space.

Note: Invalid characters: !, ", #, $, %, &, ', (,), *, +, ",", /, :, ;, <, =, >, ?, @, 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, [, \,], ^, _,CR (hex '0D'), LF (hex '0A')
A CRLF character set is ONLY USED as a delimiter.

(2)Characterscan be used for a data element with attribute 'an'

Characters within the bold line in Table 3-5-2are able to usefor a data element with attribute is 'an'in transaction request messages transmitted by users.

Table 3-5-2Character set are able to use for a data element with attribute 'an' in outbound messages (transaction request)

Bit	b7	b6	b5	b4	b3	b2	b1	Row\Column	0	1	2	3	4	5	6	7
	0	0	0													
											SP	0	@	P		
	0	0	0	0	0	0	0	0			SP	0	@	P		
	0	0	0	0	0	0	1	1			!	1	A	Q		
	0	0	0	0	0	1	0	2			"	2	B	R		
	0	0	0	0	0	1	1	3			#	3	C	S		
	0	0	0	0	1	0	0	4			$	4	D	T		
	0	0	0	0	1	0	1	5			%	5	E	U		
	0	0	0	0	1	1	0	6			&	6	F	V		
	0	0	0	0	1	1	1	7			'	7	G	W		
	0	0	0	1	0	0	0	8			(	8	H	X		
	0	0	0	1	0	0	1	9			)	9	I	Y		
	0	0	0	1	0	1	0	A	LF		*	:	J	Z		
	0	0	0	1	0	1	1	B			+	;	K	[		
	0	0	1	1	0	0	0	C			,	<	L	\		
	0	0	1	1	0	0	1	D	CR		−	=	M	]		
	0	0	1	1	0	1	0	E			.	>	N	^		
	0	0	1	1	0	1	1	F			/	?	O	_		

（Note）SP denotes a space.

Note: Invalid characters: $, [, \,], ^, _, CR (hex '0D'), LF (hex '0A')
A CRLF character set is ONLY USED as a delimiter.

(3) Characters can be used for following (A)(B) (C) and (D) in transaction request message

(A) "Password" data element in input common segment

(B) "Password" data element in service specific segment in URY service

(C) "License No" data element in service specific segment in JLA service

(D)File name for attachment file described in "Chapter 3.2.2 Attachment file transmission message"

Characters within the bold line in Table 3-5-3 are able to use for following (A), (B)(C) and (D);

(A) "Password" data element in input common segment in transaction request messages transmitted by users.

"Password" data element is defined in following areas;

   (a)   No6, Table 3-1-1 of Chapter 3.1

   (b)   No7, Table 3-7-2 of Chapter 3.7

(B) "Password" data element in service specific segment in URY service

(C) "License No" data element in service specific segment in JLA service

(D) File name for attachment file described in "Chapter 3.2.2 Attachment file transmission message"

Also, please refer "Appendix 5 File types and other rules for attachment file" on this issue.

Table 3-5-3Characters can be used for following(A) (B) (C) and (D)
(A) "Password" data element in input common segment,
(B) "Password" data element in service specific segment in URY service
(C)"License No" data element in service specific segment in JLA service
(D) File name for attachment file described in "Chapter 3.2.2 Attachment file transmission message"

						0	0	0	0	1	1	1	1
						0	0	1	1	0	0	1	1
						0	1	0	1	0	1	0	1
Bit	b7	b6	b5	b4 b3 b2 b1	Row \ Column	0	1	2	3	4	5	6	7
				0 0 0 0	0			SP	0	@	P	`	p
				0 0 0 1	1			!	1	A	Q	a	q
				0 0 1 0	2			"	2	B	R	b	r
				0 0 1 1	3			#	3	C	S	c	s
				0 1 0 0	4			$	4	D	T	d	t
				0 1 0 1	5			%	5	E	U	e	u
				0 1 1 0	6			&	6	F	V	f	v
				0 1 1 1	7			'	7	G	W	g	w
				1 0 0 0	8			(	8	H	X	h	x
				1 0 0 1	9			)	9	I	Y	i	y
				1 0 1 0	A	LF		*	:	J	Z	j	z
				1 0 1 1	B			+	;	K	[	k	{
				1 1 0 0	C			,	<	L	\	l	|
				1 1 0 1	D	CR		−	=	M	]	m	}
				1 1 1 0	E			.	>	N	^	n	~
				1 1 1 1	F			/	?	O	_	o	

（Note） SP denotes a space.

Note: Invalid characters: CR (hex '0D'), LF (hex '0A')
A CRLF characterset is ONLY USED as a delimiter.

3-5-5

(4)Characters are able to use for a data element with attribute 'w'

Users are able to create transaction request messages with Myanmar charactersdefined as below threeMACCS/MCISpreconditions:

- Based on Level A character set is listed in Appendix E-4
- Characters within the bold line in Table 3-5-4 and Table 3-5-5
- All characters must be represented as UTF-8 characters in EDI message

In transaction messages, Myanmarcharacters are allowed in particular elements (attribute: w). Myanmar characters can be mixed from single-byteor two-byte or three-byte UTF-8 characters.. Note that since the Private terminal software provided by Myanmar Customsautomatically converts Unicode character codes to UTF-8 character codes, Unicode characters are handled as UTF-8 characters on PCs.

In EDIFACT messages, "#" and "@" can also be used in addition to the characters included in Level A character set. ("#" and "@" do not cause errors in the EDIFACT server.)

Level A character set is listed in Appendix E-4.

Table 3-5-4 Character set are able to use for a data element with attribute 'w'

	000	001	002	003	004	005	006	007	008	009	00A	00B	00C	00D	00E	00F
0			SP	0	@	P	`	p								
1			!	1	A	Q	a	q								
2			"	2	B	R	b	r								
3			#	3	C	S	c	s								
4			$	4	D	T	d	t								
5			%	5	E	U	e	u								
6			&	6	F	V	f	v								
7			'	7	G	W	g	w								
8			(	8	H	X	h	x								
9			)	9	I	Y	i	y								
A		LF	*	:	J	Z	j	z								
B			+	;	K	[	k	{								
C			,	<	L	\	l	|								
D		CR	-	=	M	]	m	}								
E			.	>	N	^	n	~								
F			/	?	O	_	o									

Note: Invalid characters: CR (hex '0D'), LF (hex '0A')
A CRLF characterset is ONLY USED as a delimiter.

Table 3-5-5 Character set can be used for a data element with attribute 'w'

	100	101	102	103	104	105	106	107	108	109	10A	10B	10C	10D	10E	10F
0	က	တ	၄	ူ	၀	ၐ	ၠ	ႂ	႐	၀						
1	ခ	ထ	အ	ေ	၁	ၑ	ၡ	ႃ	႑	၁						
2	ဂ	ဒ	ဢ	ဲ	၂	ၒ	ၢ	ႄ	႒	၂						
3	ဃ	ဓ	ဣ	ဳ	၃	ၓ	ၣ	ႅ	႓	၃						
4	င	န	ဤ	ဴ	၄	ၔ	ၤ	ႆ	႔	၄						
5	စ	ပ	ဥ	ဵ	၅	ၕ	ၥ	ႇ	႕	၅						
6	ဆ	ဖ	ဦ	ံ	၆	ၖ	ၦ	ႈ	႖	၆						
7	ဇ	ဗ	ဧ	့	၇	ၗ	ၧ	ႉ	႗	၇						
8	ဈ	ဘ	ဨ	း	၈	ၘ	ၨ	ႊ	႘	၈						
9	ဉ	မ	ဩ	္	၉	ၙ	ၩ	ႋ	႙	၉						
A	ည	ယ	ဪ	်	၊	ၚ	ၪ	ႌ	ႚ	Ⴀ						
B	ဋ	ရ	ါ	ျ	။	ၛ	ၫ	ႍ	ႛ	Ⴁ						
C	ဌ	လ	ာ	ြ	၌	ၜ	ၬ	ႎ	ႜ	Ⴂ						
D	ဍ	ဝ	ိ	ွ	၍	ၝ	ၭ	ႏ	ႝ	Ⴃ						
E	ဎ	သ	ီ	ှ	၎	ၞ	ၮ	႐	႞	Ⴄ						
F	ဏ	ဟ	ု	ဿ	၏	ၟ	ၯ	႑	႟	Ⴅ						

Table 3-5-5 cites documents described in following URL;

<http://www.unicode.org/charts/PDF/U1000.pdf>

3.5.1.2 Character set in inbound messages (transaction response)

"Transaction response" means "transaction status notice", and "transaction output", which aretransmitted from the MACCS/MCIS center server to users.

For more details about "transaction status notice", "transaction output", please refer figure in first page (Page 3-3-1) of Chapter 3.3.

(1)Characters can be used for a data element with attribute 'n'

"Characters can be used for a data element with attribute 'n' in transaction response"**ARE SAME AS "Characters can be used for a data element with attribute 'n' in TRANSACTION REQUEST".**

Please refer Characters within the bold line in Table 3-5-1for details.

(2)Characters can be used for a data element with attribute 'an'

Characters within the bold line in Table 3-5-6 can be used for a data element with attribute is 'an' in transaction response messages (transaction status notice, transaction output) transmitted from the MACCS/MCIS center server to users.

Note that in EDIFACT messages, "#" and "@" can also be used in addition to the characters included in Level A character set. ("#" and "@" do not cause errors in the EDIFACT server.)

Level A character set is listed in Appendix E-4.

Table 3-5-6 Character set are able to use for a data element with attribute 'an'
in inbound messages (transaction response)

Bit	b7	b6	b5	b4	b3	b2	b1	Row \ Column	0	1	2	3	4	5	6	7
	0	0	0													
									0	0	0	0	1	1	1	1
									0	0	1	1	0	0	1	1
									0	1	0	1	0	1	0	1
				0	0	0	0	0			SP	0	@	P		
				0	0	0	1	1			!	1	A	Q		
				0	0	1	0	2			"	2	B	R		
				0	0	1	1	3			#	3	C	S		
				0	1	0	0	4			$	4	D	T		
				0	1	0	1	5			%	5	E	U		
				0	1	1	0	6			&	6	F	V		
				0	1	1	1	7			'	7	G	W		
				1	0	0	0	8			(	8	H	X		
				1	0	0	1	9			)	9	I	Y		
				1	0	1	0	A	LF		*	:	J	Z		
				1	0	1	1	B			+	;	K	[		
				1	1	0	0	C			,	<	L	\		
				1	1	0	1	D	CR		−	=	M	]		
				1	1	1	0	E			.	>	N	^		
				1	1	1	1	F			/	?	O	_		

（Note）SP denotes a space.

Note: Invalid characters: CR (hex '0D'), LF (hex '0A')
A CRLF characterset is ONLY USED as a delimiter.

---

(3)Characters can be used for following (A) and (B) in transaction response message

    (A) "password" data element in service specific segment in URY service

    (B) "License No" data element in service specific segment in JLA service

    (C) File name for attachment file described in "Chapter 3.2.2 Attachment file transmission message"

    "Characters can be used for above (A)　(B) and (C) "**ARE SAME AS "(3) Characters can be used for following (A) (B) (C) and (D) in TRANSACTION REQUEST message" in Chapter 3.5.1.1.**

(4)Characters can be used for a data element with attribute 'w'

    "Characters can be used for a data element with attribute 'an' in transaction response"**ARE SAME AS "Characters can be used for a data element with attribute 'w' in TRANSACTION REQUEST".**

    Please refer following conditions for details;

-   Based on Level A character set is listed in Appendix E-4
-   Characters within the bold line in Table 3-5-4 and Table 3-5-5

    Note that in EDIFACT messages, "#" and "@" can also be used in addition to the characters included in Level A character set. ("#" and "@" do not cause errors in the EDIFACT server.)

    Level A character set is listed in Appendix E-4.

3.5.2 Corruption of characters

    In MACCS/MCIS, some processes handle output elements with UTF-8 Myanmarcharacters. Therefore, in some models of user gateway computers, corruption of characters (not allowed characters) may occur in texts, and contents of output elements may not be processed properly due to corrupt texts.

3.6   Message storage table and fetch transaction

3.6.1   Message storage table for INTERACTIVE processing method

The message storage table for INTERACVITVE processing methodis a storage space that temporarily stores following message class messages: Printer [P]. The message storage table for INTERACVITVE processing method is used in Interactive processing method (using User system). And process for getting a message from the message storage table is called "fetch transaction".

3.6.2   Message storage table for DELAYED processing method

The message storage table for DELAYED processing method is a storage space that temporarily stores following message class messages: Screen [R], [C], [M], Printer [P]. The message storage table for DELAYED processing method is used in Delayed processing method (using User system).Difference from 3.6.1 is that Screen [R], [C], [M], is also stored in message storage table.

Table 3-6-1 explains difference between Message storage table for INTERACTIVE processing method and Message storage table for DELAYED processing method.

Table 3-6-1 Difference in usage of the message storage table by processing method

Message Class		(1) Message storage table for INTERACTIVE processing method	(2) Message storage table for DELAYED processing method
Transaction status notice message [R]			Y
Transaction output message	Printer / Report [P]	Y	Y
	Non-query result, Printer [C]		Y
	Query result (normal) [M]		Y
	Query result (error) [R]		Y

Y   The message IS stored in the message storage table.

＼   The message is NOT stored in the message storage table.
           Instead, themessage is sent as response to the request of
           transaction requestmessage (Outboundfrom User system to MACCS).

> **!**
>
>   In Message storage table for INTERACTIVE processing method,messages other than the following message classes are not stored in the message storage table: Printer / Report [P].
>
> It is becausemessage is sent as response to the request of Transaction request message (Outbound from User system to MACCS).
>
>   Therefore, if process failure occurs due to a network problem or a shutdown of the MACCS center server or the User systemserver while processing a message, the message is discarded and becomes unavailable to the user.

3.6.3 Fetch transaction

    For INTERACTIVE processing method, #REP1 transaction (for fetching messages in the message storage table,hereinafter refer to "#REP1")isused when retrieving transaction output messages from the message storage table on the MACCS center server.

    For DELAYED processing method, #REM1 transaction (for fetching messages in the message storage table, hereinafter refer to "#REM1") isused when retrieving transaction response messages from the message storage table on the MACCS center server.

3.6.3.1 #REP1 transaction

#REP1 transaction is provided for fetching messages stored in message storage table.
<u>#REP1 is only for INTERACVITVE processing method.</u>
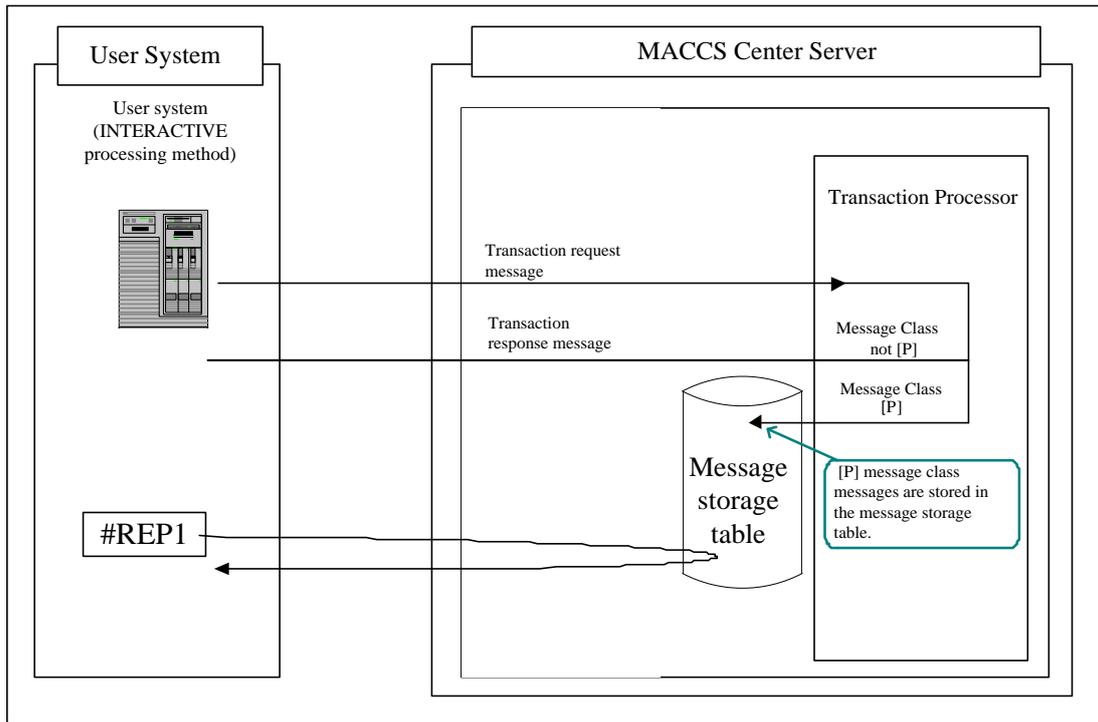
**Figure 3-6-1Overview of a message stored in the message storage table for
interactive processing method**

3.6.3.2 #REM1 transaction

#REM1 transaction is provided for fetching messages stored in message storage table.
<u>#REM1 is only for DELAYED processing method.</u>
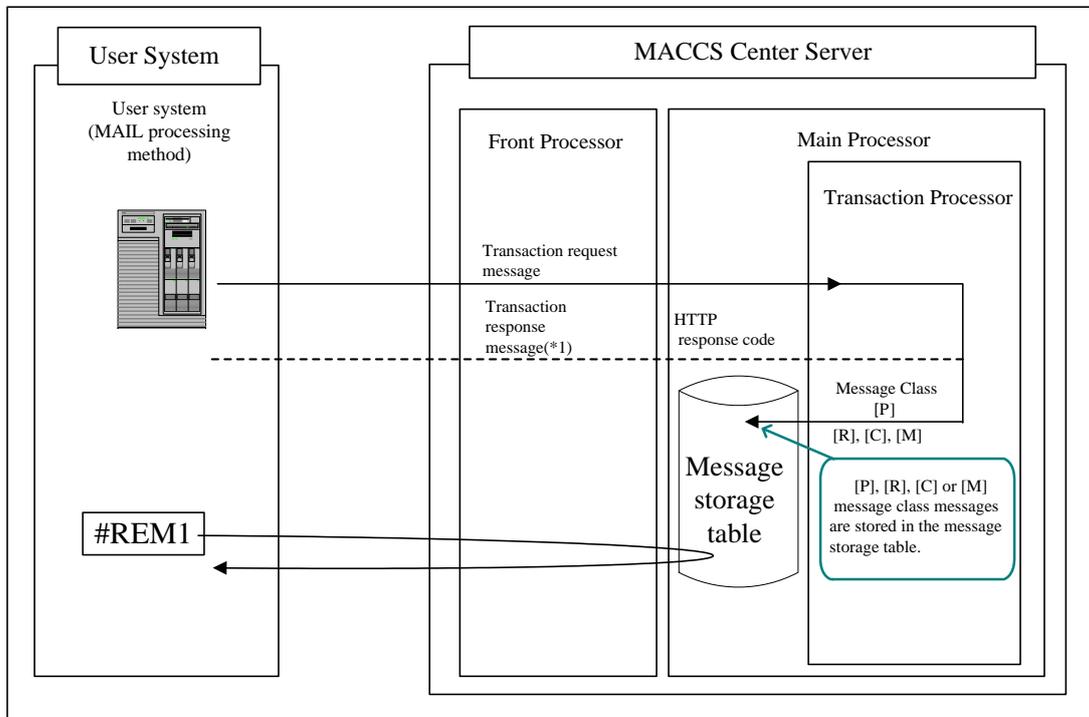
**Figure 3-6-2Overview of a message stored in the message storage table for
Delayed processing method**

(*1: In case of invalid common segment, common error will be sent to User system. Please refer
Chapter 1.4.1 in Appendix1 and Appendix Table 2-4 in Appendix 2 for details)

3.6.4   Process flow of Fetch transaction

3.6.4.1 Process flow of #REP1 transaction

In #REP1 transaction, messages stored in the message storage table are fetched according to the following procedure.
Figure 3-6-3 describes a process flow of #REP1 transaction.

As for message format of Acknowledgement message(?A2), please refer to "3.7.2 Format of control message".

(1)-1In #REP1 transaction, user send "#REP1" message(Refer to Table 3-6-2).

(1)-2In case #REP1 has no response, user should re-send "#REP1" message.

(2)-1In case #REP1 has processed, an output message will be sent from MACCS center server to user system.

(2)-1-A Incase user system could receive the transaction output message insidethe message storage table normally, send "Acknowledgement message" (?A2） to MACCS center server after receiving. MACCS center server will delete the corresponding transaction output message from the message storage table after receiving the Acknowledgement message.

> ❗Notes related to "Acknowledgement message"(?A2)
> - As for RTP tag inside input common segments, RTP tag of output information message received will be set.

(2)-1-B Incase the number of messages of the output message is large and they have been restored in the message storage table, the next transaction output message will be send by MACCS center server after receiving "Acknowledgement message" (?A2) from user system.

(2)-1-C If there is no the next message, MACCS center server send "END_OF_MESSAGE" message. User system should judge that there is no transaction output message fetched in the message storage table, and the process will be finished.

> **!**
>
> - #REP1 transaction should be executed regularly in order to fetch messages stored in the message storage table on the MACCS center server. However, because #REP1 transaction adds heavy load to the MACCS center server, we recommend to execute #REP1 transaction EVERY 5 minutes OR MORE.
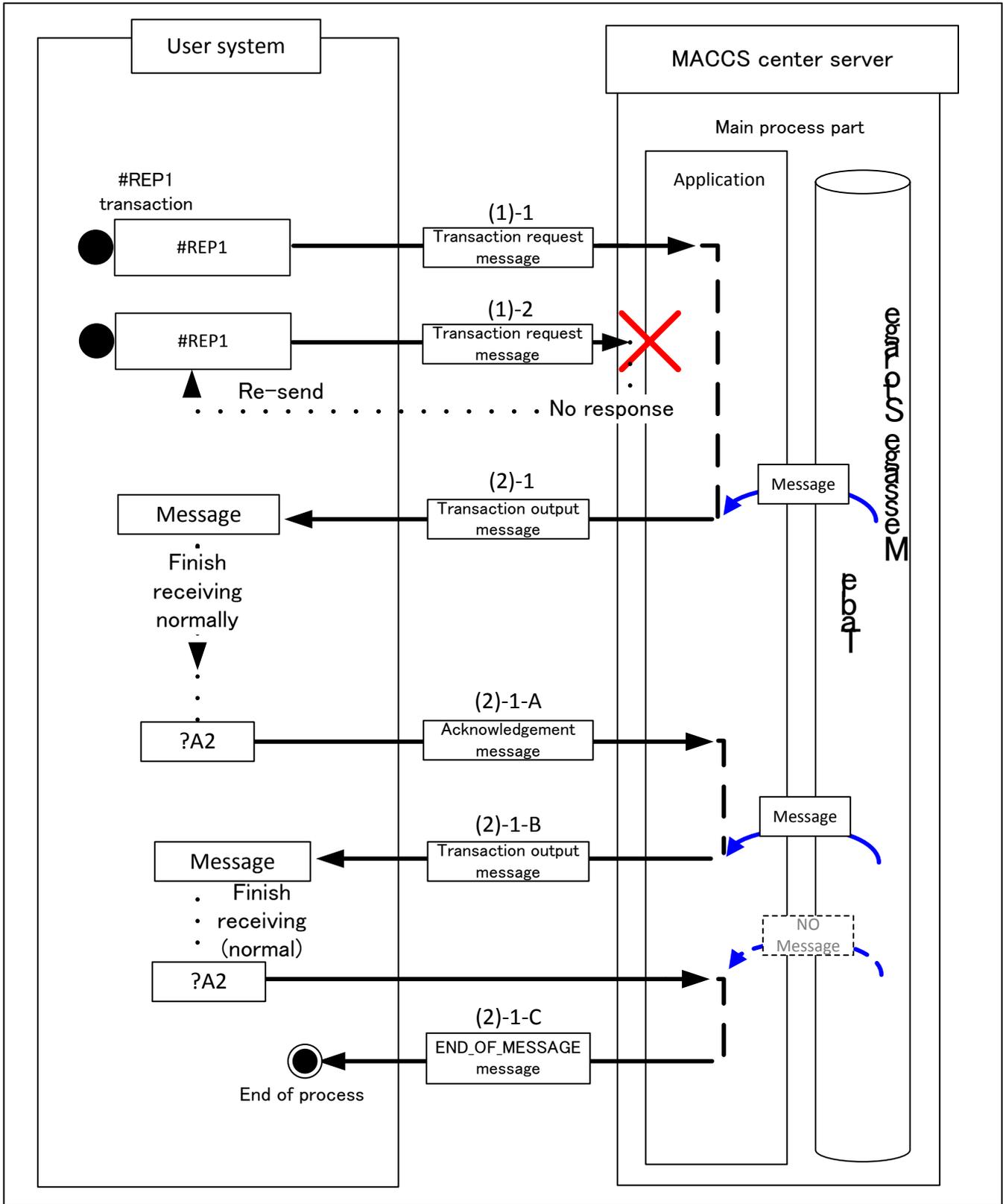
Figure 3-6-3Example of process sequence of #REP1 transaction

3.6.4.2 Process flow of #REM1 transaction

In #REM1 transaction, messages stored in the message storage table are fetched according to the following procedure.
Figure 3-6-4 describes a process flow of #REM1 transaction.

