MAREVA
THE EDI SYSTEM FOR APPLICATION EXCHANGES
WITH CUSTOMS
PARTNER SPECIFICATIONS

VERSION 1.17 – JUNE 2007

GENERAL DIRECTORATE OF CUSTOMS AND EXCISE

C2 BUREAU – TECHNICAL AND SECURITY ARCHITECTURE

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22/12/2006

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June 2007

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1. INTRODUCTION

Customs is opening a system for inter-application exchange with its partners (that works like Electronic Data Interchange, EDI) called MAREVA, the French acronym for Application Messaging on Value Added Network (*Messagerie Applicative en REseau à Valeur Ajoutée*).

The document describes how MAREVA works from our partners' standpoint and details the technical elements for MAREVA implementation.

For implementation, MAREVA requires a (PASTEUR) network interconnection between the partner and Customs so that MAREVA's network protocol (SMTP) can be supported. PASTEUR interconnection specifications can be found in another document called <u>Secure Interconnections with Customs – Specifications for Partners</u>.

1.1 PURPOSE AND SCOPE

The document presents the dialogue with the MAREVA system. It is addressed to connection providers.

MAREVA is application messaging based on the following standards:

- SMTP for the exchange protocol
- XML for the format of the exchanged documents
- SHA1 and RSA for the signature mechanisms

1.2 TERMINOLOGY

1.2.1 ROSA

Rosa is a repository with all the intrinsic data of the businesses or individuals dealing with Customs and the specifications of their relations with customers.

1.2.2 Operator

The operator is an enterprise with one or several business relations with Customs, which are referenced in ROSA. The business's identifier in the message envelope is the element **<PartyId>**.

1.2.3 Connection Provider

The Connection Provider offers a technical service handling functional message routing from an operator to Customs. The Connection Provider's identifier in the <u>connection envelope</u> is the element **<ConnexionId >**. An operator may handle this function without resorting to the services of a connection provider. In this case, <PartyId> and <ConnexionId> will be identical.

1.2.4 Interchange Agreement

The Interchange Agreement is special to the EDI mode assigned to connection providers once the technical tests are validated. This ROSA relationship contains the email addresses where Customs must send its technical messages for the different procedures (business agreement). If a provider uses several different addresses for the same procedure, provider will have several agreements.

The Interchange Agreement identifier in the <u>connection envelope</u> is the element **<InterchangeAgreementId>**.

1.2.5 Envelope Number

The Envelope Number is managed by the sender of a technical message: the technical provider or Customs (MAREVA). Each sender manages its own series. There is one envelope number per technical message.

Envelope number identifier in the <u>connection envelope</u> is the element **<numEnveloppe>**.

1.2.6 Technical Message

In the document, the technical message is a message in the 'container' sense: it is the exchange unit between a connection provider and MAREVA. A technical message has a <u>connection envelope</u>.

1.2.7 Functional Message

In this document, the functional message is a message in the application sense (a simplified declaration, for instance). A technical message contains **<u>only one functional message</u>**. The functional message has a <u>message envelope</u>.

1.2.8 Transaction Identifier

This is a unique mandatory number managed by the operator. The number makes it possible to locate all the incoming or outgoing functional messages under the same reference, leading to changes of state of the same object ranging from its initial state (creation) to its final state.

For instance, the transaction identifier of the functional message creating an early declaration will be the same as the identifier for the functional message validating the same declaration.

Customs applications will not generate any transaction identifiers or sequence numbers. When a customs application sends a functional message to an operator, it will refer to the operator's transaction number.

1.2.9 Sequence Number

The sequence number gives the order of a functional message within a transaction, thus enabling MAREVA to deliver functional messages in the right order to the application (viz. the functional validation message must not be delivered before the functional creation message). The operator assigns the sequence number. Customs does not provide a number in the envelope of its functional messages transmitted to operators.

Zero must be the **sequence number** of the first message of a transaction.

For instance, if Customs has received messages with sequence numbers 0, 1, 5, and 6, messages 5 and 6 will be stored in the memory for one half hour. If messages 2, 3, and 4 are not sent within that half hour, then messages 5 and 6 will be rejected and an error 51 message will be sent for each of the messages.

1.3 UNIQUENESS OF THE MESSAGES

A technical message is identified by the triplet **(application, ConnexionId, numEnveloppe)**.

A functional message is identified by the quadruplet **(application, partyId, transactionId, numsequence)**.