As for message format of Acknowledgement message(?A2), please refer to "3.8.2 Format of control message".

(1)-1 In #REM1 transaction, user send "#REM1" message (Refer to Table 3-7-3).

(1)-2 In case #REM1 has no response, user should re-send "#REM1" message.

(2)-1 In case #REM1 has processed, an output message will be sent from MACCS center server to user system.

(2)-1-A Incase user system could receive the transaction output message inside the message storage table normally, send "Acknowledgement message" (?A2) to MACCS center server after receiving. MACCS center server will delete the corresponding transaction output message from the message storage table after receiving the Acknowledgement message.

! Notes related to "Acknowledgement message"(?A2)
- As for RTP tag inside input common segments, RTP tag of output information message received will be set.

---

(2)-1-B Incase the number of messages of the output message is large and they have been restored in the message storage table, the next transaction output message will be send by MACCS center server after receiving "Acknowledgement message" (?A2) from user system.

(2)-1-C If there is no the next message, MACCS center server send "END_OF_MESSAGE" message. User system should judge that there is no transaction output message fetched in the message storage table, and the process will be finished.

> [!]
>
> - #REM1 transaction should be executed regularly in order to fetch messages stored in the message storage table on the MACCS center server. However, because #REM1 transaction adds heavy load to the MACCS center server, we recommend to execute #REM1 transaction EVERY 5 minutes OR MORE.
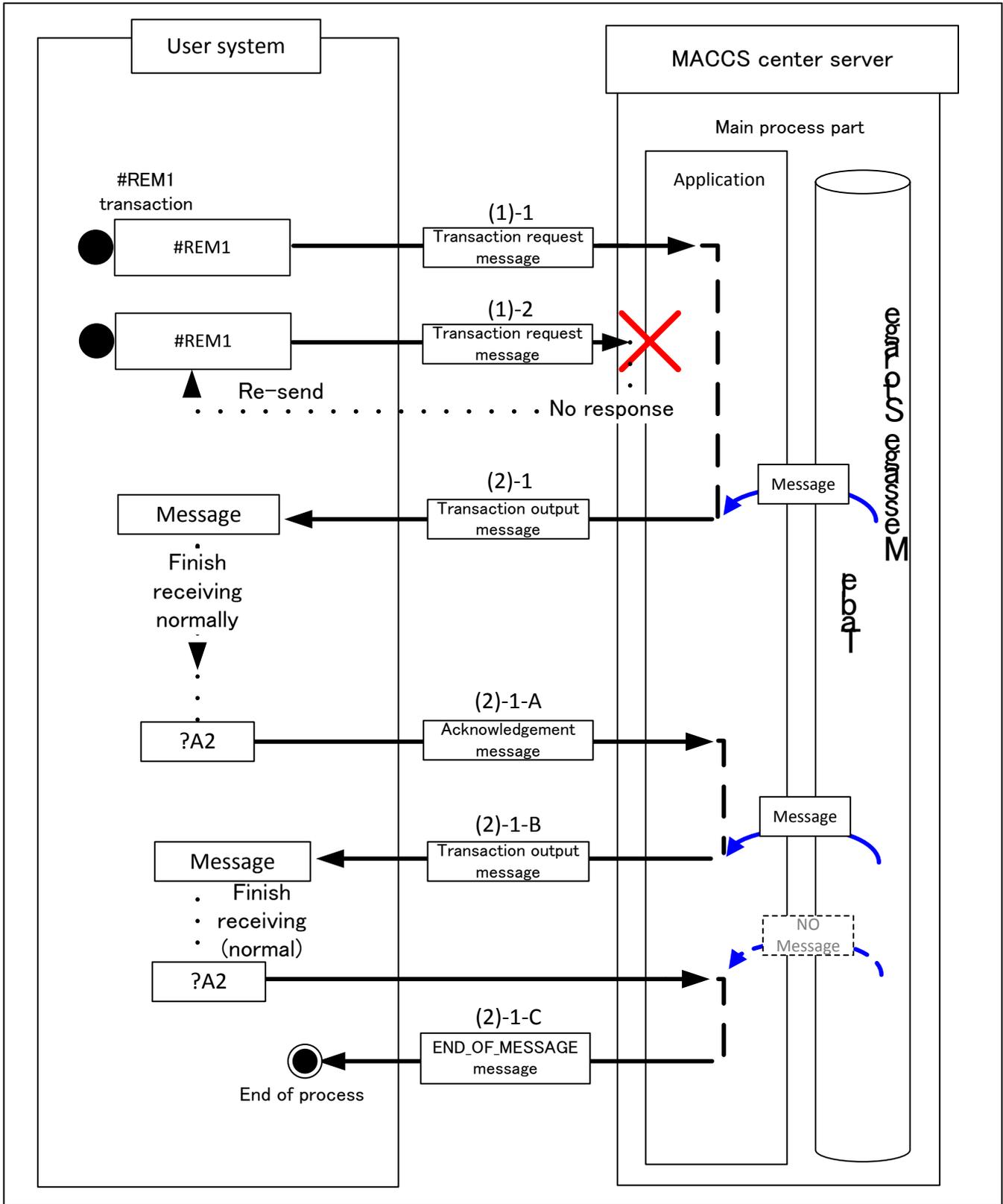
Figure 3-6-4Example of process sequence of #REM1 transaction

3.6.5 Message format of fetching transaction

（1）Example message for #REP1

In order to fetch a message stored in the message storage table, the user sends a message to the MACCS center server in the following form. Figure 3-6-5 shows an example message. And servicespecific segmentincluded in the #REP1 transaction request format are described in Table 3-6-2.

XXXXXXXXXX ······· XXXXXXXXXX < CRLF >
Input Common Segment (398 bytes)

XXXXXX < CRLF >
Terminal ID (6 bytes)

XXXXXXXXXXXXXXXX < CRLF >
Terminal Access Key (16 bytes)

1 < CRLF >
Auto execute flag (1 byte, always set '1')
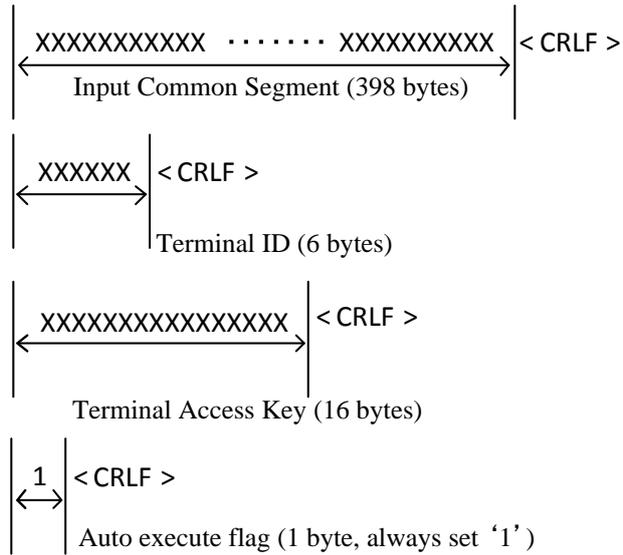
Figure 3-6-5 Example of a #REP1 transaction request message

Table 3-6-2Service specific segment in a #REP1 transaction request

Element	Length	Description	Sample Setting
Terminal ID	6	Set Terminal ID.	BC001C
Delimiter	2	Indicate the end of the segment.	(Always CRLF)
Terminal access key	16	Set Terminal access key.	ABCDEF123456ABCD
Delimiter	2	Indicate the end of the segment.	(Always CRLF)
Auto execute flag	1	Set Auto execute flag.	1 (always set '1')
Delimiter	2	Indicate the end of the segment.	(Always CRLF)

（2）Example message for #REM1

In order to fetch a message stored in the message storage table, the user sends a message to the MACCS center server in the following form. Figure 3-6-6 shows an example message. And service specific segment included in the #REM1 transaction request format are described in Table 3-6-3.
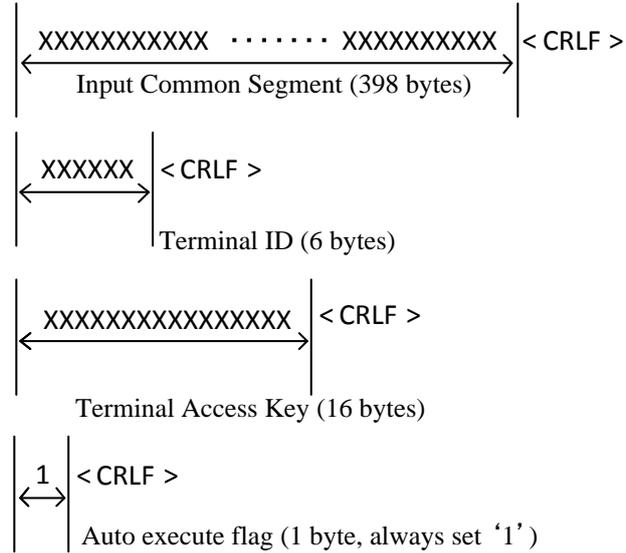

Figure 3-6-6Example of a #REM1 transaction request message

Table 3-6-3Service specific segment in a #REM1 transaction request

Element	Length	Description	Sample Setting
Terminal ID	6	Set Terminal ID.	BC001E
Delimiter	2	Indicate the end of the segment.	(Always CRLF)
Terminal access key	16	Set Terminal access key.	ABCDEF123456ABCD
Delimiter	2	Indicate the end of the segment.	(Always CRLF)
Auto execute flag	1	Set Auto execute flag.	1 (always set '1')
Delimiter	2	Indicate the end of the segment.	(Always CRLF)

（3）ExampleEND_OF_MESSAGEmessage

If there is no message to fetch, MACCS center server send "END_OF_MESSAGE message". User system should judge that there is no transaction output message fetched in the message storage table, and the process will be finished.

Figure 3-6-7 shows an example message.

PLEASE NOTE THAT THIS MESSAGE HAS NO OUTPUT COMMON SEGMENT.


```
|                          |
|    END_OF_MESSAGE    |   < CRLF >
|<------------------->|
|                          |          END_OF_MESSAGE (14 bytes)
|                          |

|                 |
|  XXXXXXXXXX  |  < CRLF >
|<----------->|
|                 |     (Reserved area)  (10 Bytes OR LESS)
|                 |
```
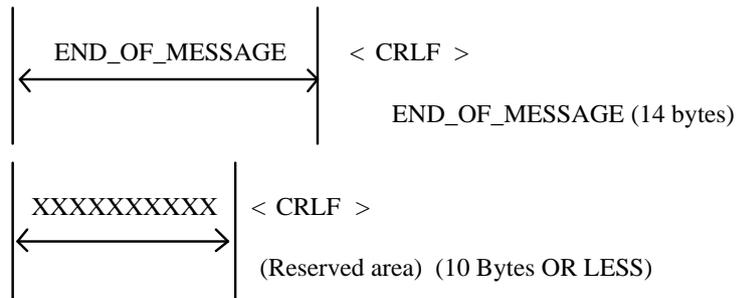
Figure 3-6-7Example of a END_OF_MESSAGE message

The reserved area is used to control system.

3.7　Control message

3.7.1　　　　Control message

　This message type is used to communicate non-business related information between a user system and the main processor in the MACCS center server. Control messages are originated in a user system or the main processor.

　Types of control message are listed inTable 3-7-1.

Table 3-7-1Control message types (transaction request)

No	Type	Message Class	Service code (Service ID)	Output Message Code (Output information ID)	Description	Note
1	Acknowledgement message		?A2		The user sends this message to the main processor when a transaction response message stored in the message storage table is successfully transmitted.	The main processor deletes the corresponding transanction response message from the message storage table.

3.7.2   Format of control message

Message format of the control message type (Acknowledgement message (?A2)) are describe in Table 3-7-2.

Table 3-7-2Input common segment of the acknowledgement message (?A2)
(For interactive processing mode and delayed processing mode)
（The acknowledgement message (?A2) has the input common segment only）

No	Element		Length	Description	Sample Setting
1	Transaction Control Code		3	Set a transaction control code.	SS␣ (For the interactive processing) ES␣ (For delayed processing) (␣ denotes one-byte space.)
2	Service code (Service ID)		5	Set a service code (Service ID).	?A2␣␣
3	Output Message Code (Output information ID)		7	Always spaces	Spaces
4	Message Receive Date		14	Always spaces	Spaces
5	User ID	User Code	5	Set a user code, ID number and password for identifying a user.	00001
6		ID Number	3		001
7	Password		8		********
8	Terminal ID		6	Set a terminal ID that made this request.	BC001C
9	(Reserved Area)		64	Always spaces	Spaces
10	Subject		64	Always spaces	Spaces
11	RTP Tag		30	Set the value of RTP Tag specified in the received message.	Set the value of RTP Tag specified in the received message.
12	(Reserved Area)		10	Always spaces (*)	Spaces
13	Message Tag		26	Set information for matching a transaction request with a response message.	The sender assigns a unique number. When using Private terminal software, Message Tag data is automatically set.
14	Message Control Code		8	Always spaces	Spaces
15	Input Message ID		10	Output in the corresponding transaction response message.	The sender assigns a any character or key information that sender would like to set.
16	Index Tag		100	Always spaces	Spaces
17	(Reserved Area)		1	Always spaces (*)	Spaces
18	System ID		1	Set a system identification as 1.	1
19		(Reserved Area)	27	Always spaces (*)	Spaces
20		Message Length	6	Indicate the size in bytes of the MACCS-EDI message (including the input common segment). The MACCS center server acknowledges the termination of the message with this value.	always set "00400".
21		Total	398	■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■

(*1)The reserved areas are used to control system.
(*2) A value in RTP Tag is used for sequential transaction processing in the MACCS center server. The user sets the same value as specified in RTP Tag in the receivedtransaction response message.

4.Detailsofeachprocessingmode

4 Details of each processing mode

4.1 Interactive processing method

4.1.1 Overview

The overview of Interactive processing method in MACCS is described in Figure 4-1-1. Interactive processing method sends message in real time when message is generated. The interactive processing method can be implemented only on the environments where a dedicated interactiveuser serveror terminal software is installed on the user side.It is required that each user system has to have high availability.In this document user server and terminal software are referred to as a client generically.
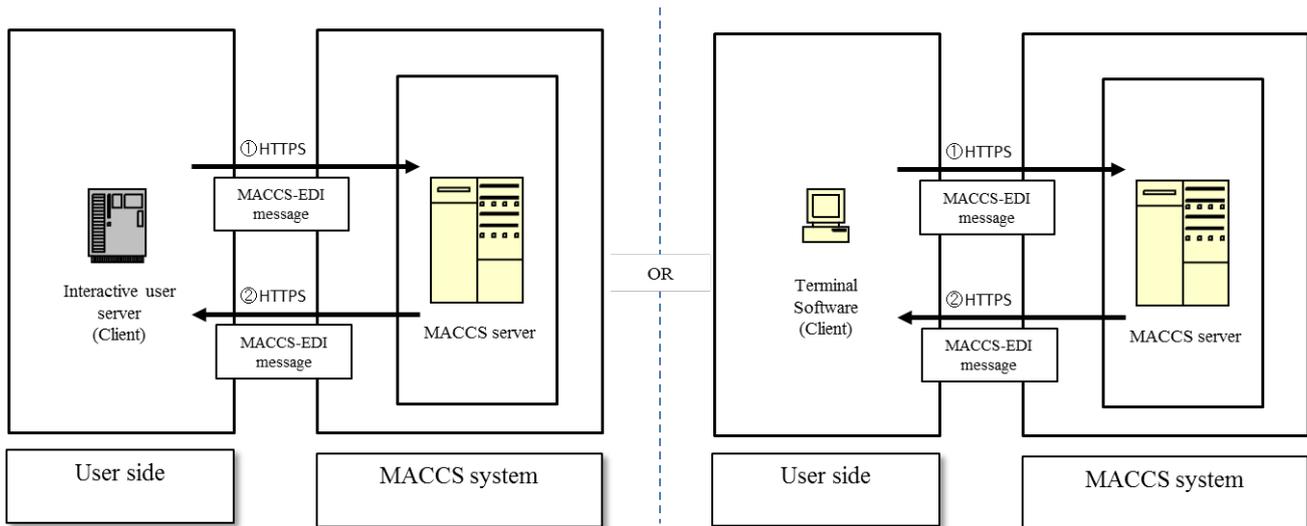

Figure 4-1-1.Overview of interactive processing method

1. A client sends a MACCS-EDI message that contains necessary data for a MACCS serviceusingHTTPS protocol. Then the MACCSserver receives the message from the client and executes a corresponding MACCS service.

2. A transaction response message is sent back to the client, after executing a MACCS service.

4.1.2 Details of communication protocols and MACCS-EDI message

In communication protocols of interactive processing method, TCP/IP is used in Network and Transport layers. HTTPS is used in the upper layer.

(1) Message format

The message format of MACCS message in interactive processing method is described as below. It is referred to as MACCS-EDI message. When transmitting a MACCS-EDI message, a communication protocol header is added to the message. When the message has no attachment file, it has to be a HTTP single part POST message.

Communication protocol header	In/Output Common Segment	Service Specific Segment

MACCS-EDI message (max 500,000 bytes)

(Refer to "Chapter 3. Message structure and format")
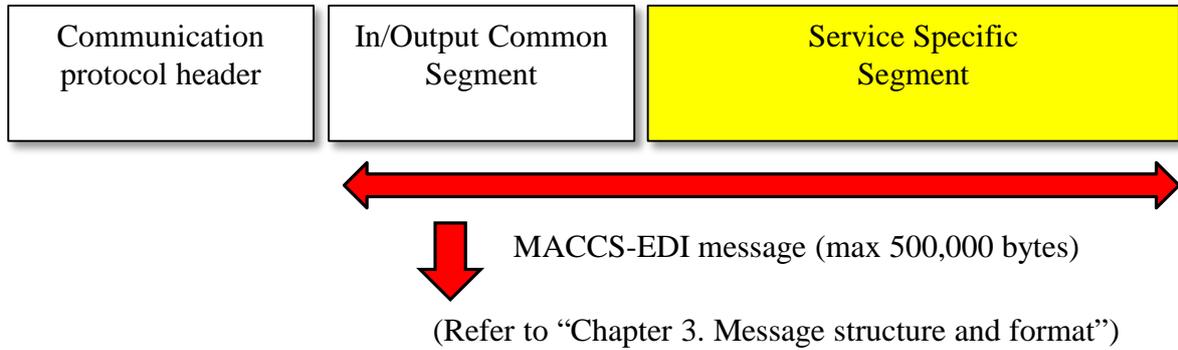
Figure 4-1-2Message format of the interactive processing method

The message format of MACCS message with attachment files is described as below.It has to be multi-part message and needs MIME header. Content-Type is"multipart/form-data" for uploading and"multipart/mixed" set by MACCS server when downloading.

Protocol header											
System header part/Service data part											
MIME header	content field	boundary	content field	MACCS message	boundary	content field	attachment file data 1	boundary	...	content field	attachment file data n	boundary
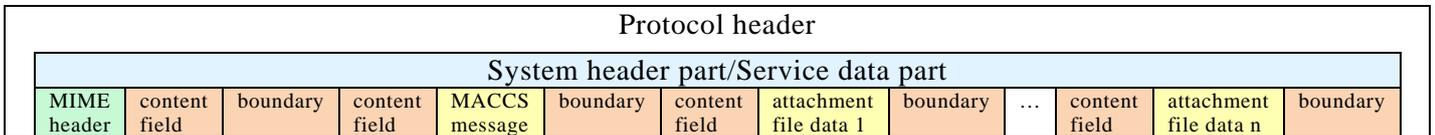
Figure 4-1-3   Attachment message format

Table 4-1-1 The message with attachment file

Items	Value
Maximum count of attachment files per transaction	10 (*)
Maximum size of the total size of attachment files	3,000,000 bytes (*)
Maximum size of MACCS message	100,000 bytes
Message part structure	Multi-part
File type(extension)	Word(docx, doc), Excel(xlsx, xls), PowerPoint(pptx, ppt), PDF, JPEG, JPG, GIF, PNG, TIFF, TIF, CSV, TXT, XML

(*) These value means just a server side system capacity.Then these valueswould be adjusted considering the environment including internet speed for each service.

(2) URL format

The URL format to use MACCS service is described as below. When you use a MACCS service, you have to access to the following format URL.

https://[server address]/[service identifier(*)]

(*) In case of fetching message "#REP1" and Acknowledgement message "?A2", specific characters "#" and "?" must be omitted.

(*) In order to use MACCS service except for Fetching message and Acknowledgement message, service code should be set at the service identifier.

<Example 1 for use IDA etc.>: https://*server.address*/IDA
<Example 2 for Fetching message>: https://*server.address*/REP1
<Example 3 for Acknowledgement message>: https://*server.address*/A2

Note: The *server.address* is just a dummy sample and not a formal address.

(3) Contents of the MACCS header (In/Output Common Segment or Input/Output common segment)

MACCS header means "In/Output Common Segment". Contents of the MACCS header included in transaction request or response messages are as follows.

1. Transaction request message

This request message is sent by client to MACCSserver to use a MACCS service. The summary contents of the MACCS header in a transaction request message fromclient are listed as below.For more detail, refer to Chapter 3.1.

Table 4-1-2Input common segment(transaction request message to MACCS)

No	Field	Contents specified by the client
1	Transaction Control code	Set a fixed value "SS␣".
2	Service Code	Set a service code for identifying the MACCS service.
3	User Code	Set a user code for identifying a user.
4	ID number	Set an ID number for identifying a user.
5	Password	Set a user password for authentication.
6	Terminal ID	Set a terminal ID for identifying a client.
7	Index tag	If sequential transaction processing is taken place, set a value as specified in Index Tag of the returned transaction response message.
8	System ID	Set fixed value "1".
9	Message Length	Set the byte length of the MACCS-EDImessage.

Note: A character "␣" means a space.

2. Transaction response message

This message is response message from MACCSserver. The summary contents of the MACCS header in a transaction response message (transaction status notice and transaction output) from MACCSserver to a client are listed as below.For more detail,refer to Chapter 3.1.

Table 4-1-3Output common segment(transaction response message from MACCS)

No	Field	Contents specified by MACCS
1	Transaction Control Code	System reserved area
2	ServiceCode	Service code or space
3	User Code	User code that receives this message or space
4	ID number	Space
5	Password	Space
6	Terminal ID	Terminal ID that receives message
7	RTP Tag	Key value for transaction output message which MACCS sets
8	System ID	Fixed value "1".
9	Message length	Byte length of MACCS-EDI message

Note: A character "␣" means a space.

3. Fetching message

This message is what client has to send to MACCSserveras soon as receiving a response message. The summary contents of the MACCS header in this message from client are listed as below.For more detail, refer to Chapter 3.6.

Table 4-1-4Input common segmentandservice specific segment (transaction request message to MACCS)

No	Field	Contents specified by the client
1	Transaction Control Code	Set a fixed value "SS␣".
2	Service Code	Set fixed value "#REP1␣"
3	User Code	Set a user code for identifying a user.
4	ID number	Set an ID number for identifying a user.
5	Password	Set a user password for authentication.
6	Terminal ID	Set a terminal ID for identifying a client.
7	RTP Tag	Set space value.
8	System ID	Set fixed value "1".
9	Message length	Set the byte length of the MACCS-EDI message.
10	Terminal ID	Set a terminal ID for identifying a client. This field is the first item in service specific segment and 6 bytes length value.
11	Terminal Access key	Set an terminal access key for authentication. This field is the second item in service specific segment and 16 bytes length value.
12	Mode	Set fixed value "1". This field is the third item in service specific segment and single-byte length value.

Note: A character "␣" means a space.

4. Acknowledgement message

Acknowledgement message is a message that client has to send to MACCSserveras soon as retrieving a transaction output message in response to the fetching message.The summary contents of the MACCS header in this message are listed as below.Fordetail, refer to Chapter 3.7.

Table 4-1-5Input common segment (Successfullyretrieved message (Acknowledgement message) to MACCS)

No	Field	Contents specified by client
1	Transaction Control Code	Seta fixed value "SS␣".
2	Service Code	Set fixed value "?A2␣".
3	User Code	Set a user code for identifying a user.
4	ID number	Set an ID number for identifying a user.
5	Password	Set a user password for authentication.
6	Terminal ID	Set a terminal ID for identifying a terminal.
7	RTP Tag	Set the same value as specified in RTP Tag of the returned transaction response message.
8	System ID	Set fixed value "1".
9	Message length	Set fixed value "000400"

Note: A character "␣" means a space.

5. No more transaction output message

Content of the no more transaction output message sent to a client is "END_OF_MESSAGE" without MACCS header. For detail, refer to Chapter 3.6.

4.1.3 Sequence of processing

Sequence of processing in interactive processing method is described as below. For details of message format, referto "Chapter 3".