Duplicates are acknowledged: MAREVA sends an error message and ignores the second identical message, obviously.

2. ELECTRONIC MESSAGING

2.1 EMAIL ADDRESSES

2.1.1 For Customs

Each e-procedure has a functional box in the live environment.

An example of a live email address is: teleprocedure@edi.douane.finances.gouv.fr.

The email address of the Diagnostic application is: diagnostic@edi.douane.finances.gouv.fr.

2.1.2 For the Connection Provider

The connection provider must provide Customs with at least two email addresses per e-procedure: one live email address and one certification email address. A simple incoming and outgoing mail test of the configuration with Customs' test mailbox will validate SMTP connectivity at:

smtp-test@edi.douane.finances.gouv.fr

N.B.: In live interconnection mode (via the PASTEUR interconnection), the IP address of the operator's SMTP server must also be provided. The parameters will determined at time of PASTEUR connection.

2.2 SMTP SERVERS

The connection provider must be able to receive and send messages from and to Customs. Therefore, the provider must have a mailbox on a messaging service able to receive SMTP mails from Customs (typically, a server or a host offering this type of box).

On the other hand, messages from the connection provider may be sent to Customs' SMTP server (edi.douane.finances.gouv.fr) via different media. How the messages are sent depends on the interconnection mode (not described in the document).

2.3 OUTGOING MESSAGE FORMAT

2.3.1 Addresses

The 'from' and 'to' fields of a message must be properly filled out. If not, the message will be completely ignored, and no receipt acknowledgement will be sent.

2.3.2 Attachments

The message must be a MIME MULTIPART message. It must contain two attached MIME application/octet-stream files. The two attached files must be called 'document1.xml' and 'signature1.sig'. The first file contains the MAREVA message *per se* (whose XML format complies partly with envelope specifications and, for the rest of its content, with application specifications) and the other file contains the signature of the first file (the entire MAIL message is not signed).

The message must be base64-encoded before it is sent, so that the content of the transmitted attachments remains intact.

The signature must be a 'SHA1' signature for the condensation algorithm and an 'RSA' signature for the encryption algorithm.

2.4 TIMESTAMPING

Attention: the MAREVA server is synchronised with a time server on Paris time (Metropolitan France, CET).

All XML documents have their send date in their envelope. Any XML document arriving more than one half hour after the said date will be systematically rejected.

3. CERTIFICATES

One or two X509 public certificates will be provided by the connection provider and integrated into the EDI (ROSA) repository of providers. Having two certificates means a smooth transition for certificate changes: Customs will accept signatures produced by either certificate provided there is enough time (one month) to take account of the new certificate.

Conversely, Customer will provide two X509 public certificates and the customs' signature will be done by either. When there is a change of certificate, Customs will notify connection providers one month in advance, so they can take the necessary steps to accept the new signature.

The certificates will be '.crt' files.

3.1 CUSTOMS CERTIFICATES

Customs public signature certificates are available on the prodouane website under the *prestataires EDI* (EDI providers) heading.

3.2 OPERATOR CERTIFICATES

Operator certificates must be obtained from the certification authorities approved by the French Ministry of finance at:

http://www.telecom.gouv.fr/rubriques-menu/entreprises-economie-numerique/certificats-references-pris-v1/categories-familles-certificats-references-pris-v-1-506.html

The certificates must be given to Customs when the terms of the connection contract are defined.

4. INTEGRATION INTO ROSA

The reference data on the operator's connection providers (email addresses, cleared applications and certificates) will be integrated into ROSA at time of connection contract. The data will be accessible as a (PEDI) relationship indexed by the EDI interchange number. MAREVA will check that the data are correct.

5. RECEIPT ACKNOWLEDGMENTS

For each messaged received by MAREVA, there is a matching receipt acknowledgment. Two cases are possible:

- The received message is non compliant and a negative acknowledgment is sent
- Or the received message is compliant and a positive acknowledgment is sent

Note: in compliance with the above specifications, the receipt acknowledgment is in an attachment

(document1.xml).

Acknowledgments are sent to the email address in the 'FROM' heading of the incoming message.