4.1.3.1 Examples of procedure with INQ message

(1) A normal case example
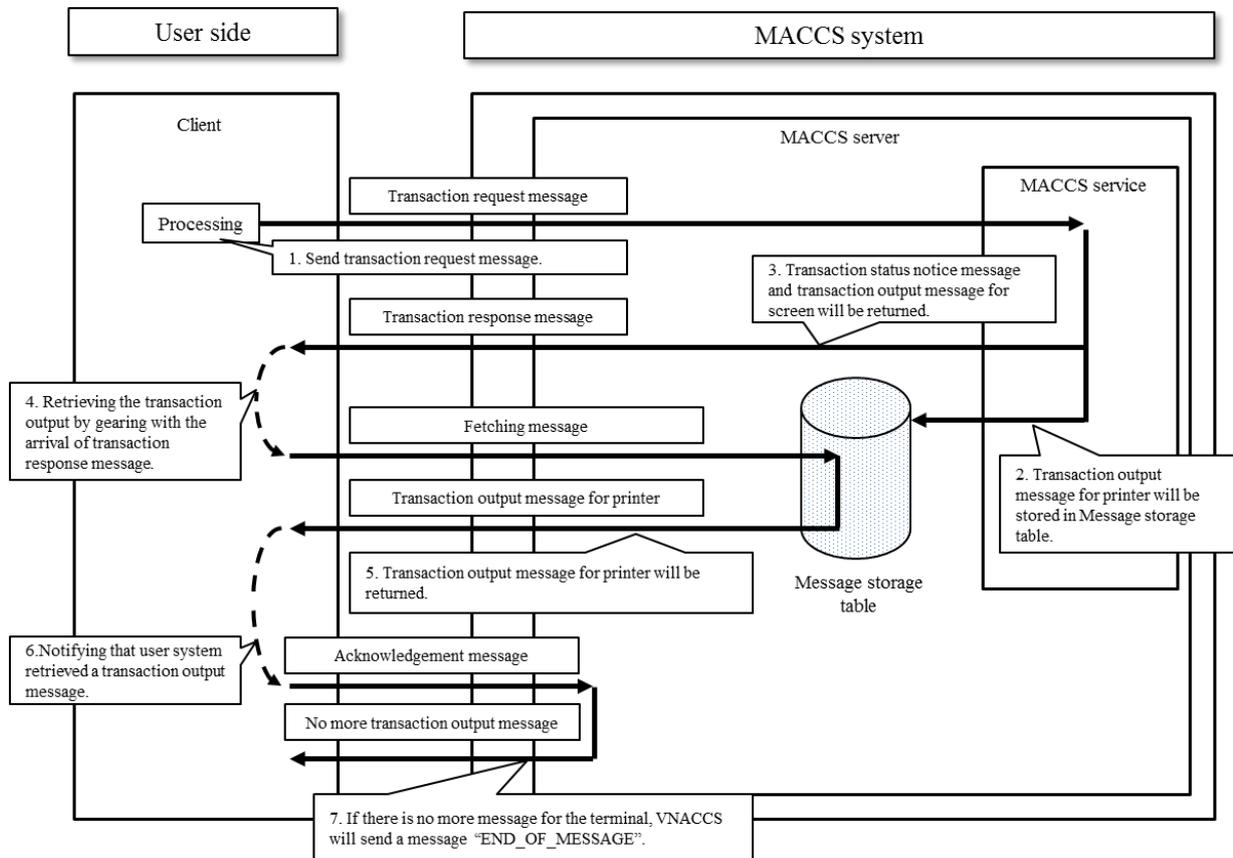
Figure 4-1-4. A normal case example of procedure with INQ message

1. A client sends a transaction request message to the MACCSserver.
2. Transaction output messages for printer are stored in Message storage table. (For detail of message type, refer to "Chapter 3.3")
3. The MACCSserver sends a transaction response message to the client immediately.
4. The clientthatreceives a transaction response message can receive transaction output message for printer from Message storage table by issuing a fetching message.
5. A transaction output message for printer is sent by the MACCSserver.
6. The client sends an acknowledgement message to the MACCSserver as soon as retrieving a transaction output message. (For more detail, refer to "Chapter 3.6")
7. If there is no message for the client, no more transaction output message is sent to the client.

(2) Error case
   (A) An example of the case in which error occurs when receiving response messages
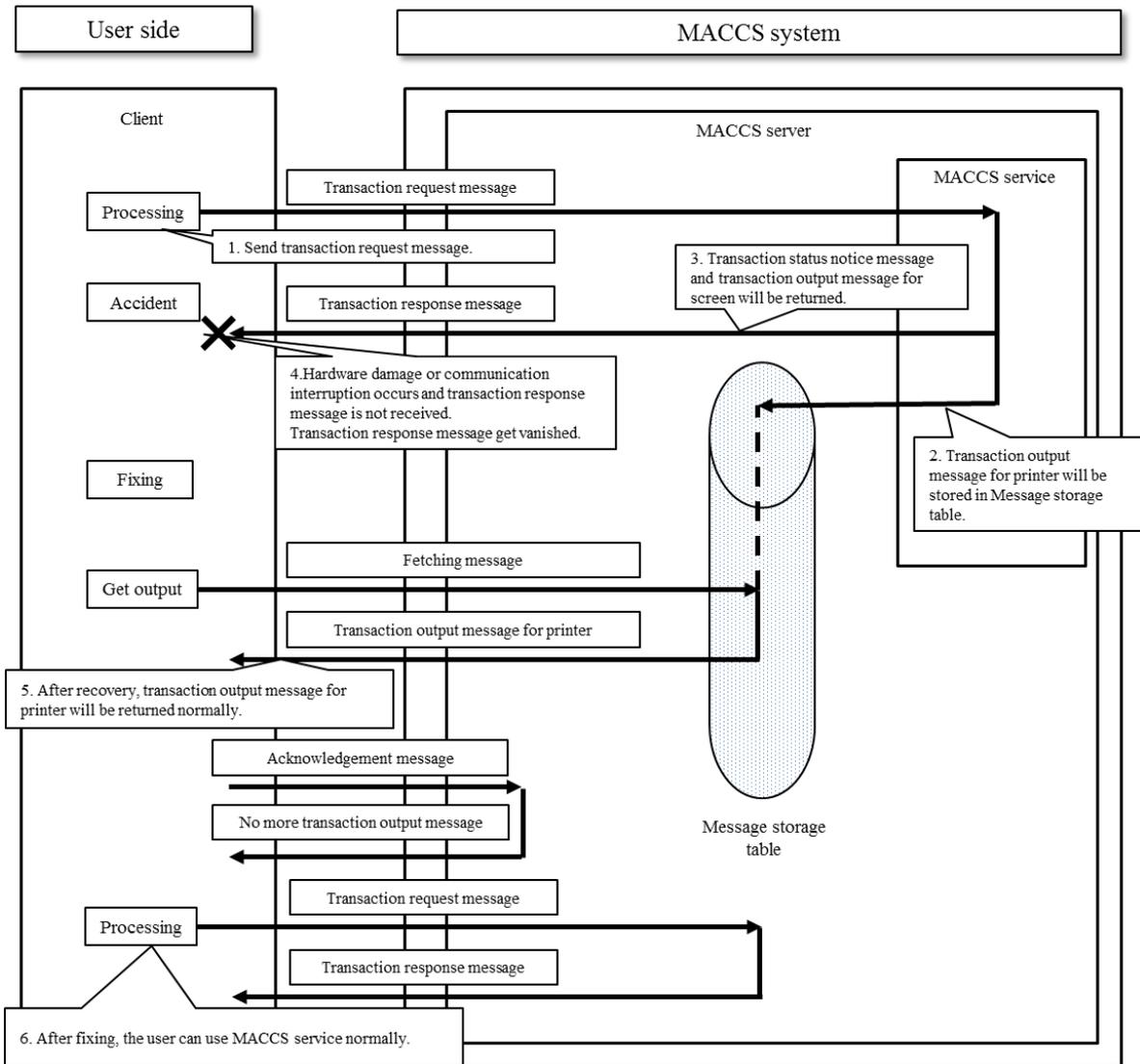
Figure 4-1-5. An example in case INQ message is not normally processed
: Error occurs when receiving transaction response messages for screen

1. A client sends a transaction request message to the MACCSserver.
2. Transaction output message for printer is stored in Message storage table. (For detail of message type, refer to "Chapter 3.3")
3. The MACCSserver returns a transaction response message to the client immediately.
4. Hardware damages or communication interruption occurs and transaction response message for screen is not received. In this case, transaction response message will disappear. However, a user can confirm its status by using some referral services.
5. After fixing damages and confirming that the processing is normally executed by using referral services, the message stored in Message storage table can be got by sending the fetching message.
6. After fixing damages, the user can use MACCS services normally.

> ! In case if hardware damages or communication interruption occurs when user is receiving the transaction output message for screen, as the message is not guaranteed in the MACCSserver, the transaction response message will disappear.

(B) An example of the case in which error occurs after receiving transaction response message
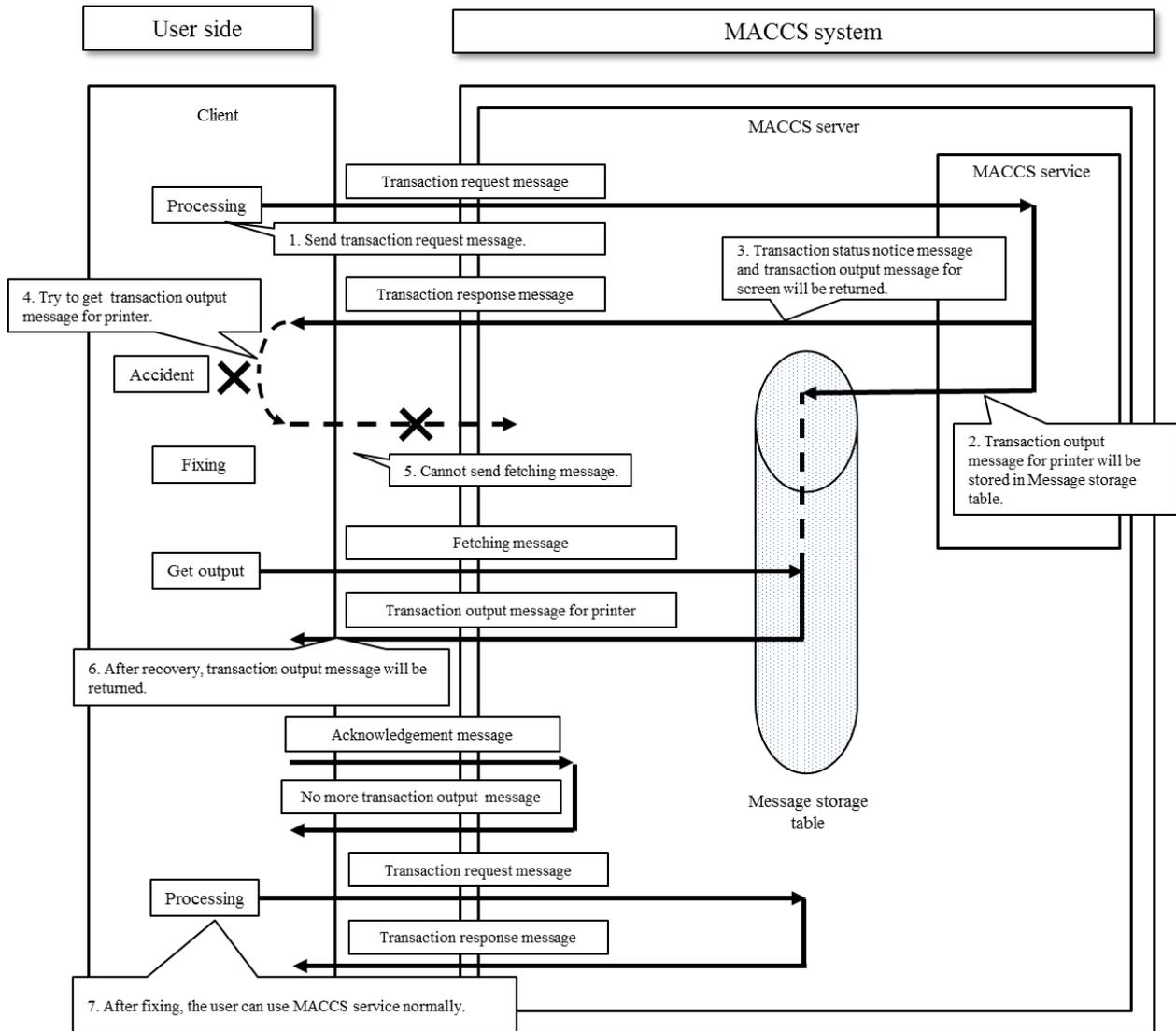
Figure 4-1-6. An example in case INQ message is not normally executed
: Errors occur after receiving transaction response message for screen

1. A client sends a transaction request message to the MACCSserver.
2. Transaction output message for printer is stored in Message storage table. (For detail of message type, refer to "Chapter 3.3")
3. The MACCSserver returns a transaction response message to the client immediately.
4. The clientthat receives a transaction response message can receive transaction output message for printer from Message storage table by issuing a fetching message.
5. Due to the client's damages, a fetching message cannot be sent and the processing of gearing with transaction response message is stopped.
6. After fixing the client, the messages stored in Message storage table can be got by issuing transaction request message.
7. After fixing the client, user can use the processing of MACCS normally.

4.1.3.2 An example in case of transmitting outputmessages to another client

(1) In case of transmitting transaction output message to another client
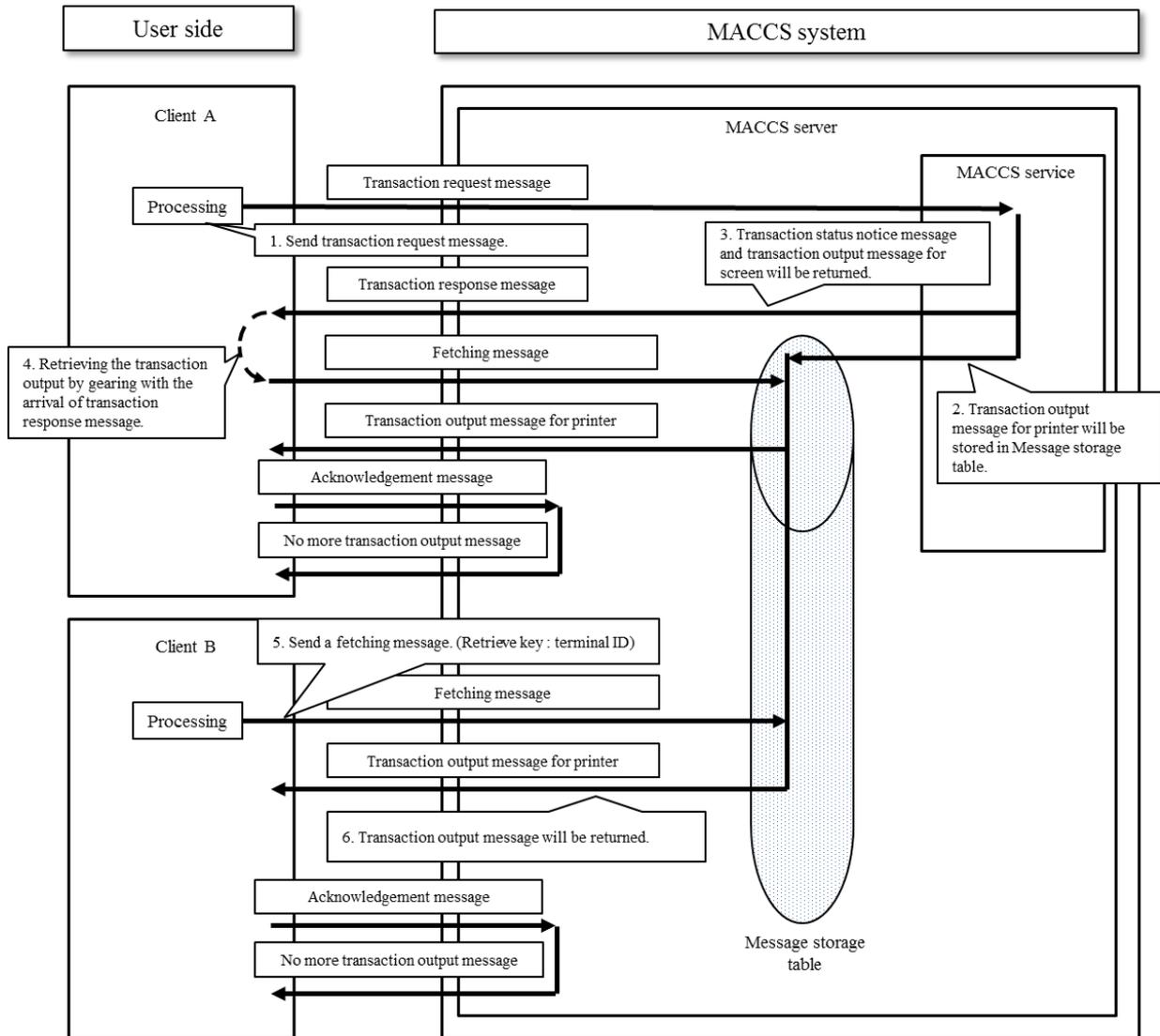
Figure 4-1-7. An example of transmitting to another client

1. The client A sends a transaction request message to the MACCSserver.
2. Transaction output message for printer is stored in Message storage table. (For detail of message type, refer to "Chapter 3.3")
3. The MACCSserver returns a transaction response message to the client A immediately.
4. The client B sends a fetching message to the MACCSserver.
5. If a transaction output message for printer to the client B remains in Message storage table, the transaction output message for printer is retrieved.

(2) An example in case of attachment file transaction message
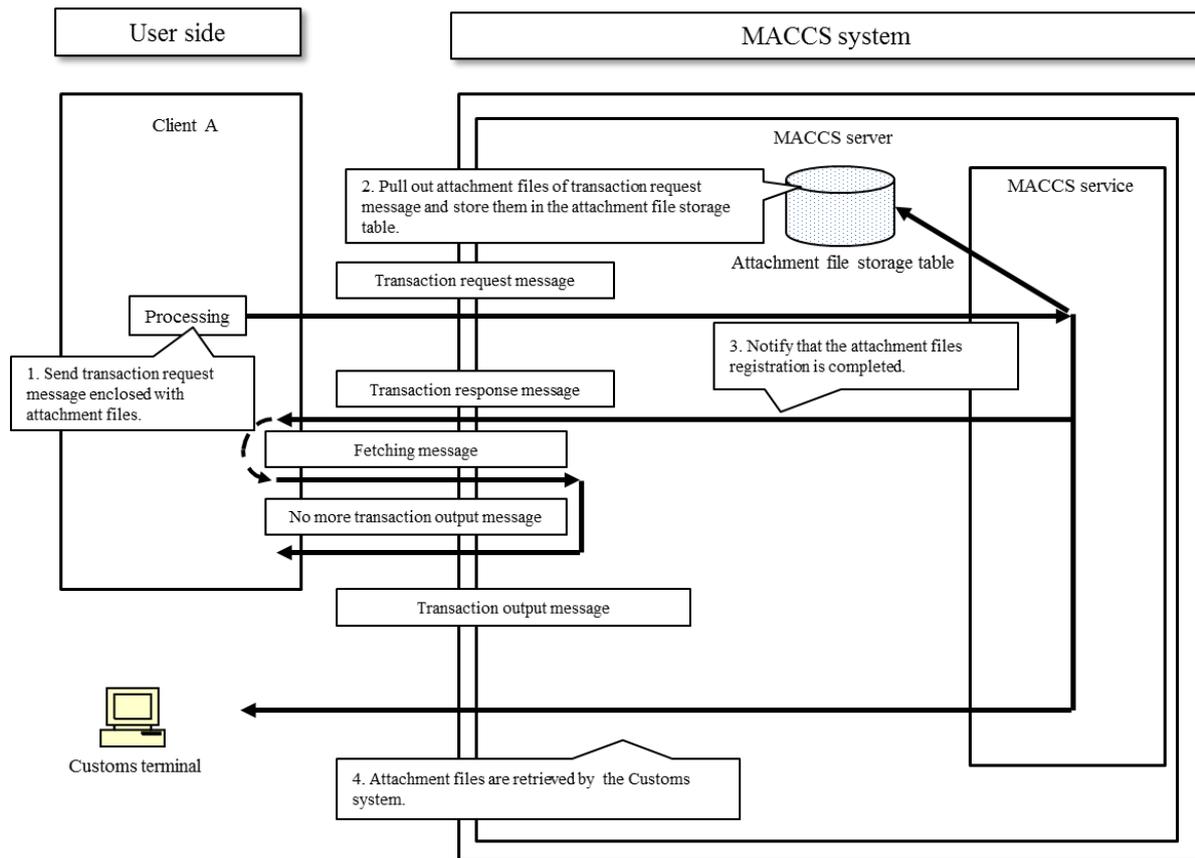
Figure 4-1-8. An example of transaction with attachment files

1. A transaction request message with attachment files for registration service is sent from the client A.
2. In the MACCSserver, attachment files are cut from the transaction request message and stored in Attachment file storage table.
3. The MACCSserver sends the transaction response message which informs the registration of attachment files is completed to the client A.
4. Stored attachment file can be retrieved by the Customs terminal.

4.1.4 Important points

(1) Message storage table

Message storage table is for storing transaction output messages temporarily based on the message classification. (For detail of message type, refer to "Chapter 3.4")

To retrieve the transaction output message stored in this table the client has to issue fetching message. (Retrieving key: terminal ID)

(2) Retention period of transaction response messages for printer

The user must promptly retrieve the transaction output message for printer in Message storage table. After that, the messages in the table will be deleted.

However, the transaction output message for printer which is not retrieved by users will be retained in Message storage table for 5 days(excluding Saturday, Sunday and National holiday)since the registration day. Message deletion procedure will be carried out in a definite night time.

(3) Keep the message sequence rule

MACCS system requires all clients to keep the message sequence rule explained previously. If a client sends messages to MACCSserver in a wrong sequence, MACCSdoes not work correctly and the client cannot use MACCS services.

(4) Retrieving request interval

MACCS requires user set the interval of fetching message more than 1 minute. (Recommendation value is 5 minutes.)

(5) Resend request interval in case of no respond

Time to resend a message is more than 5 minutes when MACCSserver or network gets error and no response returns.

(6) Resend request interval in case of the center busy

Time to resend a message is more than 15 minutes when errors occur in MACCSserver and the transaction response message notifies that "Center busy" returns.

(7) Terminal Access Key

MACCS requires all clients to set Terminal Access Key in Fetching message as well as terminal ID.

(8) Other notices

In case of overload in the system, operation restriction such as halts of receiving transaction request messages from all users may be applied.

4.2 Delayed processing method for EDIFACT message

The delayed processing method enables users to send multiple transaction request messages in one transmission operation. The EDIFACT conversion convention complies with the syntax rule (ISO9735, version 3.0). However, this method does not support a service of sending and receiving attachment files.

However, transaction result messages need to be retrieved (or received) from the MACCSserver in delayed processing after a certain period of time. In this document user server is referred to as a client generically.

4.2.1 Overview

Figure 4-2-1 describes an outline of the delayed processing method for EDIFACT message.
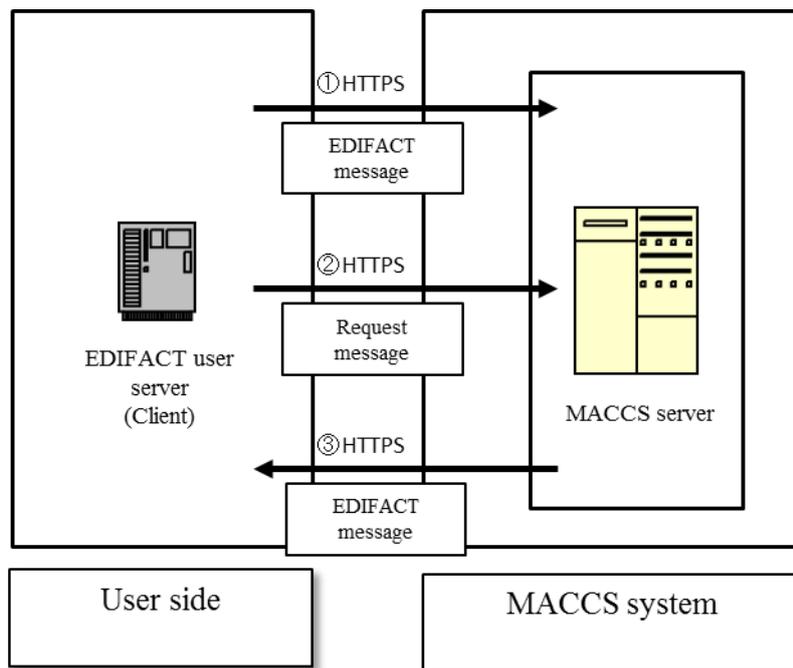
Figure 4-2-1 Overview of delayed processing methodfor EDIFACT message

1. A client creates and sends an EDIFACT message that contains necessary data for a transaction to the MACCSserver over HTTPS protocol. Then the EDIFACT server receives the message from the client and sends it to the main processor.
2. A client sends a request for responsemessage to the MACCSserver.
3. A transaction response message is sent back to the client, after receiving a request for response message.

4.2.2 Details of the communication protocols and MACCSmessage

In the delayed processing method for EDIFACT messages, TCP/IP on the network and transport layers, and on the upper layers, HTTPS are used as communication protocols.

(1) Message format

The message format of EDIFACT message in delayedprocessing method is described as below. When transmitting it, a communication protocol header is added to the message.

Communication protocol header	In/Output Common Segment	Service Specific Segment (EDIFACT)

Max 1,000,000 bytes

(Refer to "Chapter 3. Message structure and format")
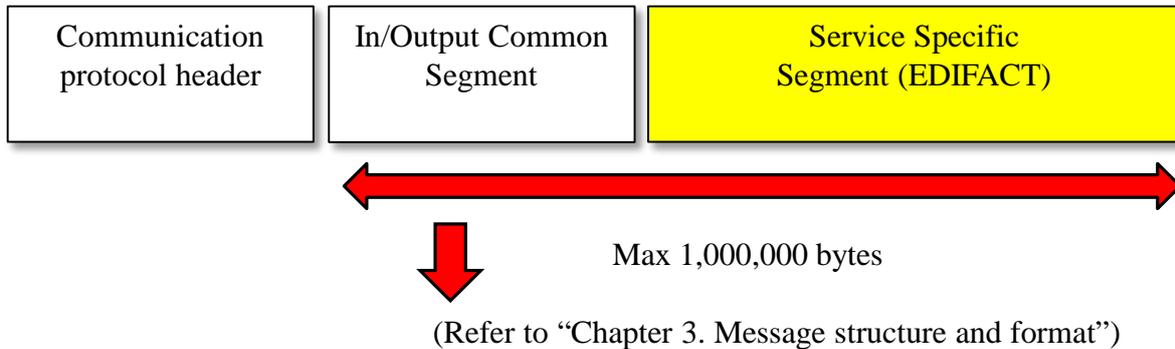
Figure 4-2-2 EDIFACT message format

Message format has to be single part MIME message. And Content-type is required to be text/plain. Process Specific Segment (EDIFACT) format has to comply with the syntax rule of ISO9735 version 3.0 and EDIFACT D98B.

(2) URL format

The URL format to use MACCS service is described as below. When you use a MACCS service, you have to access to the following format URL.

https://[server address]/[service identifier(*)]

(*) In case of fetching message "#REM1" and Acknowledgement message "?A2", specific characters "#" and "?" must be omitted.

(*) In order to use EDIFACT service except for Fetching message and Acknowledgement message, "EDIF" should be set at the service identifier.

<Example 1 for use MFR etc.>: https://*server.address*/EDIF
<Example 2 for Fetching message>: https://*server.address*/REM1
<Example 3 for Acknowledgement message>: https://*server.address*/A2

Note: The *server.address* is just a dummy sample and not a formal address.

(4) Contents of the MACCS header (In/Output Common Segment)

MACCS header means "In/Output Common Segment". Contents of the MACCS header included in transaction request or response messages are as follows.

1. Transaction request message

The summary contents of the MACCS header in a transaction request message sent by a client are listed as below.For more detail, refer to "Table 3-1-2 in Chapter 3.1".

Table 4-2-1Input common segment (transaction request message to MACCS)

No	Field	Contents specified by the user
1	Transaction Control Code	Set a fixed value "ES␣".
2	Service Code	Set a service code for identifying the MACCS service.
3	User Code	Set a user code for identifying a user.
4	ID number	Set an ID number for identifying a user.
5	Password	Set a user password for authentication.
6	Terminal ID	Set a terminal ID for identifying a terminal.
8	Index Tag	If sequential transaction processing is taken place, set a value as specified in Index Tag of the returned transaction response message.
9	System ID	Set fixed value "1".
10	Message Length	Set space value.

2. Fetching message

This message is for user to getresponse messages from MACCSserver. The summary contents of this message from client are listed as below. For detail, refer to Chapter 3.1.

Table 4-2-2Input common segment and process specific segment (transaction request message to MACCS)

No	Field	Contents specified by the client
1	Transaction Control Code	Set a fixed value "ES ␣ ".
2	Service Code	Set fixed value "#REM1"
3	User Code	Set a user code for identifying a user.
4	ID number	Set an ID number for identifying a user.
5	Password	Set a user password for authentication.
6	Terminal ID	Set a terminal ID for identifying a terminal.
7	RTP Tag	Set space value.
8	System ID	Set fixed value "1".
9	Message length	Set fixed value "000426"
10	Terminal ID	Set a terminal ID for identifying a terminal. This field is the first item in service specific segment and 6 bytes length value.
11	Terminal Access Key	Set an terminal access key for authentication. This field is the second item in service specific segment and 16 bytes length value.

3. Transaction response message

Contents of the MACCS header in a transaction response message sent from MACCS to a client are listed as below. For detail, refer to Chapter 3.6.

Table 4-2-3Output common segment (transaction response message from MACCS)

No	Field	Contents specified by MACCS
1	Transaction Control Code	System reserved area
2	Service Code	Service code or space
3	User Code	Same value as the fetching message
4	ID number	Same value as the fetching message
5	Password	Space
6	Terminal ID	Same value as the fetching message
7	RTP Tag	Key value for transaction output message which MACCS sets.
8	System ID	Fixed value "1"
9	Message length	Message byte length including MACCS header and Process Specific Segment.

4. Acknowledgement message

Contents of the MACCS header in anacknowledgement message sent from a client to MACCSserverare listed as below. For detail, refer to Chapter 3.7.

Table 4-2-4Input common segment(Acknowledgement message to MACCS)

No	Field	Contents specified by user
1	Transaction Control Code	Set a fixed value "ES␣".
2	Service Code	Set fixed value "?A2".
3	User Code	Set a user code for identifying a user.
4	ID number	Set an ID number for identifying a user.
5	Password	Set a user password for authentication.
6	Terminal ID	Set a terminal ID for identifying a terminal.
7	RTP Tag	Set thesame value as specified in RTP Tag of the returned transaction response message.
8	System ID	Set fixed value "1".
9	Message length	Set fixed value "000400".

5. No more transaction response message

Content of the no more transaction response message sent to a client is "END_OF_MESSAGE" without MACCS header and EDIFACT message.For detail, refer to Chapter 3.6.

4.2.3 Sequence of processing

Figure 4-2-3 describes a process flow of the delayed processing method. Refer to "3 Messages structure and format" for details on the message format.
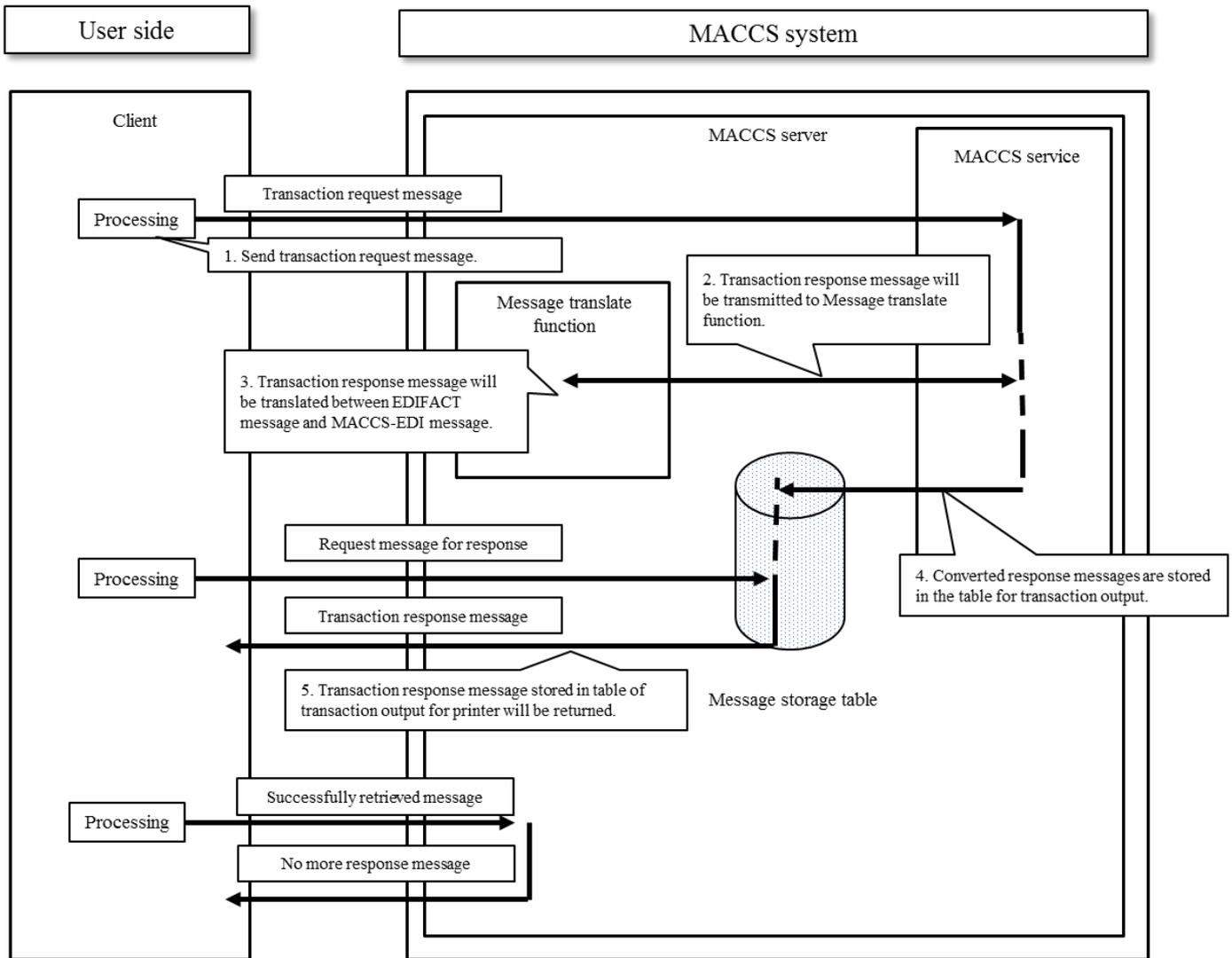
Figure 4-2-3 Process flow of the delayed processing method

1. A user sends a transaction request message which can include multi-requests from aclient.
2. All transaction response messages are stored in Message storage tablelocated in the MACCSserver.
3. Message translate functiontranslatesbetween EDIFACT message and MACCS-EDI message.
4. Converted response messages are stored in the Message storage table.
5. All messages corresponding to the user can be retrieved from the Message storage tableby issuing request message.

4.2.4 Important points

(1) Message storage table

The Message storage table is for storing transaction response messages temporarily. To retrieve the transaction response message stored in this table the client has to issue fetching message.

(2) Retention period of transaction response messages

The client must promptly retrieve the transaction response messages in the Message storage table. After that, the messages in the Message table will be deleted.

However, the transaction response messages which are not retrieved by clients will be retained in the table of transaction output for 5 days(excluding Saturday, Sunday and National holiday) since the registration day. Message deletion will be carried out in a definite night time.

(3) Keep the message sequence rule

MACCS system requires all clients to keep the message sequence rule explained previously. If a client sends messages to MACCS in a wrong sequence, MACCS does not work correctly and the client cannot use MACCS services.

(4)Retrieving request interval

MACCS requires user set the interval of fetching message more than 1 minute. (Recommendation value is 5 minutes.)

(5) Resend request interval in case of no respond

Time to resend a message is more than 5 minutes when the MACCSserver or network gets error and no response returns.

(6) Resend request interval in case of the center busy

Time to resend a message is more than 15 minutes when errors occur in MACCSserver and the transaction response message notifies that "Center busy" returns.

(7) Terminal Access Key

MACCS requires all clients to set Terminal Access Key in message as well as terminal ID.

(8) Other notices

In case of overload in the system, operation restriction such as halts of receiving transaction request messages from all users may be applied.

5.Messagedestinationcontrol

5.   Message destination control

5.1 Overview of message destination control

The message destination control function uses the message destination control table, which contains message destinations determined by combinations of a delivery type of a transaction response message (transaction output message).The message destination control function stores transaction response messages (transaction output message) in destination blocks sorted by (a) data entry terminals (terminal that sent transaction request message to MACCS), (b) user codes and (c) output message codes in the message storage table.

MACCS uses the following three different delivery types, which are called the message destination control type, for transaction response messages: INQ type, EXZ type and EXC type.

Figure 5-1-1 describes an example usage of the three delivery types in a Logistics related company's Import declaration (IDC)process. And Figure 5-1-2 shows a general logic diagram of the message destination control function.
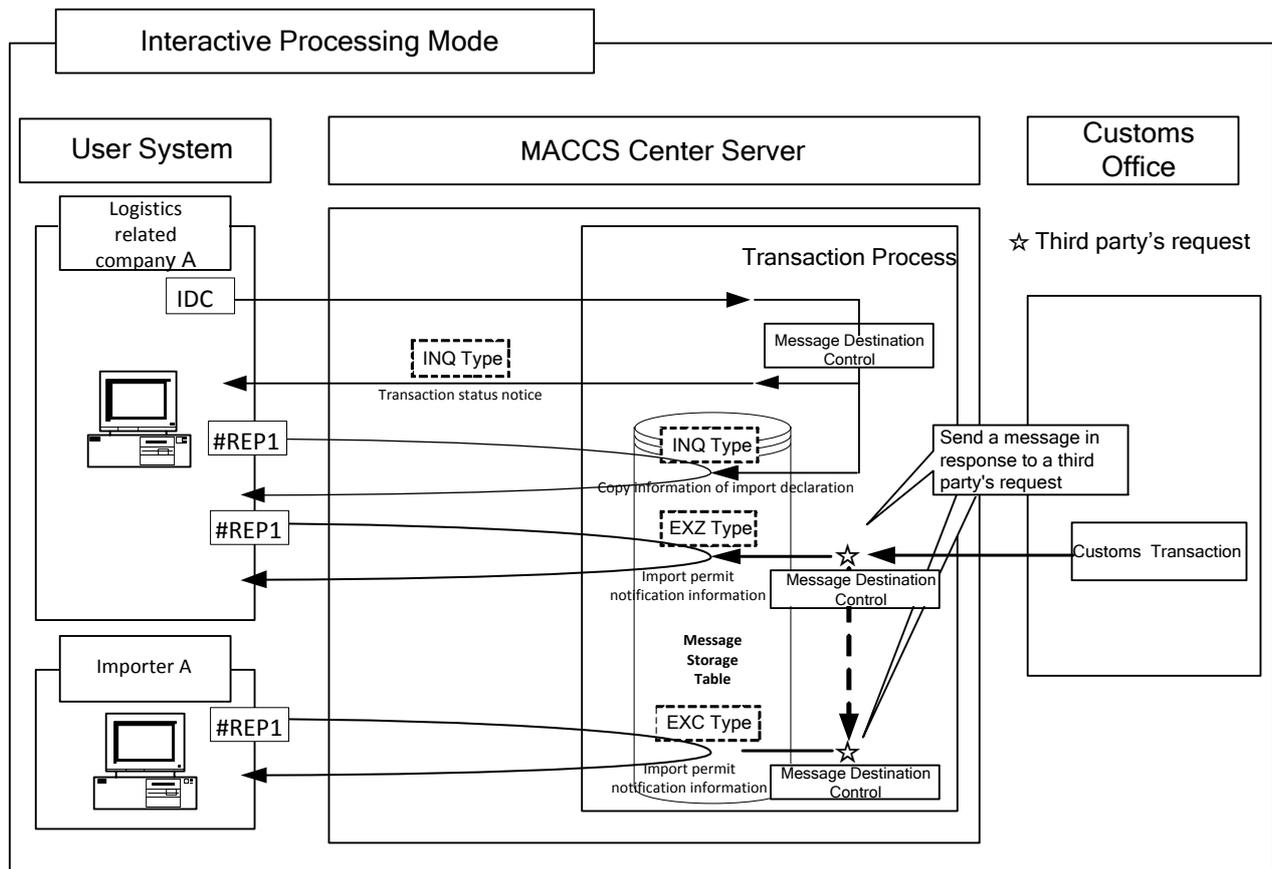
Figure 5-1-1 Example usage of the three delivery types of transaction response messages (transaction output message)

INQ type: A transaction response message (Transaction status notice message) is immediately sent to a user (Logistics related company A's user computer) who issued the corresponding transaction request message.
On the same time, another response message (Copy information of import declaration) is stored in the transaction issuer's Message storage table.
User who issued the corresponding transaction request message (Logistics related company A) should get the response message (Copy information of import declaration) by using #REP1 service.

EXZ type: In response to a third party's request(completion of a customs examination process), a transaction response message (Import permit notification information) is stored in the transaction issuer's Message storage table.
User who issued the corresponding transaction request message (Logistics related companyA) should get the response message (Import permit notification information) by using #REP1 service.

EXC type: In response to a third party's request(completion of a customs examination process) a transaction response message (Import permit notification information) is stored in another destination's Message storage table (Importer A's Message storage table).This is not a user (Logistics related companyA) who issued the corresponding transaction request message.

(Note 1) A user computer represents:a "PC" in the Interactive processing method (Private Terminal software), a " User system (per terminal ID)" in the Interactive processing method (User system) and Delayed processing method (User system).

(Note 2) #REP1 is a service to get messages stored in each user's message storage table in MACCS.
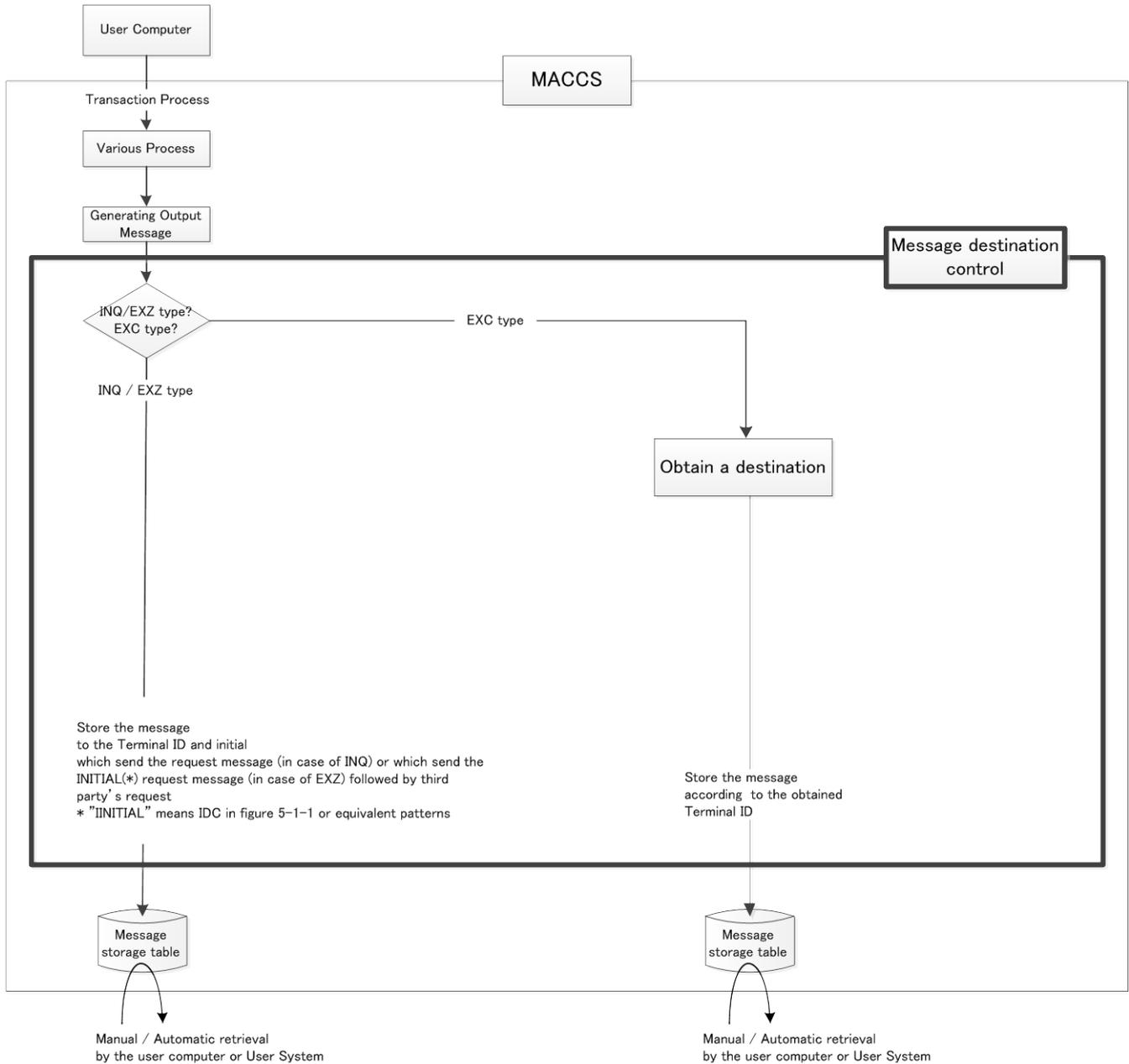
Figure 5-1-2 Logic diagram of the message destination control function

5.2 Settingadestination of a transaction response message

5.2.1 Deliverytypesofatransaction response message

(1) INQ type and EXZ type message

A transaction response message in INQ or EXZ delivery type is returned to;

(a) The same user computer (User System)that issued the corresponding request message over the same transmission procedure (in terms of a data processing mode and format) used when the user computer (User System) sent the request or

(b) Terminal IDmapped in the message storage table that the user computer (User System) sent the request.

(2) EXC type message

For a transaction response message in EXC delivery type, users are required to specify its message destination in the message destination control table.

(Note) A user code stored in the output common segment of an EXC type message

In the output common segment of an EXC type message, message destination's user code is specified.
For example, when a Logistics related company's Import declaration is permitted, Import permit notification information (EXC type message), which is created on permission of the declaration, is transmitted to animporter who asked the Logistics related company to Import.
In such case, the Import permit notification information is created according to the following procedure.

(1) From the import declaration information, obtain the Importer/Exporter code.
↓
(2) Obtain the user code that is linked to the Importer/Exporter code.
↓
(3) Specify the user code in the output common segment of the Import permit notification information.

Although different elements are used to obtain a user code depending on transactions, process flows are the same in principle.

Table 5-2-1 Available delivery control types

Request source	Response destination	Interactive processing				Delayed-processing	
		Terminal Software		User system		User system	
Interactive processing	Private Terminal software	INQ type EXZ type	EXC type	INQ type EXZ type	EXC type	INQ type EXZ type	EXC type
		Y2	Y1	Y2	Y1	—	Y1
	User system	INQ type EXZ type	EXC type	INQ type EXZ type	EXC type	INQ type EXZ type	EXC type
		Y2	Y1	Y2	Y1	—	Y1
Delayed-processing	User system	INQ type EXZ type	EXC type	INQ type EXZ type	EXC type	INQ type EXZ type	EXC type
		—	Y1	—	Y1	Y2	Y1

Y1 : Delivery control available.

Y2 : Delivery control available ONLY TO THE SAME USER COMPUTER (USER SYSTEM) THAT ISSUED THE CORRESPONDING REQUEST MESSAGE.

— : Delivery control not available (No delivery control is available where preprocess typesare different between "Request source" and "Response destination").

5.2.2 Setting of a message destination

Table 5-2-2 and Table 5-2-3 describe various setting patterns of message destinations for transaction response messages (output message).

Table 5-2-2 Destination settings for messages in INQ or EXZ type

Processing mode at the request source		Response destination	Data segment （INQ type/EXZ type）
Interactive processing	Private Terminal Software	Terminal ID at the message source mapped in the message storage table	No destination setting required
	User system	Terminal ID at the message source mapped in the message storage table	
Delayed-processing	User system	Terminal ID at the message source mapped in the message storage table	No destination setting required

Table 5-2-3 Destination settings for messages in EXC type

Processing mode at the request source		Response destination	Data segment （EXC type）
Interactive processing	Private Terminal Software	Specified terminal ID mapped in the message storage table	・Response destination's user code ・Output message code ・Output terminal ID
	User system	Specified User system's terminal ID mapped in the message storage table	・Response destination's user code ・Output message code ・Output terminal ID
Delayed-processing	User system	SpecifiedUser system's Terminal ID mapped in the message storage table	・Response destination's user code ・Output message code ・Output terminal ID

(Note) The wildcardcode for output message codes

The wildcardcode is used as a dummy code for output message codes containing a value of "999999".
If a transaction response message is destined for a particular user code without specifying its output message code in the message destination control table, the message is transmitted to the destination with the output message code "999999".

6. Requirements
to connect with MACCS

6. Requirements to connect with MACCS

MACCSrequests MACCS users to agree and comply with following conditions described in this chapter.

6.1 Technical requirements to connect with MACCS

6.1.1 Communication encryption

SSL (Ver.3.0) which becomes the de facto standard in encryption of HTTP shall be adopted as a measure against eavesdropping, falsification, spoofing, etc. of the send and receive message.

[Reference] SSL

SSL(which stands for Secure Socket Layer), developed byNetscape Communications Corporation in the United States, is an encrypted communication protocol for communicating securely on the internet. Because it is possible to encrypt the data exchanged between Web server and Web browser, it is used to prevent the problem happened with the data communication when the information such as personal information have been leaked to the third person. SSL is made up of multiple technologies related to encryption.