5.1 NEGATIVE ACKNOWLEDGMENT

An example of a MAREVA negative acknowledgment can be found below:

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<ReponseMAREVA>
      <EnveloppeConnexion>
            <connexionId>DGDDI</connexionId>
            <interchangeAgreementId>UNKNOWN</interchangeAgreementId>
            <numEnveloppe>1</numEnveloppe>
            <DateTime>
                  <date>19/05/05</date>
                  <time>11:49:36</time>
            </DateTime>
            <applicationId>UNKNOWN</applicationId>
      </EnveloppeConnexion>
<ReponseErreur>
      <erreurCode>1</erreurCode>
            <erreurDescription>Le format XML de l'enveloppe n'est pas respecte..</erreurDescription>
      <numEnveloppe>1</numEnveloppe>
</ReponseErreur>
</ReponseMAREVA>
```

The above message is 'as complete as possible' depending on how serious the error is. Here, for instance, applicationId is unknown.

The ReponseErreur fields are:

- erreurCode: the error code
- erreurDescription: a heading describing the error in french, not localized
- numEnveloppe: the number of the message envelope sent by the operator

The source message is not saved.

5.2 POSITIVE ACKNOWLEDGMENT

An example of a positive acknowledgment can be found below:

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<ReponseMAREVA>
<EnveloppeConnexion>
      <connexionId>DGDDI</connexionId>
      <interchangeAgreementId>test1</interchangeAgreementId>
      <numEnveloppe>1</numEnveloppe>
      <DateTime>
            <date>19/05/05</date>
                  <time>11:49:38</time>
```

```
            </DateTime>
            <applicationId>testmare</applicationId>
        </EnveloppeConnexion>
<Reponse>
        <numEnveloppe>1</numEnveloppe>
</Reponse>
</ReponseMAREVA>
```

The second numEnveloppe matches the numEnveloppe of the connection provider's message.

The source message is saved and transmitted to the application.

5.3 CONNECTION PROVIDER'S RECEIPT ACKNOWLEDGMENT

Any functional message (other than a receipt acknowledgment) sent by MAREVA to the connection provider must be acknowledged. If it is not within one half hour of the send, the provider will be blocked. During that time, the message is automatically re-sent every ten minutes.

An example of a connection provider's receipt acknowledgment:

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<ReponseMAREVA>
    <EnveloppeConnexion>
        <connexionId>PROVIDER-SIRET</connexionId>
        <interchangeAgreementId>test1</interchangeAgreementId>
        <numEnveloppe>1</numEnveloppe>
        <DateTime>
            <date>19/05/05</date>
            <time>11:49:38</time>
        </DateTime>
        <applicationId>testmare</applicationId>
    </EnveloppeConnexion>
<ARMareva>
        <numEnveloppe>1</numEnveloppe>
</ARMareva>
</ReponseMAREVA>
```

The second numEnveloppe matches the envelope number of the message sent by Customs.

6. TEST PROTOCOL

This section describes the test protocol for a system that will have to communicate with MAREVA. The test does not determine how the system will operate with a Customs application that will have to undergo application tests.

6.1 THE TEST APPLICATION

A functionally simple test application is available. It is called diagnostic. It receives messages from the operator's system and sends back test receipt acknowledgments.

Its email address is: diagnostic@edi.douane.finances.gouv.fr.

6.2 THE TESTS

The operator's system will have to send about ten messages. Then, 10 exclusively MAREVA receipt acknowledgements and 10 messages from the diagnostic application (exclusively for tracking purposes) will be sent. The tests check whether the operator's receipt acknowledgments were actually sent and received by MAREVA within the required deadline.

The messages sent by the operator's system will have to contain a valid envelope (including the message envelope) and the rest of the XML message will be ignored: for instance, it may contain the functional elements of a given application (such as Delta D).

6.3 CHECKS

They pertain to the conditions of message production, i.e.:

- The format of the envelopes is checked
- Any errors are sent to the operator system (a duplicate, for example)
- The signatures of the messages are checked
- The correct integration of the operator data into ROSA is checked
- Response time to the functional messages is checked

6.4 VALIDATION CONDITIONS

The ten messages that are sent by the operator's system will have to be acknowledged by MAREVA. The ten messages sent by the diagnostic application in response will have to be properly acknowledged by the operator's system.

7. MAREVA CORRESPONDENT

Bureau C2, Technical and Security Architecture

Secretariat phone: +33 (0) 1.57.53.45.49

Email: connexion-edi@douane.finances.gouv.fr

8. BLOCKING AND UNBLOCKING THE PROVIDER

8.1 HOW DOES IT WORK?

When a Customs application sends a message to the provider's address, the latter must acknowledge the message by answering with a receipt acknowledgment (see paragraph 5.3). If the message is not acknowledged, it is automatically re-transmitted every ten minutes during one half hour.

After the half hour, the provider will be blocked by MAREVA; any message sent to, or received from the provider will be rejected until actual unblocking. Blocking a connection provider is done via an application.

MAREVA will then send a negative acknowledgment to the said provider, with the error message *blocage des échanges.*

For unblocking, the provider will have to send a message asking to be unblocked (always via email with an attachment [document1.xml] containing the message).

The message will be sent to MAREVA via the application email address (in this case, diagnostic@edi.douane.finances.gouv.fr.) that will then unblock the provider and so inform the latter by sending a positive acknowledgment.

8.2 MESSAGE FORMAT

Blocking Message