Outline of communications encryption which is adopted in MACCS is shown as the following figure.
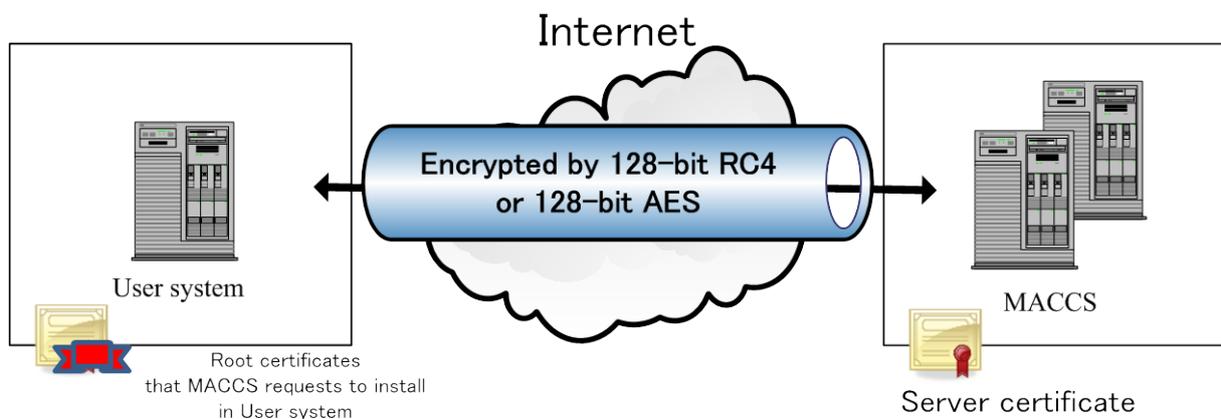
Figure 6-1-1: The outline ofcommunication encryption which is adopted inMACCS

In addition, User ID and Password which are sent by User's PC are used for authentication. Furthermore, access qualification shall also be executed when fetching messages from the message storage table. Please refer chapter 6.2 for details.

6.1.2 Firewall setting at User system

In case of connection to the internet via internal firewall, it is required for MACCS users' firewall to be available as described in figure 6-1-2.
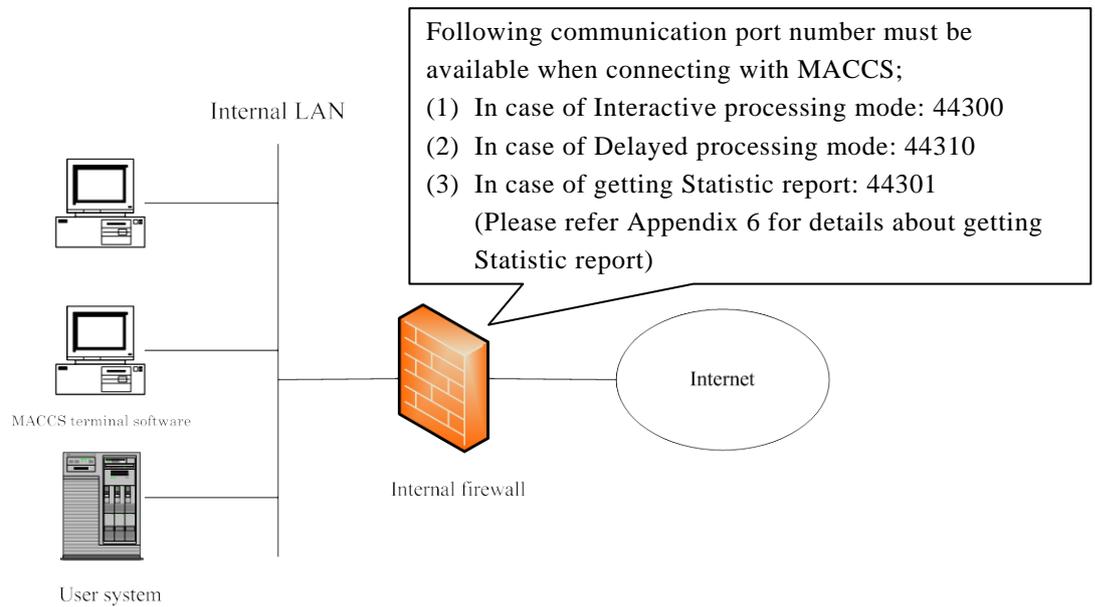
Figure 6-1-2: An example of connection to the internet via the internal firewall

6.1.3 Precautions in communicating with MACCS

(1) In case of congestion of the internet

In case of the congestion of the internet, it is difficult to ensure a reliable connection with the MACCS center server. Response time is influenced by the speed of internet environment.

(2) Disappearance (Lost) of the message

Depending on the internet environment, the message could be disappeared in case of occurring any communication failures when the user is receiving the transaction responsemessages (for screen [C][M][R]) corresponding to the user's requests.

(3) Unavailability of MACCS

MACCS user may not be able to user MACCS in following cases;
(a) Maintenance hours
(b) Unavailability of Internet
(c) Natural disaster
(d) Other unexpected issue, such as DoS attack

(4) Unauthorized access detection by MACCS

MACCS monitors intrusion detection and virus check on every request messages to MACCS. Therefore, MACCS may send back error to MACCS user as if the request message is unauthorized access.

(5) Installing root certificates specified by MACCS in User system

It is needed to install root certificates specified by MACCS in User system. These certificates are needed for User system to verify MACCS's server certificates. This verification is executed when establishing SSL connection between User system and MACCS.

6.2 Authentication requirements to connect with MACCS

6.2.1 Authentication when sending requests to MACCS

In MACCS, use the User ID (user code + identification number) and user password (which issued by Myanmar Customs) to check user's authentication and check whether the requested service should be processed or not.

6.2.2 Authentication when fetching from Message storage table in MACCS

In addition to the above chapter 6.2.1, MACCS use Terminal ID and Terminal Access Key to check whether the request should be processed or not. The request is to access to the Message storage table. Message storage table stores transaction response messages which are generated upon requests messages sent from MACCS users.

Terminal ID and Terminal Access Key is issued/controlled/operated by Myanmar Customs

6.3 Security requirements at MACCS user side to connect with MACCS

6.3.1 Security countermeasures which user need to perform

When connecting to MACCS center server, MACCS user must observe the contents about the security countermeasures which the Myanmar Customs defined. MACCS user also must report the contents of the security countermeasures to Myanmar Customs.

When it seems that user's security countermeasures are insufficient or unsuitable, Myanmar Customs will instruct the improvement measure to user.

Table 6-3-1   Security content which user need to observe

Content	Connection Type		Compliance content	Note
	P	U		
(1)Assign person in charge of managing	(Y)	(Y)	・Assign person in charge of managing of the user system (which connect to MACCS center server) or person who manage PCs which installed Private terminal software for each office. Myanmar Customs requests users to report the managing persons when needed.	
(2) ID, password management	(Y)	(Y)	・Person in charge of managing in (1) above need to manage various ID, Password used in MACCS	
(3)Virus countermeasure	(Y)	(Y)	・All the computers connected to MACCS should install commercial anti-virus softwares, perform suitable frequency of version up. Myanmar Customs requests users to report the anti-virus software installation and version up when needed.	
(4) Manage the configuration of user side	(Y)	(Y)	・ It is needed that users manage their office LAN configuration, network topology and system topology. Myanmar Customs requests users to report following (1) (2) information, when needed. (1) System configuration figure (2) Configuration list of machinery and tool to be used	
(5) Internal security countermeasure		(Y)	・ It is needed that users prepare internal security countermeasures (a firewall, user authentication, etc.). Myanmar Customs requests users to report the internal security contermeasure when needed.	
(6) History (log) management		(Y)	・In order to specify the person who connected to MACCS center server from the user system, user need to build a history (log) management scheme. Myanmar Customs requests users to report the log when needed.	Refer to (*) in next page for more detail of history management method

(Note) P: Private Terminal software
U: User System

(Y): Need

(*) History (log) management

History (log) management method is as follows:

1. The content of history (log) need to be saved
      The content of these following items among the items of transaction messages with MACCS need to be saved.

Table 6-3-2   The item of history (log) which user should save

Transmission /Reception Item	Transmission (Transaction request message to MACCS)	Reception (Transaction respond message from MACCS)
User code	(Y)	(Y)
Identification number	(Y)	(-)
Service code	(Y)	(Y)
Date&Time	(Y)	(Y)
IP address of PC or equivalent information	(Y)	(-)

(Y): Need   (−): No need

(Note 1) In case the getting of history (log) of the PC, which used under User's system, is systematically difficult, it is possible to get the history (log) on subordinate computers (company server etc.) of User's system.

Require to be able to specify the IP address or suitable address of IP address of PC by getting history (log) of an IP address which specifies a subordinate computer and getting/conducting a follow-up survey of the history (log) which specifies a PC by a subordinate computer.

2. Storage Period
      After system operation start, storage period of history (log) will be set as a certain period of time (From 3 months to 6 months).

3. Storage device and storage method
      Although user is free from determination of the Storage device of a history (log) and its method, it must be in the state that can respond immediately the submission request from Myanmar Customs.

6.3.2 System audit

When Myanmar Customs needs to verify whether the suitable security countermeasures have been taken in user system or not, after getting the user's agreement, Myanmar Customs is able to perform the system audit (including inspecting the facilitiesplaced equipements of user).

Target of the system audits are following;

(1) Clients (such as PCs who are managed by the users)

(2) Computer systems

(3) Networks (which are operated by the users)

(4) those operation procedures

7.Privateterminalsoftware

7. Private terminal software

Myanmar Customs will supply the package software (hereafter referred to as "private terminal software" for PCwhich wasspecified in all business specification.

7.1 The hardware operation environment

In MACCS, Myanmar Customswill not supply the exclusive use hardware of MACCS (such as PC, printer). Therefore, in case user uses the MACCS private terminal software which supplied by Myanmar Customs, user has to prepare hardware personally.

Table 7-1-1 shows the hardware operation environment of private terminal softwareguaranteed by Myanmar Customs and table 7-1-2 shows the printer operation environment.

7.1.1 Specification of PC

Table 7-1-1 PC operation environment

Item	Operation environment
OS	Windows 8.1Pro (64bit) * "Windows 8.1" is not same "Windows RT 8.1", and Private terminal software does not support "Windows RT 8.1".
Framework	.net Framework 4.5.2 or greater * Major version must be "4"(4.X.X).
Browser	Internet Explorer11 or greater
CPU	The recommended CPU corresponds to Intel CORE i5 3.0GHz or greater
Memory	2 GB or greater
Hard disk	Free space of2 GB or greater (After installed MACCS private terminal software)
Graphic function	Width 1024 Pixel × Height 768 Pixel High Color(16bit) or greater
Network Interface	100BASE-TX or greater 802.11 a/b/g/n Prepare the environment which can connect to internet.
CD-ROM Driver	Optional
Keyboard Software	Myanmarkeyboard software (The software may specify "Unicode" character code)
Display	Width 1024 Pixel × Height 768 Pixel or greater * 19inches or bigger recommended

(Note 1)Version up of OS etc. may result in change of PC specification (hardware such as CPU, memory etc.) described in Table 7-1-1.

(Note2) The user who connected network or upgrade peripheral device must prepare PCwhich capability can respond to using environment such as advancement of CPU capability, upgrade of memory, hard disk

(Note 3) In case the software package for PC is installed and used in PC which prepared by user, even if thisPCsatisfied the above recommended specification, we cannot assure whether it operates normally or not.

(Note 4) About the contents of the above table, it may change because of the end of support from Microsoft company who is supplying OS, and the sale of the new product.

(Note 5) The operating verification of the private terminal software for PC is English version of the above recommendation OS.

(Note 6) In case of Windows8.1, due to limitations ofthe OS sound function, maybe don't have warning sound (Beep sound) and notice sound.

(Note 7) In MACCS, the font for screens and reports is 'Myanmar3' version '3.00 March 18, 2009'.

7.1.2 The print specification

Table 7-1-2 shows Printer operation environment guaranteed by Myanmar Customs.

Table 7-1-2 Printer operation environment

Item	Operation environment
Target printer	The printer that supports"Windows8.1Pro(64bit)" (The laser printer is recommended) (Network or local port connection is required)
Graphic mode	In case user prints a bar code (CODE-39), 600 dpi or greater is recommended.
Printing color	Monochrome
Interface	It has an interface which can be confirmed from Windows which is contained PC main body as an OS.
Paper size	A4

7.2 The function of private terminal software

This chapter contents is function of private terminal software.

7.2.1 Communication function

(1) Connection method
Correspond to internet connection. Additionally, user will prepare the environment to connect the internet.

(2) Communication protocols
Use TCP/IP for the lower order protocol. Use HTTPSfor the higher order protocol.

(3) History of user code
In order to use private terminalsoftware and perform MACCSservice, it is necessary to input user ID(including identification number), password according to log-on operation. The private terminal software saves up to 10records of user code (including identification number) which was inputted in the past as a history, and enables the pulldown selection when log-on at next time.

7.2.2 Message creation and display function

(1) The function of creating the transaction request message
In the private terminalsoftware, the user can use the GUI control on input screen, and input the necessary information to service easily. Moreover, when the inputted items were sent as transaction request message, the input common item of transaction request messageis created automatically.

(2) The function of receiving the Transaction response message
In private terminal software, the transaction response messages are received in a user's PC from a MACCS center server by automatic or manual operation. The user can indicatethe received transaction response messages and display theservicescreen, print the report, etc.
Moreover, the report can be printed automatically by settingprivate terminalsoftware in advanceat the time of receiving the transaction response message.

7.2.3 The printing function

The outline of printing function in private terminal software is shown in table 7-2-1.

Table 7-2-1 The printing function outline

Function	Outline
Paper size	A4
Printing paper	A4
Printing character	Alphanumeric character, Myanmar character, barcode (CODE-39)
Automatic/manual operation	Automatic or manual output to printer at the time of receiving the Transaction response message (for screen, report)
Re-output	It is possible to re-output the Transaction response messages in receiving folder
Print page indication	It is possible to indicate the page, print copies
Output of each report	It is possible to set the print copies, automatic or manual output, output destination printer indicating in each processing message (for report) as option at the time of automatic output.
Hardcopy	It is possible to print the screen image (bit map) which is displaying on display by manual.
Report print	1Print thereport according to determined form (Use template for report) 2) barcode printing (CODE-39) are possible
Preview	Able to confirm the printing image on screen

7.3 Other specifications

(1) User interface
It is an interface of the Windows base which usesa keyboard and mouse together. Operation only by keyboard is also taken into consideration and it is also possible to set the shortcut or function key.

(2) Version up of package software
Version up of private terminal software which supplied by Myanmar customs is shown in table 7-3-1.

Table 7-3-1 Version up of private terminalsoftware

Target	Method
Large-scale version up	Media (CD-ROM) distribution.
Small-scale version up	Download from the web server of Myanmar customs.

7.4　Notes of using Private Terminal Software

(1)It is allowed for users to use PC(which was installed private terminal software for PC) for business in company with user's responsibility.
However, Myanmar Customs doesn't assure the problems which occur due to install the application software that are commercially available, self-developed software, etc.

Appendix 1 Overview of online service process flow

Appendix1Overview of online service process flow

The MACCS center server implements the following error checking procedure. If an error is detected at a checking stage, a transaction status notice message is transmitted.

A general transmission flow of transaction status notice messages is described in Appendix Figure 1-1 (interactive processing) and Figure 1-2 (delayed processing).
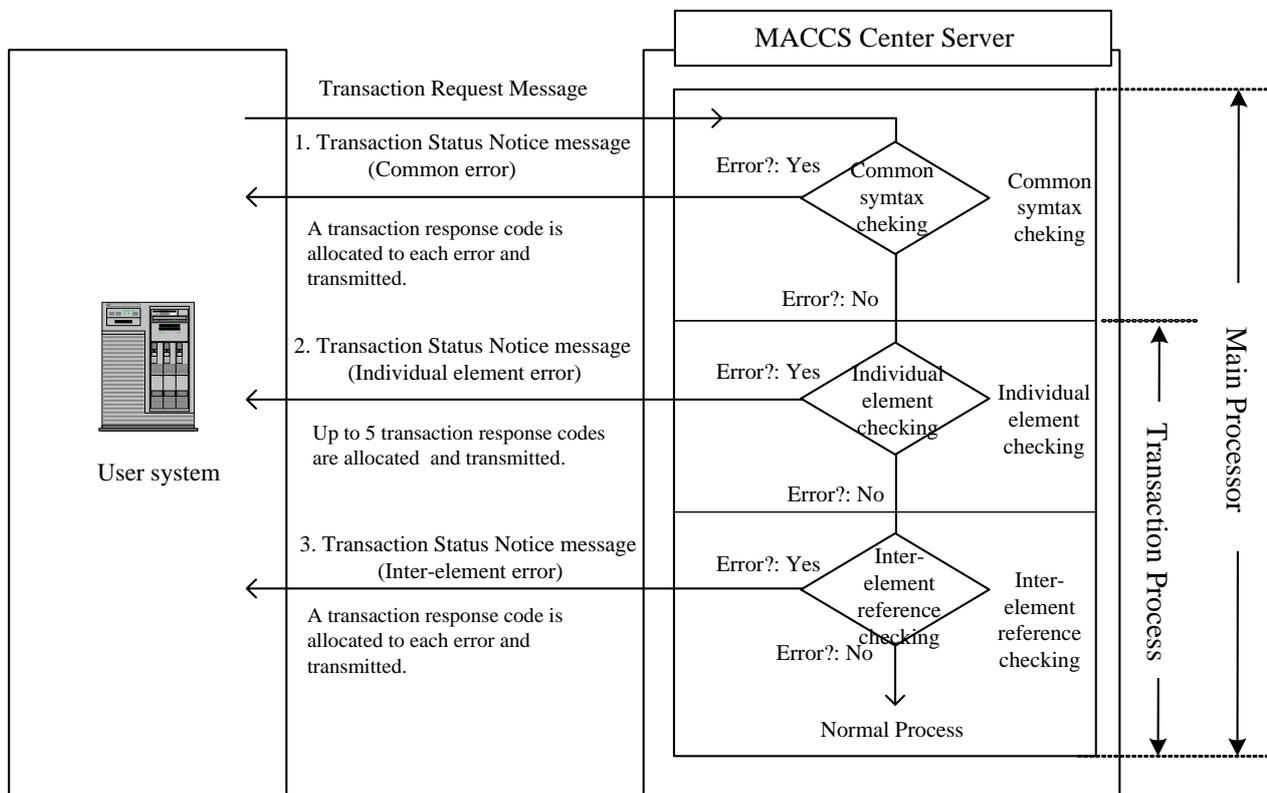
Appendix Figure 1-1General transmission flow of transaction status notice messages (interactive processing)

Individual checking procedures depend on a service specification.
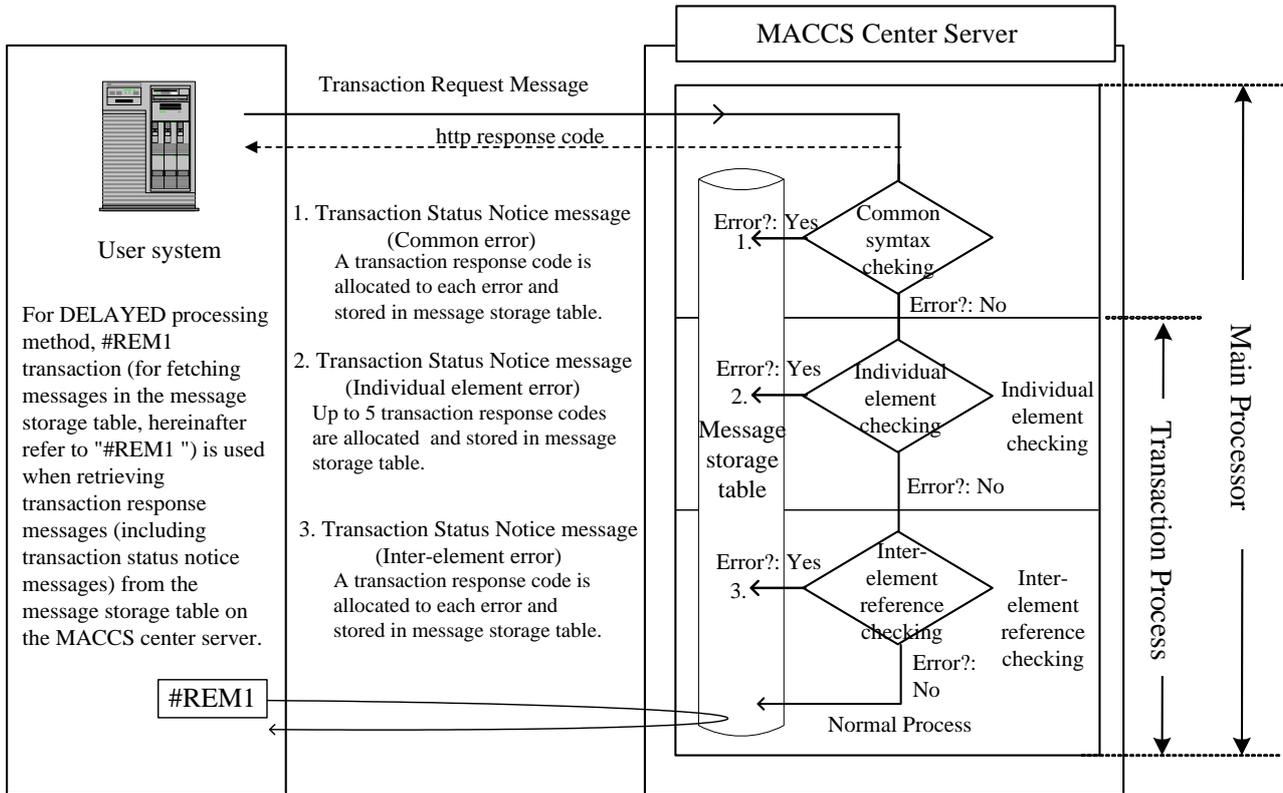
Appendix Figure 1-2 General transmission flow of transaction status notice messages (delayed processing)

Individual checking procedures depend on a service specification.

Appendix 2Code systems

Appendix2 Code systems

1. Output message code system

An output message code is allocated to each transaction status notice message and transaction output message.

Codes are listed in "Appendix Table 2-6List of MACCS online services" and "Appendix Table2-7 List of output message (List of output information)".

(1) Output message code system for transaction status notice messages

Appendix Table 2-1 describes the output message code system for transaction status notice messages.

Appendix Table 2-1 Output message code system for transaction status notice messages

Element	Length	Description
Transaction Status Notice Identification	1	Always use "*" (asterisk).
Service Identification	1	Assign a system identification code: 　M:MACCS service 　C: Infrastructure service
Process Code	5	Assign a process code that invoked the output event.

Example) *MMFR␣␣ : Manifest registration Atransaction status notice

(␣ denotes a space)

*MIDA␣␣ : Pre-registration of import declarationtransaction status notice

*CCMSG␣ :　A transaction status notice for a system common message (common error)

(␣ denotes a space)

*CCTRL␣ : An acknowledgement of an EDIFACT message transmission and notice of a syntax error in an EDIFACT message

(␣ denotes a space)

(2) Output message code system for transaction output messages

Appendix Table 2-2 describes the output message code system for transaction output messages.

Appendix Table 2-2 Output message code system in a transaction output message

Element	Length	Description
System Classification	1	Assign a system identification code: 　M:MACCS service 　C: Infrastructure service
Classification of Online / Batch	1	Assign an information class code at the message source: 　A: Transaction result 　B: Management document 　R: Transaction result (used only for a transaction for retransmission)
Classification of service	1	Assign a transaction class: 　A : Common / Original document data 　C : Clearance (Common / Transit) 　D : Clearance (Import) 　E : Clearance (Export) 　F : Payment 　H: OGA(License) 　I : OGA (OGA test application) 　K : Selectivity (Transit) 　L : Selectivity (Import) 　M : Selectivity (Export) 　N : Selectivity (Cargo) 　R : Cargo (Common) 　S : Cargo (Import) 　T : Cargo (Export) 　Y : For survey / internal service 　Q:Infrastructure
Message code No.		
Message Number Information No.	3	Described as alphanumeric with 3digits.
Version History Number	1	Assign a version history number of the output message template "0"～"9". (Note: Use "0" for the first release of the MACCS.)

Example） 　MAR0230 : 　Vessel basic information

　　　　　　　MAD0010 : 　Copy information of import declaration

2. Transaction response code system

A transaction response code is specified in transaction status notice (Message class [R]) and transaction output (query result) (Message class [M], [R]).

XXXXX-XXXX-XXXX

(4)Individual entry number

(3)Input element name abbreviation

(1)(2)Error code (type + serial number)
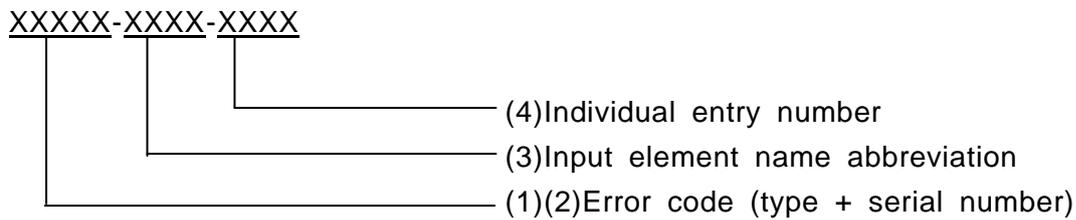
A transaction response code is a 15 bytes fixed-length and consists of an error code, input element name abbreviation and individual element number.