```xml
<?xml version="1.0" encoding="ISO-8859-1" ?>
<ReponseMAREV A>
      <EnveloppeConnexion>
            <connexionId>DGDDI</connexionId>
            <interchangeAgreementId>000541534</interchangeAgreementId>
            <numEnveloppe>3</numEnveloppe>
            <DateTime>
                <date>19/05/05</date>
                <time>11:49:36</time>
            </DateTime>
            <applicationId>Diagnostic</applicationId>
      </EnveloppeConnexion>
<ReponseErreur>
      <erreurCode>40</erreurCode>
      <erreurDescription> Blocage des échanges. </erreurDescription>
      <numEnveloppe>3</numEnveloppe>
</ReponseErreur>
      </ReponseMAREVA>
```

Unblocking Message

```xml
<?xml version="1.0" encoding="ISO-8859-1" ?>
<DemandeDeblocage>
      <EnveloppeConnexion>
            <connexionId>PROVIDER-SIRET</connexionId>
            <interchangeAgreementId>00000001</interchangeAgreementId>
            <numEnveloppe>1</numEnveloppe>
            <DateTime>
                <date>01/01/05</date>
                <time>00:00:00</time>
            </DateTime>
            <applicationId>Diagnostic</applicationId>
      </EnveloppeConnexion>
</DemandeDeblocage>
```

9. TABLE OF ERRORS

The table lists all the errors that may be sent in negative acknowledgments.

No.	ErreurDescription	Heading	Explanation
1	Le format XML de l'enveloppe n'est pas respecte.	The XML format of the envelope is non-compliant	The attached document is not in XML format.
2	numseq manquant.	numseq missing	The <numseq> field is not filled out.
3	numseq format invalide.	numseq format invalid	The numseq field contains a character that is not a digit, or it has more than 5 characters.
4	Date manquante.	Date missing	The <date> field is not filled out.
5	Time manquant.	Time missing	The <time> field is not filled out.
6	DateTime format invalide.	DateTime format invalid	The concatenated date and time fields are not in the following format: dd/MM/yyHH:mm:ss
7	partyId manquant ou invalide.	partyId missing or invalid	The partyId field is not filled out, or it contains non-ASCII characters (only the ASCII codes of characters 32 to 127 are accepted).
8	interchangeAgreementId manquant ou invalide.	interchangeAgreementId missing or invalid	The interchangeAgreementId is not filled out, or it contains non-ASCII characters (only the ASCII codes of characters 32 to 127 are accepted).
9	connexionId manquant ou invalide.	connexionId missing or invalid	The connexionId field is not filled out, or it contains non-ASCII characters (only the ASCII codes of characters 32 to 127 are accepted).
10	applicationId manquant ou invalide.	applicationId missing or invalid	The applicationId field is not filled out, or it contains non-ASCII characters (only the ASCII codes of characters 32 to 127 are accepted).
11	Le message n'est pas de type MIME.	The message is not a MIME message	The message sent to MAREVA must be a MIME message.
12	Le contenu du message n'est pas de type MIME multipart.	Message content is not MIME multipart	The message sent to MAREVA must be a MIME message with attachments.
13	Piece jointe XML manquante.	XML attachment missing	The message must contain an attachment called document1.xml that contains the EDI XML message.
14	Message corrompu.	Corrupted message	Impossible to retrieve message content

15	Enveloppe manquante.	Envelope missing	The message does not contain the envelope tags.
16	Doublon d'enveloppe.	Envelope duplicate	A message with the same envelope number has already been received and recorded by the MAREVA application. The unique identifier is the triplet (application, connexionId, numEnveloppe).
17	Trop de messages a sequencer.	Too many messages to sequence	Internal error
18	numEnveloppe manquant.	numEnveloppe missing	The numEnveloppe field is not filled out.
19	numEnveloppe format invalide.	NumEnveloppe format invalid	The numEnveloppe field has more than 10 characters, or does not only contain digits.
20	document1.xml contient un nombre de messages fonctionnels different de 1.	Document1.xml contains a number of functional messages different from 1	Only one functional message is authorised per technical message.

No.	ErreurDescription	Heading	Explanation
21	SchemaId manquant.	SchemaId missing	The schemaId is not filled out.
22	SchemaVersion manquant.	SchemaVersion missing	The schemaVersion field is not filled out.
23	TransactionId manquant ou invalide.	TransactionId missing or invalid	The transactionId field is not filled out, or it contains non-ASCII characters (only the ASCII codes of characters 32 to 127 are accepted).
24	document1.xml mal encode.	Document1.xml improperly encrypted	The XML document is improperly encrypted; one character is invalid.