In case of normal termination, the following code is used:

00000-0000-0000

(1) Error code: type (alphanumeric 1 character)

The type code of the error (Refer to Appendix Table 2-3)

(2) Error code: serial number (alphanumeric 4 characters)

The serial number in the error type

(3) Input element name abbreviation (alphanumeric 4 characters)

This indicates the 4 characters abbreviation of the input element that caused the error.

A unique name called "input element name abbreviation" is allocated to each input element on the display template provided byPrivate terminal software. When an error occurs, an input element name abbreviation on the display template corresponding to the value in "Input element name abbreviation" of the transaction response code indicating the error is highlighted.

If there is no corresponding data element to the error (e.g. user's access permission error), "0000" is specified.

Example) 1. An error caused by a specific data element(␣ denotes a space)

S0001-PCS␣-0000

2. An error not caused by a specific data element

A0005-0000-0000

(4) Individual entry number (numeric 4 digits)

If an error occurs in an element that has separate entries, such as "Domestic consumption tax type code" in the import declaration registration process (IDA), a value in this section indicates a position in the separate entries (i.e. a position in the "Input element name abbreviation" above). However, some processes have "Input element name abbreviations" with element numbers, which can directly indicate specific positions in an element. (See the note below)

If there is no separate entry involved in a process, "0000" is specified.

(Note) There are two ways to indicate positions of repeat entries with a value of "Input element name abbreviation" or "Individual entry number" section.

1. "Individual entry number" section is used to indicate an error position in multiple entries within the same "Input element name abbreviation".
   Example） (i) An error occurred in the first repeat entry

   XXXXX-SHB␣-<u>0001</u>
   　　　　　　　　　└─1st entry

   (ii) An error occurred in the 1005th repeat entry

   XXXXX-SHB␣-<u>0050</u>
   　　　　　　　　　└─50th entry

   (␣ denotes a space)

2. A value in "Input entry name abbreviation" section includes an error position in multiple entries.
   Example) (i) An error occurred in the first repeat entry

   XXXXX-<u>S1␣␣</u>-0000
   　　　　　└─1st entry

   (ii) An error occurred in the 150th repeat entry.

   XXXXX-<u>S150</u>-0000
   　　　　　└─150th entry

   (␣ denotes a space)

   （Note） Although three digits are used to indicate a position in the above examples, it is possible that only one or two digits are used in some cases.

Appendix Table 2-3 Error code (type)

Type	Category	Description
U	Access status error	Errors detected as a result of verification of user's access status such as user's identification, terminal type or servicetype.
S	Individual element error	Errors detected as a result of verification of the attribute of the individual input element.
R	Inter-element error	Errors detected as a result of verification of a relationship between two input elements.
E	Transaction condition error	1. The relationship between input data and file data is not valid in terms of program's process condition. 2. The message length is not valid.
W	Warning message	Although transaction processing is completed without errors, a warning message is issued. If this error code is used: A normal termination message is specified in the transaction response code1 section, and A warning message is specified in the transaction response code2 section.
M	Instruction message	An error message and an instruction to handle the error are issued. If this error code is used: An error message is specified in the transaction response code1 section, and An instruction message is specified in the transaction response code2 section.
L	Logic error	Data in two tables are logically inconsistent.
A	System message （common error）	Issued when an error occurred before transaction processing. （Refer to Appendix Table 2-4）

（Note） Descriptions of transaction status notice messages (common error)

Descriptions of transaction status notice messages (common error) that are generated as a result of common transaction processing are listed in Appendix Table 2-4 and Appendix Table 2-5.

(Refer to "Appendix Figure 1-1 General transmission flow of transaction status notice messages (interactive processing)" and "Appendix Figure 1-2 General transmission flow of transaction status notice messages (delayed processing)".)

Appendix Table 2-4 Descriptions of transaction status notice messages (common error)

Error Code	Element	Input Element Name Abbreviation	Description	Handling procedure
A0001	Service code (Service ID)	0000	The service code specified in the message header (Input Common Segment) does not match the service code specified in the URL.	Enter a valid process code.
A0002	Service code (Service ID)	0000	The service is currently in restraint condition.	Wait for cancel of restraint.
A0003	User code and Password	0000	Authentication failed.	Enter a valid user code and password.
A0006	None	0000	The service is not started yet.	Wait until the service is open.
A0007	None	0000	The service has abnormally ended or in Center Busy status.	Contact thecustoms.
A0008	None	0000	Message length in Input Common Segment is invalid.	Examine causes.
A0009	None	0000	Invalid character is included in the message header. (Input Common Segment.)	Examine causes.
A0010	None	0000	Currently the service is being closed.	Wait until the service is open.
A0012	User code	0000	Not authorized for this service.	None
A0013	None	0000	User information does not match the message header (Input Common Segment) information.	Contact thecustoms.
A0014	None	0000	The user is prohibited from using the system.	None
A0016	None	0000	The format of the message header (Input Common Segment) is invalid. Or invalid character is included in the message header.	Create and send a message with a valid message header. (Input Common Segment)
A0017	None	0000	The format of the HTTP protocol header or the message is invalid.	Enter a valid value.
A0018	Terminal access key	0000	Terminal Access Key is invalid.	Enter a valid terminal access key.
A0019	Terminal ID	0000	Terminal ID is invalid.	Enter a validterminal ID.
A0020	None	0000	Specified attachment file does not exist.	Enter a valid value.

AppendixTable 2-5 Descriptions of transaction status notice messages (common error) (continued)

Error Code	Element	Input Element Name Abbreviation	Description	Handling procedure
A0025	None	0000	The system identification of message header(Input Common Segment) is invalid.	Enter a valid value.
A0041	None	0000	Attachment file is invalid. (size, number of files, filename extension etc.)	Enter a valid attachment file.
A0042	None	0000	Statistic document file is invalid. (size, number of files, filename extension etc.)	Enter a valid value.
A0070	None	0000	Output message accumulated for the corresponding terminal ID is currently being extracted.	Fetch a message stored in message storage table after a while.
A0071	None	0000	Output message for corresponding terminal ID is not currently accumulated.	Fetch a message stored in message storage table after a while.
A0080	None	0000	The contents of EDIFACT message are invalid.	Examine causes.
A0101	None	0000	Corresponding service is not permitted for uploading files or downloading files.	Contact the customs.

3. Numbering rule of User ID in MACCS

(1) About User ID in MACCS
   User ID in MACCS is issued by Myanmar Customs.

(2) User ID numbering rule
   In MACCS, User ID is constructed from User code (5 digits) and ID number (3 digits) as below:

   XXXXXXXX
   ───────── ID number
   ───────── User Code
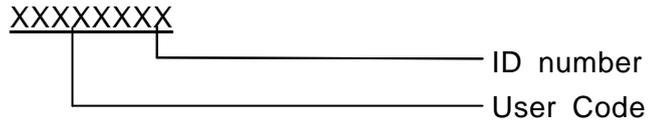
a. User code (5digits)
   User code (organization identifier) provides unique identifier with following rules:
Private users:	10000-8ZZZZ
OGA users:	90000-9ZZZZ

b. ID number (3 digits)
   If a user belongs to anorganization then ID number of that user will be provided as a serial number in thatcompany. The serial number rule is described as below:
Private users:	001-100
OGA users:	001 - 100

Appendix 3 Details of transaction response message

Appendix 3 Details of transaction response message

1. MACCS-EDI message

1.1. Transaction status notice message format in normal case (Message class [R])

A **maximum**length of 75 bytes is allocated to store **up to 5 transaction response codes** in individual message elements. Appendix Figure 3-1 describes the format of transaction status notice message.

Output Common Segment (398 bytes)	C R	L F	Transaction Response Code 1 (15 bytes)	Transaction Response Code 2 (15 bytes)	Transaction Response Code 3 (15 bytes)	Transaction Response Code 4 (15 bytes)	Transaction Response Code 5 (15 bytes)	C R	L F

Appendix Figure 3-1Format of transaction status notice message
(This example shows when **maximum** number of error code is set.)

The following figure shows a text presentation of Appendix Figure 3-1with text editor.
(This example shows when maximum number of error code is set.)

```
XXXXXXXXXX      ·····················      XXXXXXXXXX    < CRLF >

Output Common Segment (398 bytes)

XXXXX - XXXX - XXXX  XXXXX - XXXX - XXXX  XXXXX - XXXX - XXXX  XXXXX - XXXX - XXXX  XXXXX - XXXX - XXXX    < CRLF >

Transaction Response Code 1  Transaction Response Code 2  Transaction Response Code 3  Transaction Response Code 4  Transaction Response Code 5
       (15 bytes)                  (15 bytes)                  (15 bytes)                  (15 bytes)                  (15 bytes)
```
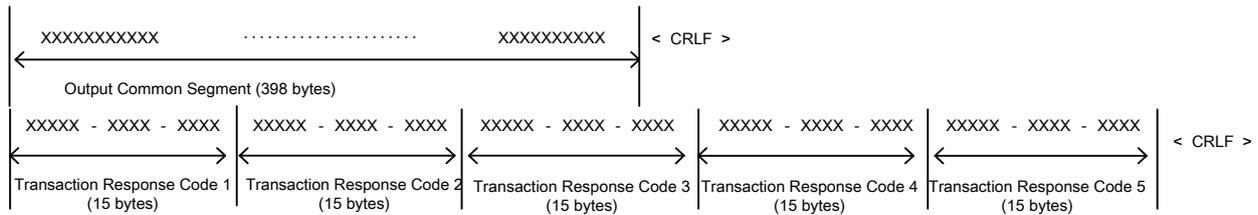
In case of transaction status notice message, transaction response code + space + service specific data will be set in Subject of output common segment.

In case Subject part is viewed with the text format such as text editor, it will be shown as below. (Subject is extracted).
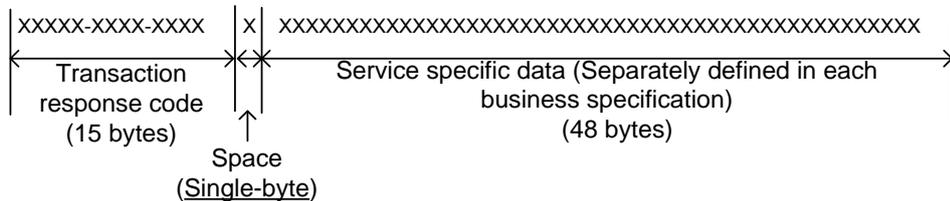
```
XXXXX-XXXX-XXXX    x  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

  Transaction              Service specific data (Separately defined in each
 response code                         business specification)
  (15 bytes)                                 (48 bytes)
                   ↑
                 Space
              (Single-byte)
```

(Note)
  Incase the transaction is finishing normally and warning message (Refer to "Appendix 2 2. Transaction response code system" for details) is NOT set, the first transaction response code (Transaction response code 1＝00000-0000-0000) will be set in "Transaction response code" area in Subject.
  Incase the transaction is finishing normally and the warning message is set, the 2nd transaction response code Transaction response code 2＝WXXXX-XXXX-XXXX) will be set in "Transaction response code" area in Subject.

Please refer"Appendix 1 Overview of online service process flow"for error patterns.

1.2. Transaction output (query result) message format (Message class [M])

A **maximum**length of 75 bytes is allocated to store **up to 5 transaction response codes** for errors occurred in individual message elements. If there is no error, that is, the query result was successful, "00000-0000-0000" is set in Transaction Response code 1, followed by delimiter <CRLF>.

Appendix Figure 1-2 describes the format of transaction status notice and transaction output (query result) messages.

Output Common Segment (398 bytes)	C R	L F	Transaction Response Code 1 (15 bytes)	C R	L F	Service Specific Segment	C R	L F

Appendix Figure 1-2 Format of transaction output (query result) message
(in case query result was successful)

(Note) Contents of the servicespecific segment are separately defined in eachservice specification.

The following figure shows a text presentation of Appendix Figure 1-2with text editor.

```
 XXXXXXXXXX    ....................    XXXXXXXXXX      < CRLF >
 |<--------------------------------------------->|
     Output Common Segment (398 bytes)

 XXXXX - XXXX - XXXX
 |<----------------->|  < CRLF >
   Transaction Response
   Code 1 (15 bytes)

 XXXXXXXXXX    ..............    XXXXXXXXXXXXXX     < CRLF >
 |<------------------------------------------->|
     Service Specific Segment
       (Separately defined in each business specification)
```
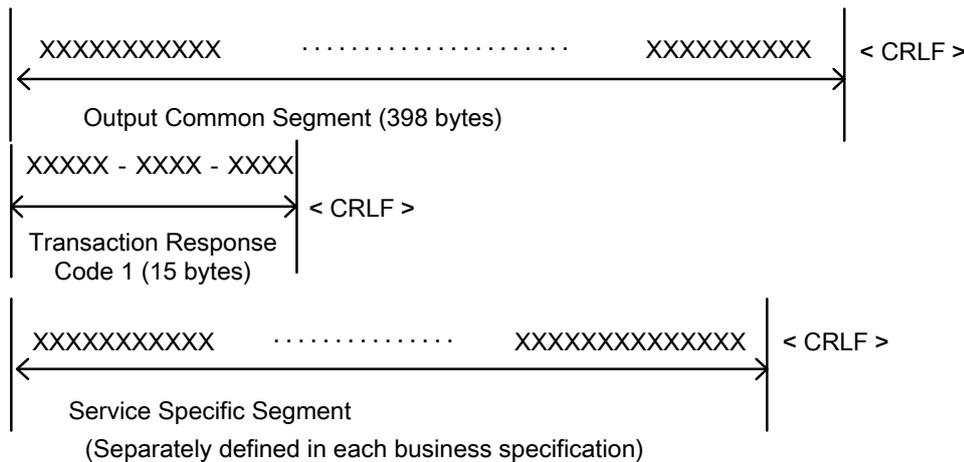
In case of transaction output (query result) message, transaction response code + space + service specific data will be set in Subject of output common segment

In case Subject part is viewed with text editor, it will be shown as below. (Subject is extracted).

```
 XXXXX-XXXX-XXXX   x  xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
 |<------------->|<>|<----------------------------------------------->|
   Transaction         Service specific data (Separately defined in each
   response code              business specification)
    (15 bytes)                       (48 bytes)
            Space
          (Single-byte)
```

(Note)
Incase the transaction is finishing normally and warning message (Refer to "Appendix 2 2. Transaction response code system" for details) is NOT set, the first transaction response code (Transaction response code 1＝00000-0000-0000) will be set in "Transaction response code" area in Subject.
Incase the transaction is finishing normally and the warning message is set, the 2nd transaction response code Transaction response code 2＝WXXXX-XXXX-XXXX) will be set in "Transaction response code" area in Subject.

1.3. Transaction output (non-query result) message format (Message class [C] or [P])

Appendix Figure 1-4 describes the format of transaction output (non-query result) messages.

Output Common Segment (398 bytes)	C R	L F	Service specificsegment	C R	L F	Service specific segment	C R	L F	Service specific segment	C R	L F
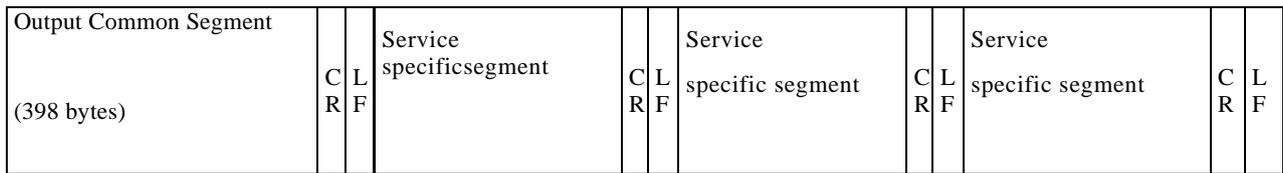
Appendix Figure 1-4Format of transaction output (non-query result) messages

(Note) Contents of the servicespecific segments are separately defined in each servicespecification.

The following figure shows a text presentation of Appendix Figure 1-3 on text editor.

XXXXXXXXXXX········· ·   XXXXXX   <CRLF>

Output Common Segment （398 bytes）

XXXXXXXXXXX············   XXXXXXXXXXX   <CRLF>

Service Specific Segment
 (separately defined in each business specification)

XXXXXXXXXXX···········   XXXXXXXXXXXX   <CRLF>

Service Specific Segment

XXXXXXXXXXX············   XXXXXXXXXXX   <CRLF>

Service Specific Segment
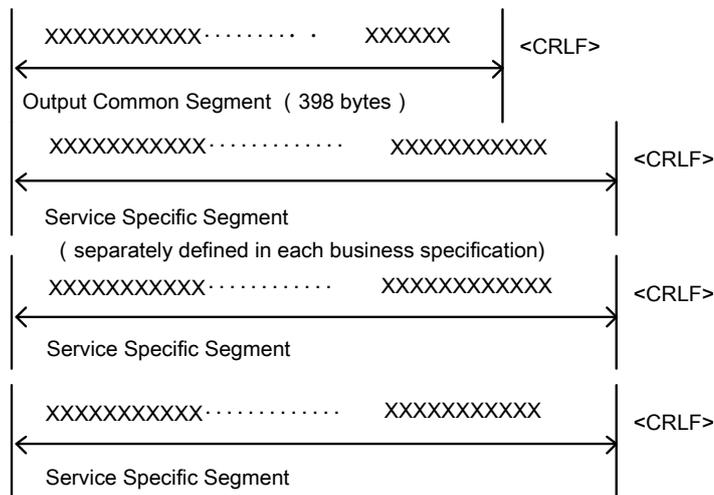
Incase of transaction output message (excluded query result), service specific data will be set to Subject of output common segment.

In case Subject part is viewed with text editor, it will be shown as below. (Subject is extracted).

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Service specific data (Separately defined in each business specification)
(64 bytes)
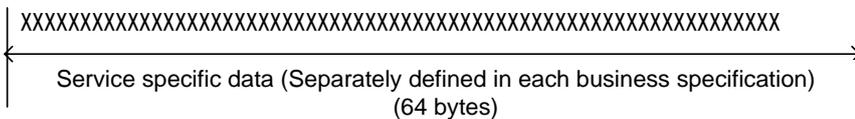
2. EDIFACT message

Depending on errors, up to 5 transaction response codes are set in "APERAK" (common error) or "CUSRES" (transaction error) element of the EDIFACT message.

3. Service with sequential processing

List of service with sequential processing is described in "Processing to continue" column of Appendix Table2-7 List of output message (List of output information).

Appendix 4Transaction process which service code is different from original service code

Appendix 4Transaction process which service code is different from original service code

There are 4 patterns in Transaction process which service code is different from original service code. Theyare;

Division process (pattern 1)

Service execution triggered by other MACCS service than original service(pattern 2)

Delayed batch process (pattern 3)

In any case, the sub-service in service code is different from the service code at the time when the user send request message to perform the service (original service).Therefore, it is necessary for user to understand and to adopt this scheme to process normally.

More details are described below.

(1) Division process (pattern 1)

In case process occurs by 1 service becomes enormous, process is run by sub-service which divided the concerned service into the small fixed processing unit.

To find which service adopt "pattern 1", please refer "remarks" column in "Appendix 2Table2-6 (List of MACCS Online Services)" and find word "(Accumulated service)".

(Example) In case of running the "Manifest submission A (DMF)" service

Manifest Submission

DMF

1MF
1MF
1MF

Registration of
60 B/Ls and
60 containers

Divide into every 20 B/Ls

1MF
1MF
1MF

Divide into every 20 containers

<Example of the occurrence of sub-service>
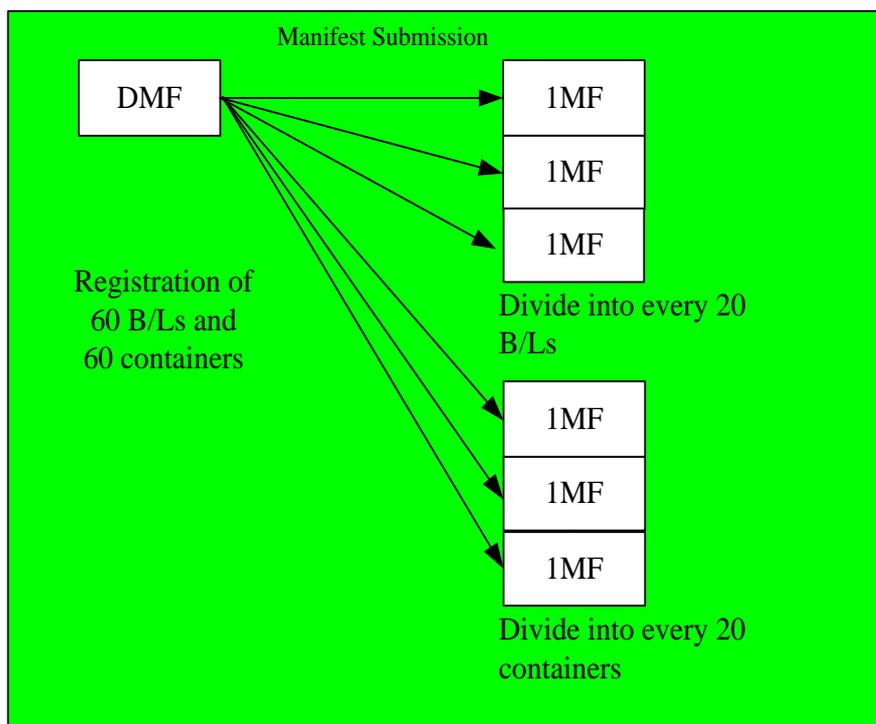
In case of registering 60 B/L and 60 containers, sub-service 1MF which divides (1) 60 B/Ls into every 20 B/Ls and (2) 60 containers into every 20 Containers will occur.

However, even when it is going to register 1 container, 1MF service will occurs.

[Data element which user should pay attention]

"Input message ID" which is set by original service, is inheritedwithout change to its sub-service process. Therefore, it is possible to specify the message of corresponded processing request totransaction output message by using "input message ID"inoutput common field of transaction output message whichis occurred by sub-service.

(2) Service execution triggered by other MACCS service than original service (pattern 2)

In this case, service A is NOT executed on the timing due to business process rule and is registered as "stand-by" in MACCS. When service B is executed, "stand-by" service A is executed. Service B is defined as a trigger serviceof service A.

For example, (a) When IDC (import declaration) request is made with Declaration condition code"F" (Preliminary declaration (automatic startup at the time of cargo carried in the customs warehouse)), IDC DOES NOT execute on this timing.

It is executed (b) When "Registration of carried-in" service, such as PKK (Sea cargo discharge check registration (Individual)), that execute IDC service. In this case, "stand-by"service ID for IDC (1DA) is DIFFERENT FROM ORIGINAL SERVICE (IDC).

To find which service adopt "pattern 2", please refer "Appendix Table 4-2".

(Example) In case of running the "Import declaration (IDC)" service, triggered by"Sea cargo discharge check registration (Individual) (PKK)"

Declaration starup triggered by
"Sea cargo discharge check registration (Individual)" service
(PKK)
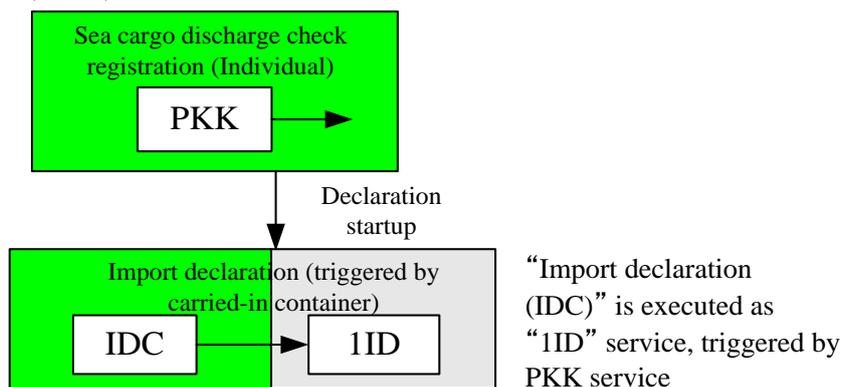
"Import declaration (IDC)" is executed as "1ID" service, triggered by PKK service

[Data element which user should pay attention]

"Input message ID" which is set by original service, is inherited without change to its sub-service process. Therefore, it is possible to specify the message of corresponded processing request to transaction output message by using "input message ID" in output common field of transaction output message which is occurred by sub-service.

(3) Delayed batch process (pattern 3)

In this case, it proceeds as follows;

(a) Service A makes a request to execute delayed batch process B.

(b) Delayed batch process B generates output.

(c) After the delayed batch process B finished, service C is executed to notify the completion of the delayed batch process B.

To find which service adopt "pattern 3", please refer "remarks" column in "Appendix 2Table2-6 (List of MACCS Online Services)" and find word "(Asynchronous processing)".
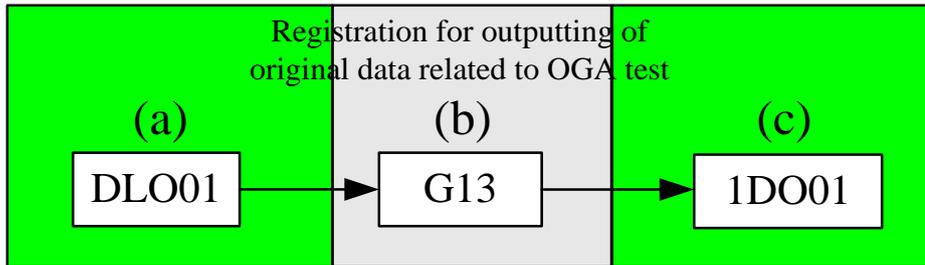
| Registration for outputting of original data related to OGA test		
(a)	(b)	(c)
DLO01 →	G13 →	1DO01

[Data element which user should pay attention]

"Input message ID" which is set by original service, is inherited without change to its sub-service process. Therefore, it is possible to specify the message of corresponded processing request to transaction output message by using "input message ID" in output common field of transaction output message which is occurred by sub-service.