25	applicationId format invalide.	applicationId format invalid	The field contains more than 15 characters.
26	InterchangeAgreementId format invalide.	InterchangeAgreementId format invalid	The field contains more than 20 characters.
27	numEnveloppe format invalide.	NumEnveloppe format invalid	The field exceeds 10 billion in value.
28	partyId format invalide.	partyId format invalid	The field exceeds 100 characters.
29	idTransaction format invalide.	idTransaction format invalid	The field exceeds 15 characters.
30	numseq format invalide.	numseq format invalid	The field exceeds 1000 in value.
31	connexionId format invalide.	connexionId format invalid	The field exceeds 20 characters.
32	ApplicationId incoherente.	ApplicationId incoherent	The name of the application given by the XML message is different from the name assigned to the email box.
33	Deuxieme numEnveloppe manquant.	Second numEnveloppe missing	The second numEnveloppe field in the receipt acknowledgment sent by the connection provider is not filled out.
34	Deuxieme numEnveloppe invalide.	Second numEnveloppe invalid	The field exceeds ten digits, or contains a character that is not a digit.
35	Deuxieme numEnveloppe invalide.	Second numEnveloppe invalid	The field exceeds ten billion.
36	InterchangeAgreementId inconnu.	Interchange Agreement Id unknown	The identifier is not listed in the ROSA repository.
37	signature1.sig manquant.	Signature1.sig missing	The message sent to MAREVA does not contain the attachment signature1.sig, i.e. the message signature.
38	Signature invalide.	Signature invalid	The signature contained in the message does not match one of the certificates supplied by the connection provider.

39	Certificat invalide.	Certificate invalid	None of the certificates in the ROSA repository is valid.
40	Blocage des echanges.	Exchanges blocked	A message was sent three times unsuccessfully within one half hour. MAREVA blocks all the connection provider's messages from the relevant application and waits for an unblocking message.
41	Delai depasse.	Timed out	The message has a send Date Time that exceeds the reception date/time by more than one half hour.
42	Echange bloque en attente de deblocage.	Exchange blocked pending unblocking	The connection provider is blocked. MAREVA will reject all the messages from the relevant application until unblocking.
43	Numero d'enveloppe douane invalide.	Customs envelope number invalid	The envelope number in the operator's receipt acknowledgment is not known by MAREVA.
44	Relation PEDI desactivee.	PEDI relationship deactivated	Internal error

No.	ErreurDescription	Heading	Explanation
45	Relation PEDI corrompue.	Corrupted PEDI relationship	Internal error
46	ConnexionId autre que celui indique par InterchangeAgreementId.	ConnexionId different that the one found in the InterchangeAgreementId	The connexionId field of the message envelope does not match the connexionId field indicated in the PEDI relationship of the ROSA repository.
47	InterchangeAgreementId de l'AR different de celui en base.	InterchangeAgreementId of the receipt acknowledgment different from the one in the base	The connection provider's receipt acknowledgment refers to a customs message whose InterchangeAgreementId does not match the same connection provider.
48	Piece jointe document1.xml corrompue.	Corrupted document1.xml attachment	The message received by MAREVA contains an illegible document1.xml attachment.
49	Erreur lors de l'ecriture du message.	Error during message write	Internal error
50	Acces au referentiel Rosa impossible.	Impossible to access the ROSA repository	Internal error
51	Message hors sequence consecutive expire.	Message not in consecutive sequence expired	The sequence number of the message is higher than a non-received number: the 30-minute deadline has expired.
52	Piece jointe signature1.sig corrompue.	Corrupted signature1.sig attachment	The message received by MAREVA contains an illegible signature1.sig attachment.
53	Plus d'une piece jointe document1.xml.	More than one document1.xml attachment	The message received by MAREVA contains more than one document1.xml attachment.
54	Plus d'une piece jointe signature1.sig.	More than one signature1.sig attachment	The message received by MAREVA contains more than one signature1.sig attachment.
55	Doublon de message fonctionnel.	Duplicate of a functional message	A message with the same transaction and sequence number has already been received and recorded by the MAREVA application. The unique identifier is the quadruplet (application, partyId, transactionId, numseq).

APPENDIX A: XML SCHEMAS

APPENDIX A.1: OPERATOR UNBLOCKING