(4) Service execution for large amount of items in import/export/transit declaration (pattern 4)

In this case, it proceeds as follows;

(a) Service A check if the request message excesses in number of items than defined by Myanmar Customs. If the number of items are exceed, service A makes a request to execute delayed service B. If the number of items are NOT exceed, service A process the request by way of online process.

(b) Delayed service B processes information and generates transaction output messages.

To find which service adopt "pattern 4", please refer "Appendix Table 4-3".

Service execution for large amount of items in import/export declaration

"Correction of import declaration (IDE)" makes a request for
"delayed service (1IE)"
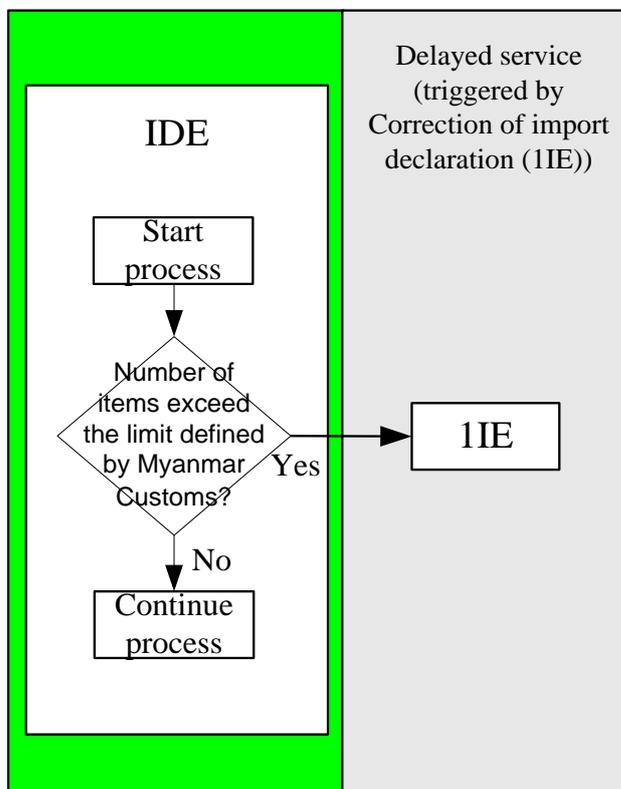
[Data element which user should pay attention]

"Input message ID" which is set by original service, is inherited without change to its sub-service process. Therefore, it is possible to specify the message of corresponded processing request to transaction output message by using "input message ID" in output common field of transaction output message which is occurred by sub-service.

Appendix 5File types and other rules for attachment file

Appendix 5 File types and other rules for attachment file

1. Definition of attachment file

As defined in Chapter 3.2 in EDI specification, MIME format is used when sending "Attachment file" to MACCS. This appendix define (1) Naming rule of attachment file (in following 2.) , (2) File format of attachment file (in following 3.), (3) Services that are able to send/receive attached file (in following 4.), and Allowed file size and number of files for the attachment file(in following 5.). The following table shows the reference information.

Appendix Table 5-1 Reference information of the attachment file

Item	Reference
Message format	Chapter 3.2.2 Attachment file transmission message in EDI specification
Processing mode	Chapter 4.1 Interactive processing method in EDI specification

2. Name of the attachment file

File name of the attachment files transmitted to MACCS should follow rules (A) and (B) below;

(A) File name should consist of characters defined in Table 3-5-3 in Chapter 3.5 of EDI specification

(B) File name shouldbe given with names that Customs officers can guess their content after looking at them.

If needed, Myanmar Customs may specifydetailed rules, apart from EDI specification.

3. Allowed file format for the attachment file

- Microsoft Word format: DOC/DOCX format (Exclude execution module of macro)

- Microsoft Excel format: XLS/XLSX format (Exclude execution module of macro)

- Microsoft PowerPoint format: PPT/PPTX format (Exclude execution module of macro)

- PDF format

- JPG/JPEG format

- GIF format

- PNG format

- TIF/TIFF format

- CSV format

- TEXT format: TXT format

- XML format

4. Services that are able to send/receive attached file

(1) Services which use attachment files at outbound from User system to MACCS are as follows (upload from User system to MACCS);

MSB (Attachment files registration)

HYS (Application by attached electronic file)

HYE (Correction of application by attached electronic file)

MSX (Declaration documents attachment registration)

MSY (Declaration documents attachment correction)

IOA (OGA test application with attached file)

IOE (Correction of OGA test application with attached file)

OOA (Registration of attached file of OGA test approval)

(2) Services which use attachment files at inbound from MACCS to User system are as follows (download from MACCS to User system);

IOR (Reference of OGA test application with attached file)

IOO (Reference of OGA test approval with attached file)

MSC (Attachment files retrieval)

MSZ (Declaration documents attachment acquisition)

?GTN (Get request for the Statistic report)

?GTP (Re-get request for the Statistic report)

For details of ?GTN service and ?GTP service, please refer Appendix 6 (How to get Statistic report from MACCS) of EDI specification.

5.Allowed file size and number of files for the attachment file

When sending attachment files, it should COMPLY with following rules (1) and (2) and (3).

(1) Number of attached file per transaction request/response message SHOULD NOT EXCEED the maximum number (10 files). **(Notice)**
That is, if number of files exceeds the maximum number, user must divide the file into several parts so that the number of files does NOT exceed the maximum number.

(2) When **User system** sends attachment files(upload from User system to MACCS), it is requested that file size of each attached file is less than or equal to maximum file size (500,000 bytes). **(Notice)**

(3) Attached file per transaction request message (upload from User system to MACCS)SHOULD NOT EXCEED the maximum length (3,000,000 bytes). **(Notice)**
That is, if a file whose length exceeds the maximum length, user must divide the file into several parts so that the file's length does NOT exceed the maximum length.

Notice:We will set other rule apart from EDI specification how much of attachment file each user is able to send, because this will effect on bandwidth of Customs WAN.

Appendix 6How to get Statistic report from MACCS

Appendix 6　How to getStatistic report from MACCS

1　Distribution Method

In MACCS, the statistic report is distributed to the user as the electronic data.

MACCS adopts HTTP/HTTPS for communication protocol, and distribute the statistic report to the user.

The user shouldsend request message to MACCS to getstatistic report at the delivery time (or later than the delivery time) of defined for each statistic report.

2　User Who are able to get statistic report

Following Users are able to getstatistic report;
(1) Users who are using Private Terminal Software (PTSW)
(2) User system who have equipped following functions;
　　(a) Function to send and receive message according to MACCS-EDI specification with HTTP/HTTPS protocol
　　(b) Function to decompress the compressed files

3　How to get statistic report

The Private Terminal Software (to be referred as PTSW hereafter) can getstatistic report without considering the transmission by HTTPS or decompression of the compressed files. Users who are using PTSW are able to get statistic report just by carrying out "GetStatistic report" from the menu of the PTSW. Procedure of getting statistic report by the User system is shown in Appendix: 6-"7. Procedure to getstatistic report (When Using User System)". Image of the Delivery of gettingstatistic report is shown in Appendix Figure 6-1.
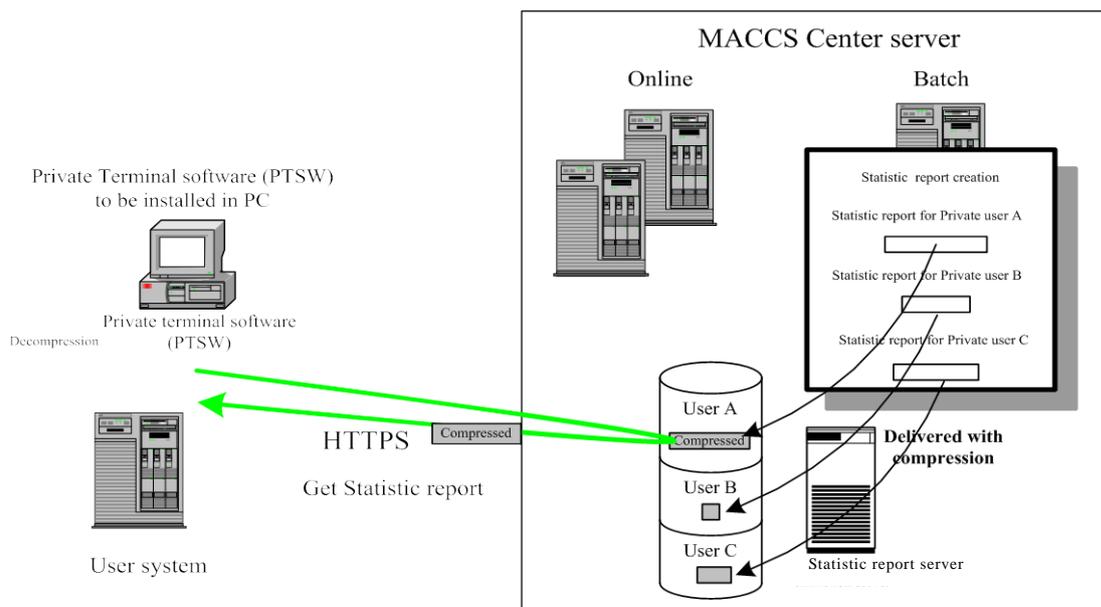
Appendix Figure 6-1　Image of thegettingStatistic report

4　Saving period of statistic reports

　　Statistic report (including original document data) which the user has NOTgotwill be saved for 7 days including the day of creation. This 7 DAYS INCLUDE Saturdays, Sundays, and holidays.

　　Since the statistic report(excluding original document data)the user gets is moved to the directory for re-get and saved in the MACCS for 62 days including the distributed day (including Saturdays, Sundays and holidays), it is possible to for each user to re-getthe statistic reports even which are already gotten from MACCS. It is possible by making the request to MACCS by using "Re-get statistic report" function.

　　For original document data, these reports are DELETED AND on the day after the day that the user got AND ARE NOT ABLE TO RE-GET.

　　User shouldgetthe statistic report which stored in MACCS on the delivery date (following) immediately due to the limitation of the capacity of the server.

5　File Format and Spreadsheet to be Used

　　Basically the statistic report will be offered in TSV format so that the user can edit it using the commercial spreadsheet software.

　　Maximum allowable message transmission size is 1MB (1,000,000 bytes) of data after file compression (zip format).

Appendix **Table** 6**-1 Description of the In-File delivery message type**

Format	Handling
TSV (tab separated format)	Users can edit transferred files using off-the-shelf spreadshe et software.

(Reference) Delivery formats of statistic reports

(1) Delivery procedures and file formats
Basically statistic reports are provided in the TSV format, which enables users to edit documents using off-the-shelf spreadsheet software. And some types of documents such as statement information for batch payment are provided in the fixed-length delimiter format.

TSV format:
A text-base format. Data elements are delimited with '→' (tab) and each line ends with CRLF codes. Appendix Figure 6-2describes an example of TSV format file.
('→'describes an tab data)

Date of Permit→ Date of Authorization→ Date of Declaration→Declaration Number＜CRLF＞	(cell element)
AAAAAAAAAA→ BBBBBBBBBB→ CCCCCCCCCC→ DDDDDDDDDD＜CRLF＞	(values in 1st row)
EEEEEEEEEE→ FFFFFFFFFF→ GGGGGGGGGG→ HHHHHHHHHH＜CRLF＞	(values in 2nd row)

Appendix Figure 6-2 TSV format file

TSV stands for "Tab Separated Value". This file format uses '→' (tab) as a data element separator. This format is widely adopted by spreadsheet and database software products, which enable users to directly handle TSV format files. Note that there are some functional incompatibilities among spreadsheet products in terms of usage of special codes such as tab and double quotation.

(2) Edit and print
1. Files are converted to the TSV format at the MACCS server and delivered to users.
2. Users can edit, modify or print TSV format files using off-the-shelf spreadsheet software.

6 Method for Re-get

In MACCS, the distributed statistic report (EXCLUDING original document data) will be saved for a certain period of time (62 days including the day when it is delivered: including Saturdays, Sundays, Holidays) in MACCS. The user can getthe statistic report by specifying the target statistic report in "Re-getStatistic report" in the Private Terminal Software (PTSW).

7 Procedure to get statistic report (When Using User System)

7.1 Communications Specifications

As for the communication protocol to getstatistic report in MACCS, TCP/IP is adopted for the network transport layer and HTTP/HTTPS for the higher layers.

7.1.1 HTTP request / response Specifications

(1) Request / response of HTTP

The HTTP method that can be used for sending request to getstatistic reports from MACCS is shown in Chapter 4.1.2 "Details of communication protocols and MACCS-EDI message".

(Caution)The method of the HTTP request to be used in this specifications is only POST.

(2)Types of transaction request message

For getting the statistic report, there are three transaction request messages shown in Appendix Table 6-2. Each transaction result in transaction response message which is transmitted to the user system as the response of the HTTP request.

For details of URL setting in http header, please refer (2) URL format of Chaper4.1.2 "Details of communication protocols and MACCS-EDI message" in EDI specification.

Appendix Table 6-2　Types of transaction request message

No.	Kind of messages	Service code (Service ID)	Explanation
1	Get request for the list of the Statistic report	?LST ␣ 　(␣denotes Single-byte space.）	Get the list of the Statistic report accumulated in MACCS.
2	Get request for the Statistic report	?GTN ␣ 　(␣denotes Single-byte space.）	Get the Statistic report accumulated in MACCS.
3	Re-get request for the Statistic report	?GTP ␣ 　(␣denotes Single-byte space.）	Re-get the Statistic report accumulated in MACCS.

7.1.2 Sequence to get statistic report

(A)Sequence of services

The sequence to getstatistic report from the user system is shown in Figure6-2, and the sequence to re-get statistic report is shown in Appendix Figure 6-3.
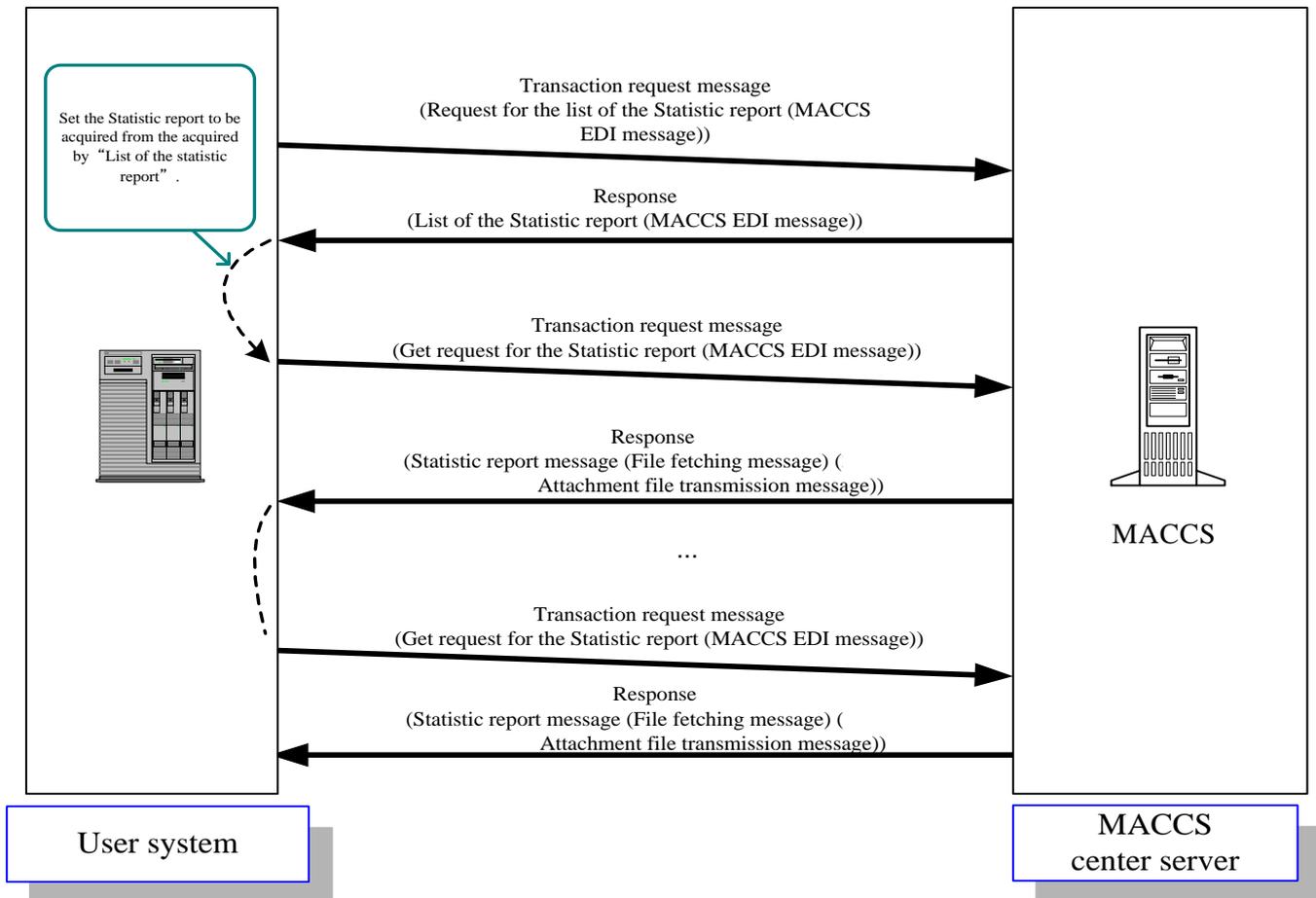
Appendix Figure6-2 Sequence to get statistic report

1. The user system sends request message in order to acquire the list of the statistic report to MACCS.
2. MACCS receives the request from the user system, and acquires the stored statistic report file name and file size.
3. MACCS returns the search results to the user system.
4. The user system sets the statistic reportfile name to be acquired from the list of the statistic report.
5. Based on the demandfrom the user system in 4, request to get statistic report is transmitted to MACCS.
6. MACCS acquires the statistic report based on the request message.
7. MACCS transmits the acquired statistic report to the user system.
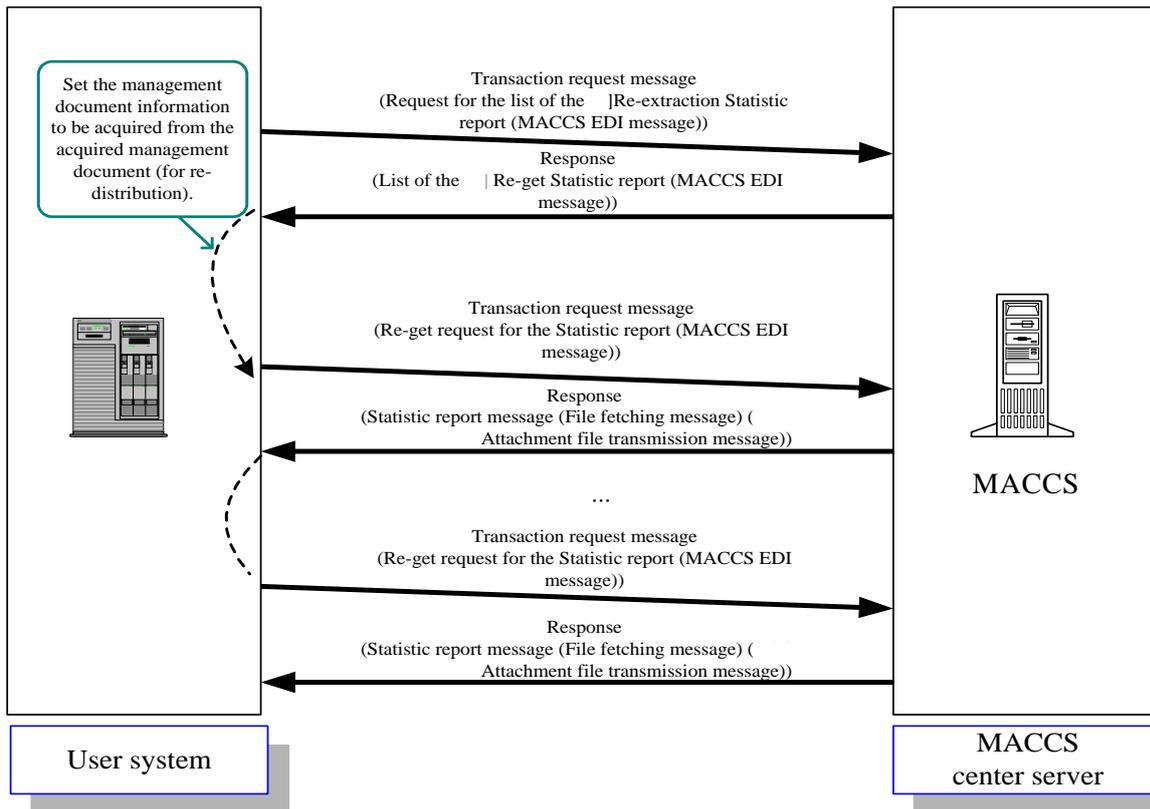
Appendix Figure6-3Sequence to re-getstatistic report

1. The user system sends request message in order to acquire <u>the list of the Re-extraction Statistic report</u> to MACCS.
2. MACCS receives the list demand from the user system, and searches for the file based on the request 1 above.
3. MACCS returns the search results to the user system.
4. The user system sets the statistic report file name to be re-extracted in the list of the statistic report.
5. Based on the request from the user system, the Re-get request for the statistic reportmessage is transmitted to MACCS.
6. MACCS acquires the extracted statistic report based on the request message.
7. MACCS transmits the acquired statistic report to the user system.

(B)Points to be concerned

(1) Message structure of get request for the statistic report
・The message format to getstatistic reportis Attachment transmission file message.
・"Get Statistic report" service and the "Re-get Statistic report" service DOES have different service codes.

(2) File compression format
・The statistic report is saved as the zip compression state on the center side, and is transmitted in the state. Therefore, it is necessary to decompress the zip compressed file on the user system side.

(3) User Authentication at the time of "GetStatistic report" request
・MACCS executes the user authentication with the user code(5-digit) + ID number(3-digit) and password set in the received message from the user system (MACCS-EDI message). "Get Statistic report"requestcan be performed only after the user authentication is succeeded.
In case of authentication error, an error message will be returned to the user system.

(4) "Get Statistic report" function
It becomes possible to get statistic reportonly when (a) user system implementsthe interface of to get statistic report which Myanmar Customs disclose BY THIS DOCUMENT and (b) by connecting by HTTP/HTTPS.

7.2 Message Specifications

In transmittingstatistic report, theformat forthe message with the attachmentfile is adopted. For detail, refer to Chapter 4.1.2 "Details of communication protocols and MACCS-EDI message".

7.2.1   Message Structure

The outline of the message structure of each form is shown below.

(1) In case of the MACCS-EDI message

1. Transaction request message

The form of message, in which the user system transmits the processing requestmessage (Get request for the list of the statistic report, Get request for the statistic report, Re-get request for the statistic report) to MACCS.

2. Transaction response message

The form of the message, in which MACCStransmits the transaction response messages (Get request for the list of the statistic report, Get request for the statistic report, Re-get request for the statistic report) to MACCS, is shown Chapter 4.1.2 "Details of communication protocols and MACCS-EDI message".

(2) In case of theAttachment file transmission message:

The statistic report will be returned to the user system as the message with attachment file. For detail, refer to Chapter 4.1.2 "Details of communication protocols and MACCS-EDI message". The outline of the message are shown in Appendix Figure 6-4.In addition, the statistic report is returned to the user system as compressed attached file in zip format as an attachment file.
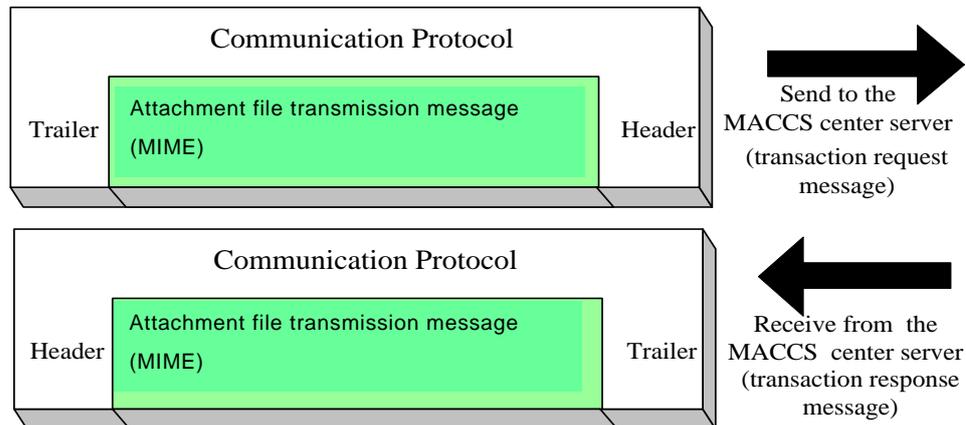
Appendix Figure 6-4   Outline of the attached file messages

In MACCS, we use MIME (Multipurpose Internet Mail Extensions) when transmitting the statistic report. The statistic report will be stored in the format for the attached file. Also refer to chapter
The note pointsareas follows:

- ・ We use BASE64 for Content-Transfer-Encoding of the attached file part.
- ・ We use "attachment" For Content-Disposition, and a file name is set for the "filename".
- ・ There is only ONE attached file per Attachment file transmission message.