```
<?xml version="1.0" encoding="ISO-8859-1"?> <xs:schema
xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:element name="DemandeDeblocage" type="TDemandeDeblocage"/>
<xs:complexType name="TDemandeDeblocage">
<xs:sequence>
<xs:element name="EnveloppeConnexion"  type="TEnveloppeConnexion" minOccurs="1"
maxOccurs="1"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="TEnveloppeConnexion">
<xs:annotation>
<xs:documentation> The envelope at connection level includes the information required for connection
provider identification and follow-up of its technical messages in the container sense.</xs:documentation>
</xs:annotation>
<xs:sequence>
<xs:element ref="connexionId"/>
<xs:element ref="interchangeAgreementId"/>
<xs:element ref="numEnveloppe"/>
<xs:element ref="DateTime"/>
<xs:element ref="applicationId"/>
</xs:sequence>
</xs:complexType>
<xs:element name="connexionId">
<xs:annotation>
<xs:documentation>Provider's SIRET or DGDDI</xs:documentation>
</xs:annotation>
<xs:simpleType>
<xs:restriction base="xs:string"/>
</xs:simpleType>
</xs:element>
<xs:element name="numEnveloppe">
<xs:annotation>
<xs:documentation>Number generated by the message sender</xs:documentation>
</xs:annotation>
```

```xml
<xs:simpleType>
<xs:restriction base="xs:long">
<xs:minInclusive value='1'/>
<xs:maxExclusive value='10000000000'/>
</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="DateTime">
<xs:annotation>
<xs:documentation>Envelope creation date</xs:documentation>
</xs:annotation>
<xs:complexType>
<xs:sequence>
<xs:element ref="date"/>
<xs:element ref="time"/>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="date">
<xs:simpleType>
<xs:annotation>
<xs:documentation>Date in usual format</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:string">
<xs:length value="8"/>
<xs:pattern value="[0-3][0-9]/[0-1][0-9]/[0-9]{2}"/>
</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="time">
<xs:simpleType>
<xs:annotation>
 <xs:documentation>Time in usual format hh:mm:ss</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:time">
<xs:pattern value="\d\d:\d\d:\d\d"/>
</xs:restriction>
</xs:simpleType>
```

```
</xs:element>
<xs:element name="interchangeAgreementId" type="xs:string">
<xs:annotation>
<xs:documentation>Identifier of the provider's EDI interchange agreement</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="applicationId" type="xs:string">
<xs:annotation>
<xs:documentation>Application reference (DELTA-D)</xs:documentation>
</xs:annotation>
</xs:element>
</xs:schema>
```

APPENDIX A.2: NEGATIVE ACKNOWLEDGMENT

```xml
<?xml version="1.0" encoding="ISO-8859-1"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:element name="ReponseMAREVA" type="TReponseMAREVA"/>
<xs:complexType name="TReponseMAREVA">
<xs:sequence>
<xs:element name="EnveloppeConnexion" type="TEnveloppeConnexion" minOccurs="1"
maxOccurs="1"/>
<xs:element name="ReponseErreur" type="TReponseErreur" minOccurs="1" maxOccurs="1"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="TEnveloppeConnexion">
<xs:annotation>
<xs:documentation> The envelope at connection level includes the information required for connection
provider identification and follow-up of its technical messages in the container sense.</xs:documentation>
</xs:annotation>
<xs:sequence>
<xs:element ref="connexionId"/>
<xs:element ref="interchangeAgreementId"/>
<xs:element ref="numEnveloppe"/>
<xs:element ref="DateTime"/>
<xs:element ref="applicationId"/>
</xs:sequence>
</xs:complexType>
<xs:element name="connexionId">
<xs:annotation>
<xs:documentation>Provider's SIRET or DGDDI</xs:documentation>
</xs:annotation>
<xs:simpleType>
<xs:restriction base="xs:string"/>
</xs:simpleType>
</xs:element>
<xs:element name="numEnveloppe">
<xs:annotation>
<xs:documentation>Number generated by the message sender</xs:documentation>
</xs:annotation>
```