7.2.2 Setting Contents of Each Message

Setting contents of each message is shown below.

(1) Contents of the Get request for the list of the statistic report message (Transaction request message)

A) Input common segment

The contents of the Input Common Segment in the Get request for the list of the statistic reportmessage are shown in Appendix Table 6-3.

Appendix Table 6-3　Input common segment (Get request for the list of the statistic report)

No.	Item name	Digit	Contents of setup
1	(Reserved area)	3	SS␣ (␣ denotes single-byte space.)
2	Service code (Service ID)	5	?LST␣ (␣ denotesSingle-byte space)
3	(Reserved area)	21	(Always space)
4	User code	5	Set the user code, ID number, user password, and use them to identify User ID.
5	ID number	3	
6	Password	8	
7	Terminal ID	6	Set a terminal ID that made this request.
8	(Reserved area)	313	(Always space)
9	System ID	1	(Always set "1")
10	(Reserved area)	27	(Always space)
11	Message Length	6	It shows the length of the MACCS-EDI message (including the Input common segment)

B) Service specific segment

The contents of the setup of the Service specific segment of the Get request for the list of the Statistic report are shown in Appendix Table 6-4.

Appendix Table 6-4　Service specific segment (Get request for the list of the statistic report)

No.	Item name	Digit	Contents of setup
1	Output Message Code (Output information ID)	7 (at maximum)	(1) In case of "Get Statistic report", set no value (that is 0 digit). (2) In case of "Re-get Statistic report", set target Output Message Code (Output information ID) that user would like to fetch. (Note)
2	Delimiter	2	<CRLF>is set

(Note)Since the targets of re-get messages are assumed to become vast, User should narrows down the target statistic report with the output information code. Therefore, set the output information code when re-get them.

(2) Contents of the List of the Statistic report (response message)

A) Output common segment

The contents of the output common segment in the List of the statistic report message are shown in Appendix Table 6-5.

Appendix Table 6-5   Output common segment (List of the Statistic report message)

No.	Item name		-digit	Contents of setup
1	Control		3	(Note1)
2	Service code (Service ID)		5	The same service code as for the processing demand message will be set (?LST␣) (␣denotesSingle-byte space)
3	Output Message Code (Output information ID)		7	Normal : CAQ0160 Common error : *CCMSG␣ (Normal error does NOT happen) (␣denotesSingle-byte space)
4	Message Receive Date		14	The message reception date will be set (yyyymmddhhmm␣␣)
5	User Code		5	The user code of the user who receives the message will be set
6	(Reserved area)		211	(Note1)
7	Message Control Information	Division Sequence Number	3	Normal : 001 Error : 000
8		Termination	1	E (fixed)
9		Message Class	1	Normal : M Error : R
10		(Reserved area)	3	(Note1)
11	(Reserved area)		110	(Note1)
12	Message Destination Control Code		1	Q (fixed)
13	(Reserved area)		28	(Note1)
14	Message Length		6	It shows the length of MACCS-EDI message 000400~500000

(Note1)The reserved areas are used to control system.

C) Service specific segment

The contents of the service specific segment item in the List of the Statistic report message (Normal) are shown in Appendix Table 6-6.

Appendix Table 6-6　Service specific segment (List of the Statistic report message)

No.	Item name		Digit	Contents of setup
1	Processing result code		15	00000-0000-0000 (The processing result code will be)
2	Delimiter		2	<CRLF>
3	Statistic report file name (Note1)	Output Message Code (Note2)	7	The Output Message Code that specify statistic reportis be set
4		Target date	8	The date of the target data for editing will be set (yyyymmdd format)
5		Separation	1	_ (Underscore)
6		Destination user code	5	The user code will be set
7		Separation (Note3)	1	_ (Underscore)
8		Subject	Max64	Importer / exporter code will be set
9		Separation	1	_ (Underscore)
10		Copy source user code (Note4)	5	The user code of the copy source will be set
11		Separation	1	_ (Underscore)
12		Created date and time	14	The system date and time when editing the distribution file in the center server will be set (yyyymmddhhmmss format)
13		Extension	4	.zip will be set
14	Delimiter (Note1)		2	<CRLF>
15	Size (Note1)		8	File size(Unit : Byte)
16	Delimiter (Note1)		2	<CRLF>

(Note 1) No.3-16 will be repeated when there are two or more statisticdocument files. In addition, No.3-12 are variable length.

(Note 2) When you get statistic documentsby the Private Terminal Software (PTSW), the PTSW converts the output information code into service specification No.(of Statistic report) + Statistic report name. Therefore, it becomes the following:

Output Message Code＋Target date＋_＋Destination user code＋_ ＋Importer/Exporter code, etc.＋_＋Copy source user code, etc.＋_＋Created date and time.tsv

(Example of the Statistic report file name converted by the package software for PC)

AAA999020161101_3ANTT_ABCDE_1ANTT_20161208091024.tsv

(Note3)The underscore, which is located in front of " infront/back of No.8 "Subject", is outputted when "Subject" is outputted.
　　　　It will NOT be outputted when "Subject" is not outputted.
(Note4)It will be used only when distributing the Statistic report, which has once been distributed for a user, to the other user. When "_Subject_" is included in the original Statistic report, "Copy source user code" will be outputted to the front to the copied statistic report.

　　The contents of the Service specific segment in the List of the Statistic report message (error) are shown in Appendix Table 6-7.

Appendix Table 6-7　Service specific segment (List of the Statistic report message)

No.	Item name	Digit	Contents of setup
1	Processing result code	15	Processing result code showing error
2	Delimiter	2	<CRLF>

(3)Contents of "Get request for the Statistic report"/"Re-get request for the Statistic report" (Transaction request message)

A) Input common segment

The contents of the setup of the Input common segment of the Get request for the Statistic report/ Re-get request for the Statistic report are shown in Appendix Table 6-8.

Appendix Table 6-8　Input common segment (the Get request for the Statistic report/Re-get request for the Statistic report)

No.	Item name	Digit	Contents of setup
1	Control	3	SS ␣ (␣ denotes single-byte space.)
2	Service code (Service ID)	5	Get request for the Statistic report : ?GTN ␣ (␣ denotesSingle-byte space) Re-get request for the Statistic report : ?GTP ␣ (␣ denotesSingle-byte space)
3	(Reserved area)	21	(Always space)
4	User code	5	Set the user code, ID number, user password, and use them to identify User ID.
5	ID number	3	
6	Password	8	
7	Terminal ID	6	Set a terminal ID that made this request.
8	(Reserved area)	313	(Always space)
9	System ID	1	(Always set "1")
10	(Reserved area)	27	(Always space)
11	Message Length	6	It shows the length of the MACCS-EDI message (including the Input common segment)

B) Service specific segment

The contents of the setup of the Service specific segment in "Get request for the Statistic report"/"Re-get request for the Statistic report" are shown in Appendix Table 6-9.

Appendix Table 6-9　Service specific segment (Get request for the Statistic report/Re-get request for the Statistic report)

No.	Item name	Digit	Contents of setup
1	File name	128	Set file name of the statistic report file name to get.According to Item "Statistic reportfile name" of the statistic report message list.
2	Delimiter	2	<CRLF>

(4) Contents of the Statistic reportmessage (response message)

A) Output common segment

The contents of the setup of the Output common segment in the Statistic report message are shown in Appendix Table 6-10.

Appendix Table 6-10　Output common segment (Statistic reportmessage)

No.	Item name		Digit	Outline
1	(Reserved area) Transaction control code		3	SS␣
2	Service code (Service ID)		5	The same service code as that of the processing demand message will be set
3	Output information code		7	In case of "reply of Get request for the Statistic report" Normal : *C?GTN␣ Common error : *CCMSG␣ (Normal error does NOT happen) In case of "reply of Re-get request for the Statistic report" Normal : *C?GTP␣ Common error : *CCMSG␣ (Normal error does NOT happen) (␣ denotes Single-byte space)
4	Date of message receive		14	The message reception date will be set (yyyymmddhhmm␣␣)
5	User code		5	The user code of the user who receives the message will be set
6	(Reserved area)		211	(Note1)
7	Message control information	Division serial No.	3	000 (fixed)
8		Final indication	1	E (fixed)
9		Message class	1	R (fixed)
11		(Reserved area)	3	(Note1)
12	(Reserved area)		110	The configuration information of the processing demand message will be outputted without changed.
13	Message destination control code		1	Q (fixed)
14	(Reserved area)		28	(Note1)
15	Message length		6	It shows the length of the MACCS-EDI message

(Note1)Use the Reserved area for the control of the system.

B) Service specific segment

The contents of the Service specific segment in the Statistic report message are shown in Appendix Table 6-11.

Appendix Table 6-11   Service specific segment (Statistic reportmessage)

No.	Item name	Digit	Contents of setup
1	Processing result code	15	Normal : 00000-0000-0000 (Processing result code will be set) Error : Processing result code which shows error
2	Delimiter	2	<CRLF>

C) Attached file
In case of Normal : The Statistic report encoded by BASE64 is attached.
In case of Error : No attached file is set.

7.2.3 Naming rule of statistic reportfile

File name of the statistic report in the TSV format is explained below.

(1)   Statistic report file name in TSV format
Output messagecode (Output information ID)(A)＋Target date (B)

＋_＋Destinationuser code (C)＋_＋Data existence identification (D)

＋_＋Importer/Exporter code, etc. (E)＋_＋Copy source user code, etc. (F)

＋_＋Created date and time (G).tsv

(A) :It represents the output messagecode of the statistic report.
(B) :It represents the date of the data for editing.
        YYYYMMDD format.
(C) :It represents the destination user code.
(D) :It represents the existence of data in the statistic report. "0" means the data does
        not exist, "1" means the data exist.
(E) :It represents Importer/Export code etc. (optional)
(F) :It represents copy source user code (optional)
        [*]It is used to distribute the statistic report, which is already distributed to a user,
        to another user. When "_Importer/Exporter code, etc._ (E)" is included in the
        statistic report of copy source user code, the contents will be outputted.
(G) :It represents the system date and time at the time of editing.

(Note)Since the underscore("_"), which is located in the front or after Item(E), is
        supposed to be outputted together when Item (F) is outputted. Therefore, it is
        NOT outputted when Item (E) is not outputted.

Below are the examples of the file names of the statistic reportwhen User system gets
it by itself.

(Example1)In case of the normal daily statistic report:

AAA999020161208_1ANAC_1_20161209045012.tsv
        └Output message code

Statistic report destination is user code 1ANAC, which was edited at 4:50:12 on
December 9, 2016 (Daily report) (The data is for December 8)

(Example2) In case of same statistic report of the user in (Example1) is created (copied) to user code 3ANAC as well:

AAA999020161208_3ANAC_1_1ANAC_20161209045012.tsv

(Example3)In case of the monthlystatistic reportwhich file name contains Importer/Exporter code etc:

AAA999020161130_1ANAC_1_ABCDE_20161208091024.tsv
→Content of statistic reportis excerpted to importer; ABCDE

AAA999020161130_1ANAC_1_FGHIJ_20161208091024.tsv
→Content of statistic reportis excerpted to importer; FGHIJ

Statistic report destination is user code 1ANAC, which was edited at 9:10:24 on December 8, 2016 (Monthly report).The data itself is data in November.

(Example4) In case of same statistic report of the user in (Example3) is created (copied) to 3ANAC as well:

AAA999020161130_3ANAC_1_ABCDE_1ANAC_20161208091024.tsv
→Content of statistic reportis excerpted to importer; ABCDE

AAA999020161130_3ANAC_1_FGHIJ_1ANAC_20161208091024.tsv
→Content of statistic reportis excerpted to importer; FGHIJ

7.3   Countermeasures in case of abnormal error(s)

(1)Error due to the contentsof HTTP header

Countermeasures are shown in Appendix Table 6-12 when error occurs at the time of the request of HTTP.

Appendix Table 6-12   Countermeasures at the time of HTTP request

No.	Method	Assumed errors and countermeasures
1	POST	HTTP is requested, but no reply comes from the Statistic report server on the center side. <Causes and countermeasures> (1) The address port number is wrong →Confirm whether the request is correct. (2) MACCS is under maintenance. →Connect again after the maintenance hours ended. (3) MACCS and /or network are under failure. →Connect it again after a while. When the failure is not recovered for a long time,ask Myanmar Customsto investigate it. An error reply (other than normal reply (200)) did notreturn. <Causes and countermeasures> (1) URL is wrong. →Confirm whether the correct URL disclosed from Myanmar Customs is set. (2) There is an error in HTTP header. →Create the appropriate HTTP header and execute it again.

7.4   Others

(1)Restrictions

When getting the Statistic reportby the User system, User system must comply with the followings:

A)   The user system should get Statistic report promptly on the date for distribution(or later as soon as possible).

B)   It is necessary for the User system to follow the following rules to prevent the response delay due to the requestcongestion from some users.
・ When getting Statistic report(s) from the User system, do not make request (of getting Statistic report) from multiple user codes simultaneously.
・ Do not send request to get multiple Statistic report(s) for the same user code.

(2)Other remarks

When getting the Statistic report by the User system, User system needs to keep in mind about the following matters:

A)   In case of the high loading in the system, MACCS may limit its operation, such as shutting request messages from all users, may be taken.

Appendix 7 Myanmar characters which are supported in MACCS/MCIS and UTF-8 encoding table

Appendix 7Myanmarcharacters which are supported in MACCS/MCIS and UTF-8 encoding table

In this Appendix, Character encoding system in EDI message defined in chapter 3.5 will be described more detail in UTF-8 encoding table also.

Note:

MACCS/MCISallow Precomposed Unicode characters but not Composite Unicode characters, so Combining Diacritical Marks will not be supported.

Note: Invalid characters: CR (hex '0D'), LF (hex '0A')
A CRLF characterset is ONLY USED as a delimiter.

Appendix Table4-1: Myanmar characters are supported in MACCS/MCIS

Character	Unicode (Hex value)	UTF-8 (Hex value)	English name
SP	0020	20	SPACE
!	0021	21	EXCLAMATION MARK
"	0022	22	QUOTATION MARK
#	0023	23	NUMBER SIGN
$	0024	24	DOLLAR SIGN
%	0025	25	PERCENT SIGN
&	0026	26	AMPERSAND
'	0027	27	APOSTROPHE
(	0028	28	LEFT PARENTHESIS
)	0029	29	RIGHT PARENTHESIS
*	002A	2a	ASTERISK
+	002B	2b	PLUS SIGN
,	002C	2c	COMMA
-	002D	2d	HYPHEN-MINUS
.	002E	2e	FULL STOP
/	002F	2f	SOLIDUS
0	0030	30	DIGIT ZERO
1	0031	31	DIGIT ONE
2	0032	32	DIGIT TWO

Character	Unicode (Hex value)	UTF-8 (Hex value)	English name
3	0033	33	DIGIT THREE
4	0034	34	DIGIT FOUR
5	0035	35	DIGIT FIVE
6	0036	36	DIGIT SIX
7	0037	37	DIGIT SEVEN
8	0038	38	DIGIT EIGHT
9	0039	39	DIGIT NINE
:	003A	3a	COLON
;	003B	3b	SEMICOLON
<	003C	3c	LESS-THAN SIGN
=	003D	3d	EQUALS SIGN
>	003E	3e	GREATER-THAN SIGN
?	003F	3f	QUESTION MARK
@	0040	40	COMMERCIAL AT
A	0041	41	LATIN CAPITAL LETTER A
B	0042	42	LATIN CAPITAL LETTER B
C	0043	43	LATIN CAPITAL LETTER C
D	0044	44	LATIN CAPITAL LETTER D
E	0045	45	LATIN CAPITAL LETTER E
F	0046	46	LATIN CAPITAL LETTER F
G	0047	47	LATIN CAPITAL LETTER G
H	0048	48	LATIN CAPITAL LETTER H
I	0049	49	LATIN CAPITAL LETTER I
J	004A	4a	LATIN CAPITAL LETTER J
K	004B	4b	LATIN CAPITAL LETTER K
L	004C	4c	LATIN CAPITAL LETTER L
M	004D	4d	LATIN CAPITAL LETTER M
N	004E	4e	LATIN CAPITAL LETTER N
O	004F	4f	LATIN CAPITAL LETTER O
P	0050	50	LATIN CAPITAL LETTER P
Q	0051	51	LATIN CAPITAL LETTER Q
R	0052	52	LATIN CAPITAL LETTER R
S	0053	53	LATIN CAPITAL LETTER S
T	0054	54	LATIN CAPITAL LETTER T

Character	Unicode (Hex value)	UTF-8 (Hex value)	English name
U	0055	55	LATIN CAPITAL LETTER U
V	0056	56	LATIN CAPITAL LETTER V
W	0057	57	LATIN CAPITAL LETTER W
X	0058	58	LATIN CAPITAL LETTER X
Y	0059	59	LATIN CAPITAL LETTER Y
Z	005A	5a	LATIN CAPITAL LETTER Z
[	005B	5b	LEFT SQUARE BRACKET
\	005C	5c	REVERSE SOLIDUS
]	005D	5d	RIGHT SQUARE BRACKET
^	005E	5e	CIRCUMFLEX ACCENT
_	005F	5f	LOW LINE
`	0060	60	GRAVE ACCENT
a	0061	61	LATIN SMALL LETTER A
b	0062	62	LATIN SMALL LETTER B
c	0063	63	LATIN SMALL LETTER C
d	0064	64	LATIN SMALL LETTER D
e	0065	65	LATIN SMALL LETTER E
f	0066	66	LATIN SMALL LETTER F
g	0067	67	LATIN SMALL LETTER G
h	0068	68	LATIN SMALL LETTER H
i	0069	69	LATIN SMALL LETTER I
j	006A	6a	LATIN SMALL LETTER J
k	006B	6b	LATIN SMALL LETTER K
l	006C	6c	LATIN SMALL LETTER L
m	006D	6d	LATIN SMALL LETTER M
n	006E	6e	LATIN SMALL LETTER N
o	006F	6f	LATIN SMALL LETTER O
p	0070	70	LATIN SMALL LETTER P
q	0071	71	LATIN SMALL LETTER Q
r	0072	72	LATIN SMALL LETTER R
s	0073	73	LATIN SMALL LETTER S
t	0074	74	LATIN SMALL LETTER T
u	0075	75	LATIN SMALL LETTER U
v	0076	76	LATIN SMALL LETTER V

Character	Unicode (Hex value)	UTF-8 (Hex value)	English name
w	0077	77	LATIN SMALL LETTER W
x	0078	78	LATIN SMALL LETTER X
y	0079	79	LATIN SMALL LETTER Y
z	007A	7a	LATIN SMALL LETTER Z
{	007B	7b	LEFT CURLY BRACKET
|	007C	7c	VERTICAL LINE
}	007D	7d	RIGHT CURLY BRACKET
~	007E	7e	TILDE
က	1000	e1 80 80	MYANMAR LETTER KA
ခ	1001	e1 80 81	MYANMAR LETTER KHA
ဂ	1002	e1 80 82	MYANMAR LETTER GA
ဃ	1003	e1 80 83	MYANMAR LETTER GHA
င	1004	e1 80 84	MYANMAR LETTER NGA
စ	1005	e1 80 85	MYANMAR LETTER CA
ဆ	1006	e1 80 86	MYANMAR LETTER CHA
ဇ	1007	e1 80 87	MYANMAR LETTER JA
ဈ	1008	e1 80 88	MYANMAR LETTER JHA
ဉ	1009	e1 80 89	MYANMAR LETTER NYA
ည	100A	e1 80 8a	MYANMAR LETTER NNYA
ဋ	100B	e1 80 8b	MYANMAR LETTER TTA
ဌ	100C	e1 80 8c	MYANMAR LETTER TTHA
ဍ	100D	e1 80 8d	MYANMAR LETTER DDA
ဎ	100E	e1 80 8e	MYANMAR LETTER DDHA

Character	Unicode (Hex value)	UTF-8 (Hex value)	English name
ဏ	100F	e1 80 8f	MYANMAR LETTER NNA
တ	1010	e1 80 90	MYANMAR LETTER TA
ထ	1011	e1 80 91	MYANMAR LETTER THA
ဒ	1012	e1 80 92	MYANMAR LETTER DA
ဓ	1013	e1 80 93	MYANMAR LETTER DHA
န	1014	e1 80 94	MYANMAR LETTER NA
ပ	1015	e1 80 95	MYANMAR LETTER PA
ဖ	1016	e1 80 96	MYANMAR LETTER PHA
ဗ	1017	e1 80 97	MYANMAR LETTER BA
ဘ	1018	e1 80 98	MYANMAR LETTER BHA
မ	1019	e1 80 99	MYANMAR LETTER MA
ယ	101A	e1 80 9a	MYANMAR LETTER YA
ရ	101B	e1 80 9b	MYANMAR LETTER RA
လ	101C	e1 80 9c	MYANMAR LETTER LA
ဝ	101D	e1 80 9d	MYANMAR LETTER WA
သ	101E	e1 80 9e	MYANMAR LETTER SA
ဟ	101F	e1 80 9f	MYANMAR LETTER HA
ဠ	1020	e1 80 a0	MYANMAR LETTER LLA

Character	Unicode (Hex value)	UTF-8 (Hex value)	English name
အ	1021	e1 80 a1	MYANMAR LETTER A
ဣ	1023	e1 80 a3	MYANMAR LETTER I
ဤ	1024	e1 80 a4	MYANMAR LETTER II
ဥ	1025	e1 80 a5	MYANMAR LETTER U
ဦ	1026	e1 80 a6	MYANMAR LETTER UU
ဧ	1027	e1 80 a7	MYANMAR LETTER E
ဩ	1029	e1 80 a9	MYANMAR LETTER O
ဪ	102A	e1 80 aa	MYANMAR LETTER AU
ါ	102B	e1 80 ab	MYANMAR VOWEL SIGN TALL AA
ာ	102C	e1 80 ac	MYANMAR VOWEL SIGN AA
ိ	102D	e1 80 ad	MYANMAR VOWEL SIGN I
ီ	102E	e1 80 ae	MYANMAR VOWEL SIGN II
ု	102F	e1 80 af	MYANMAR VOWEL SIGN U
ူ	1030	e1 80 b0	MYANMAR VOWEL SIGN UU
ေ	1031	e1 80 b1	MYANMAR VOWEL SIGN E
ဲ	1032	e1 80 b2	MYANMAR VOWEL SIGN AI
ံ	1036	e1 80 b6	MYANMAR SIGN ANUSVARA
့	1037	e1 80 b7	MYANMAR SIGN DOT BELOW

Character	Unicode (Hex value)	UTF-8 (Hex value)	English name
◌ः	1038	e1 80 b8	MYANMAR SIGN VISARGA
◌	1039	e1 80 b9	MYANMAR SIGN VIRAMA
◌်	103A	e1 80 ba	MYANMAR SIGN ASAT
◌ျ	103B	e1 80 bb	MYANMAR CONSONANT SIGN MEDIAL YA
◌ြ	103C	e1 80 bc	MYANMAR CONSONANT SIGN MEDIAL RA
◌ွ	103D	e1 80 bd	MYANMAR CONSONANT SIGN MEDIAL WA
◌ှ	103E	e1 80 be	MYANMAR CONSONANT SIGN MEDIAL HA
ဿ	103F	e1 80 bf	MYANMAR LETTER GREAT SA
၀	1040	e1 81 80	MYANMAR DIGIT ZERO
၁	1041	e1 81 81	MYANMAR DIGIT ONE
၂	1042	e1 81 82	MYANMAR DIGIT TWO
၃	1043	e1 81 83	MYANMAR DIGIT THREE
၄	1044	e1 81 84	MYANMAR DIGIT FOUR
၅	1045	e1 81 85	MYANMAR DIGIT FIVE
၆	1046	e1 81 86	MYANMAR DIGIT SIX
၇	1047	e1 81 87	MYANMAR DIGIT SEVEN
၈	1048	e1 81 88	MYANMAR DIGIT EIGHT

Character	Unicode (Hex value)	UTF-8 (Hex value)	English name
၉	1049	e1 81 89	MYANMAR DIGIT NINE
၊	104A	e1 81 8a	MYANMAR SIGN LITTLE SECTION
။	104B	e1 81 8b	MYANMAR SIGN SECTION
၌	104C	e1 81 8c	MYANMAR SYMBOL LOCATIVE
၍	104D	e1 81 8d	MYANMAR SYMBOL COMPLETED
၎	104E	e1 81 8e	MYANMAR SYMBOL AFOREMENTIONED
၏	104F	e1 81 8f	MYANMAR SYMBOL GENITIVE

Code of Unicode has been cited from documents described in following URL;

<http://www.unicode.org/charts/PDF/U1000.pdf>

Code of UTF-8 has been cited from documents described in following URL;

<http://www.utf8-chartable.de/unicode-utf8-table.pl?start=4096>