```xml
<xs:simpleType>
<xs:restriction base="xs:long">
<xs:minInclusive value='1'/>
<xs:maxExclusive value='10000000000'/>
</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="DateTime">
<xs:annotation>
<xs:documentation>Envelope creation date</xs:documentation>
</xs:annotation>
<xs:complexType>
<xs:sequence>
<xs:element ref="date"/>
<xs:element ref="time"/>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="date">
<xs:simpleType>
<xs:annotation>
<xs:documentation>Date in usual format</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:string">
<xs:length value="8"/>
<xs:pattern value="[0-3][0-9]/[0-1][0-9]/[0-9]{2}"/>
</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="time">
<xs:simpleType>
<xs:annotation>
<xs:documentation>Time in usual format hh:mm:ss</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:time">
<xs:pattern value="\d\d:\d\d:\d\d"/>
</xs:restriction>
</xs:simpleType>
```

```
</xs:element>
<xs:element name="interchangeAgreementId" type="xs:string">
<xs:annotation>
<xs:documentation>Identifier of the provider's EDI interchange agreement</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="applicationId" type="xs:string">
<xs:annotation>
<xs:documentation>Application reference (DELTA-D)</xs:documentation>
</xs:annotation>
</xs:element>
<xs:complexType name="TReponseErreur">
<xs:annotation>
<xs:documentation>Positive acknowledgement answer.</xs:documentation>
</xs:annotation>
<xs:sequence>
<xs:element ref="erreurCode"/>
<xs:element ref="erreurDescription"/>
<xs:element ref="numEnveloppe"/>
</xs:sequence>
</xs:complexType>
<xs:element name="erreurCode">
<xs:annotation>
<xs:documentation>Error code</xs:documentation>
</xs:annotation>
<xs:simpleType>
<xs:restriction base="xs:integer"/>
</xs:simpleType>
</xs:element>
<xs:element name="erreurDescription">
<xs:annotation>
<xs:documentation>Error heading.</xs:documentation>
</xs:annotation>
<xs:simpleType>
<xs:restriction base="xs:string"/>
</xs:simpleType>
</xs:element>
</xs:schema>
```

APPENDIX A.3: POSITIVE ACKNOWLEDGMENT

```xml
<?xml version="1.0" encoding="ISO-8859-1"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:element name="ReponseMAREVA" type="TReponseMAREVA"/>
<xs:complexType name="TReponseMAREVA">
<xs:sequence>
<xs:element name="EnveloppeConnexion" type="TEnveloppeConnexion" minOccurs="1"
maxOccurs="1"/>
<xs:element name="Reponse" type="TReponse" minOccurs="1" maxOccurs="1"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="TEnveloppeConnexion">
<xs:annotation>
<xs:documentation> The envelope at connection level includes the information required for connection
provider identification and follow-up of its technical messages in the container sense.</xs:documentation>
</xs:annotation>
<xs:sequence>
<xs:element ref="connexionId"/>
<xs:element ref="interchangeAgreementId"/>
<xs:element ref="numEnveloppe"/>
<xs:element ref="DateTime"/>
<xs:element ref="applicationId"/>
</xs:sequence>
</xs:complexType>
<xs:element name="connexionId">
<xs:annotation>
<xs:documentation>Provider's SIRET number or DGDDI</xs:documentation>
</xs:annotation>
<xs:simpleType>
<xs:restriction base="xs:string"/>
</xs:simpleType>
</xs:element>
<xs:element name="numEnveloppe">
<xs:annotation>
<xs:documentation>Number generated by the message sender</xs:documentation>
</xs:annotation>
<xs:simpleType>
```

```xml
<xs:restriction base="xs:long">
<xs:minInclusive value='1'/>
<xs:maxExclusive value='10000000000'/>
</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="DateTime">
<xs:annotation>
<xs:documentation>Envelope creation date</xs:documentation>
</xs:annotation>
<xs:complexType>
<xs:sequence>
<xs:element ref="date"/>
<xs:element ref="time"/>
</xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="date">
<xs:simpleType>
<xs:annotation>
<xs:documentation>Date in usual format</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:string">
<xs:length value="8"/>
<xs:pattern value="[0-3][0-9]/[0-1][0-9]/[0-9]{2}"/>
</xs:restriction>
</xs:simpleType> </xs:element>
<xs:element name="time"> <xs:simpleType>
<xs:annotation>
<xs:documentation>Time in usual format hh:mm:ss</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:time">
<xs:pattern value="\d\d:\d\d:\d\d"/>
</xs:restriction>
</xs:simpleType>
</xs:element>
```

```xml
<xs:element name="interchangeAgreementId" type="xs:string">
<xs:annotation>
<xs:documentation>Identifier of the provider's EDI interchange agreement</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="applicationId" type="xs:string">
<xs:annotation>
<xs:documentation> Application reference (DELTA-D)</xs:documentation>
</xs:annotation>
</xs:element>
<xs:complexType name="TReponse">
<xs:annotation>
<xs:documentation> Positive acknowledgment answer.</xs:documentation>
</xs:annotation>
<xs:sequence>
<xs:element ref="numEnveloppe"/>
</xs:sequence>
</xs:complexType>
</xs:schema>
```

APPENDIX A.4: OPERATOR'S RECEIPT ACKNOWLEDGMENT

```xml
<?xml version="1.0" encoding="ISO-8859-1"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
<xs:element name="ReponseMAREVA" type="TReponseMAREVA"/>
<xs:complexType name="TReponseMAREVA">
<xs:sequence>
<xs:element name="EnveloppeConnexion" type="TEnveloppeConnexion" minOccurs="1"
maxOccurs="1"/>
<xs:element name="ARMareva" type="TARMareva" minOccurs="1" maxOccurs="1"/>
<xs:sequence>
</xs:complexType>
<xs:complexType name="TEnveloppeConnexion">
<xs:annotation>
<xs:documentation> The envelope at connection level includes the information required for connection
provider identification and follow-up of its technical messages in the container sense.</xs:documentation>
</xs:annotation>
<xs:sequence>
<xs:element ref="connexionId"/>
<xs:element ref="interchangeAgreementId"/>
<xs:element ref="numEnveloppe"/>
<xs:element ref="DateTime"/>
<xs:element ref="applicationId"/>
</xs:sequence>
</xs:complexType>
<xs:element name="connexionId">
<xs:annotation>
<xs:documentation>Provider's SIRET number or DGDDI</xs:documentation>
</xs:annotation>
<xs:simpleType>
<xs:restriction base="xs:string"/>
</xs:simpleType>
</xs:element>
<xs:element name="numEnveloppe">
<xs:annotation>
<xs:documentation>Number generated by the message sender</xs:documentation>
</xs:annotation>
```

```xml
<xs:simpleType>
<xs:restriction base="xs:long">
<xs:minInclusive value='1'/>
<xs:maxExclusive value='10000000000'/>
</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="DateTime">
<xs:annotation>
<xs:documentation>Envelope creation date </xs:documentation>
</xs:annotation>
<xs:complexType>
<xs:sequence>
<xs:element ref="date"/>
<xs:element ref="time"/> </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="date">
<xs:simpleType>
<xs:annotation>
<xs:documentation>Date in usual format</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:string">
<xs:length value="8"/>
<xs:pattern value="[0-3][0-9]/[0-1][0-9]/[0-9]{2}"/>
</xs:restriction>
</xs:simpleType>
</xs:element>
<xs:element name="time">
<xs:simpleType>
<xs:annotation>
<xs:documentation>Time in usual format hh:mm:ss</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:time">
<xs:pattern value="\d\d:\d\d:\d\d"/>
</xs:restriction>
</xs:simpleType>
```

```xml
</xs:element>
 <xs:element name="interchangeAgreementId" type="xs:string">
<xs:annotation>
<xs:documentation>Identifier of the provider's EDI interchange agreement</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="applicationId" type="xs:string">
<xs:annotation>
<xs:documentation>Application reference (DELTA-D)</xs:documentation>
</xs:annotation>
</xs:element>
<xs:complexType name="TARMareva">
<xs:annotation>
<xs:documentation>Positive acknowledgment answer.</xs:documentation>
</xs:annotation>
<xs:sequence>
<xs:element ref="numEnveloppe"/>
</xs:sequence>
</xs:complexType>
</xs:schema>
```