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If an **originator-requested-alternate-recipient** has been specified by the originator of the message, the message shall be redirected to that alternate recipient in preference to one assigned by the recipients-MD.

videotex, ia5-text-to-telex, telex-to-g3-facsimile, ia5-text-to-g3-facsimile, ia5-text-to-g4-class-1, ia5-text-to-videotex, teletex-to-ia5-text, teletext-to-g3-facsimile, teletex-to-g4-class-1, teletex-to-videotex, videotex-to-telex, videotex-to-ia5-text, or videotex-to-teletex. Other types of **explicit-conversion** may be defined by future versions of this Recommendation. **Explicit-conversion** shall be performed as specified in Recommendation X.408.

facsimile-delivery, ia5-terminal-delivery, videotex-delivery or telephone delivery.

cannot be found, a **recipient-improperly-specified-abstract-error** shall be returned to the originator of the message.

In the absence of this argument, the default **physical-forwarding-address-not-requested** shall be assumed.

originator of the message. The content-type shall be either built-in or extended.

A built-in **content-type** may have one of the following values:

external: denotes a **content-type** which is reserved for use when interworking between 1988 systems and 1984 systems (see Recommendation X.419);

One specific value of an extended **content-type** which has been defined by this Recommendation is **inner-envelope**: an **extended content-type** that is itself a message (envelope and content), for forwarding by the recipient named on the outer-envelope to those named on the inner-envelope (Note that the inner-envelope and content may be protected by securing the **content** of the outer-envelope using the security arguments (see clauses 8.2.1.1.1.25 to 8.2.1.1.1.32)).

Success of a probe does not guarantee that a subsequently submitted message can actually be delivered but rather that, currently, the recipient is valid and the message would encounter no major obstacles to delivery.

determines whether expansion of the specified DL (but not of any nested DLs) would occur.

message has been redirected and the time at which the redirection was performed. It may be generated by the MTS. A different value of this argument may be present for each occasion the message was redirected. appended to the list of **intended-recipient-names**.

The **intended-recipient-name** contains the **OR-name** of an individual or **DL** intended-recipient and the time at which the message was redirected to an alternate recipient.

add recipients to the copy of the message delivered to the recipient and the time of each expansion. It shall be generated by the MTS if any DL-expansion has occurred.

This argument contains a sequence of **OR-names** and associated times which document the history of the origin of the subject-message. The first

OR-name in the sequence is the **OR-name** of the originator of the subject, and the remainder of the sequence is a sequence of **OR-names** of the DLs that have been expanded in directing the subject towards the recipient (the latter being the same as the **DL-expansion-history**). It shall be generated by the originating-MTA of the report if any DL-expansion has occurred on the subject.

The **originator-and-DL-expansion-history** contains the **OR-name** of the originator of the subject and each DL and the time at which the associated event occurred.

the security-policy in force; unable-to-downgrade: the subject could not be transferred because it could not be downgraded (see Annex B to Recommendation X.419).

information-type. Deliverable-encoded-information-types also indicates the possible encoded-information-types to which implicit conversion can be performed.

abstract-operation, and are defined in clause 8.3.1.3.1. Except for **permissible-security-context**, they may be generated by the MTS-user.

recipient-name: the **OR-Address** and **OR-Directory-name** of the intended-recipient of the **token**;

defined for a function marked as **critical-for-delivery**, or shall not deliver the message or probe and shall return a non-delivery-report with the **non- delivery-diagnostic-code** set to **unsupported-critical-function**. A recipient MTS- user shall correctly perform the procedures defined for a function marked as **critical-for-delivery** or shall return an Unsupported-critical-function

If the MTA or MTS-user cannot correctly perform the procedures defined for a function marked "**critical-for-delivery**" in a report, then the report is discarded.

-- Upper Bounds

ub-bit-options, ub-built-in-content-type, ub-built-in-encoded-information-types, ub-common-name-length, ub-content-id-length, ub-content-length, ub-content-types, ub-country-name-alpha-length, ub-country-name-numeric-length, ub-dl-expansions, ub-domain-defined-attribute-value-length, ub-domain-defined-attributes, ub-domain-defined-attribute-type-length, ub-domain-name, ub-e163-4-number-length, ub-e163-4-subaddress-length, ub-encoded-information-types, ub-extension-attributes, ub-extension-types, ub-generation-qualifier, ub-given-name-length, ub-initials-length, ub-integer-options, ub-labels-and-redirections, ub-local-id-length, ub-mta-name-length, ub-mts-user-types, ub-numeric-user-id-length, ub-organization-name-length, ub-organization-unit-name-length, ub-organizational-units, ub-password-length, ub-pds-name-length, ub-pds-parameter-length, ub-postal-code-length, ub-privacy-mark-length, ub-queue-size, ub-reason-codes, ub-recipients, ub-recipient-number-for-advice-length, ub-redirections, ub-security-categories, ub-security-labels, ub-security-problems, ub-supplementary-info-length, ub-surname-length, ub-terminal-id-length, ub-tsap-id-length, ub-transfer, ub-informed-address-length, ub-x121-address-length

Otherwise depending on bilateral agreement or intra-domain policy the current time is noted as the message arrival time and the message is held until expiration of the **deferred-delivery-time**. The message and timestamp are then returned as result. The procedure then terminates.

domain is added with **relay** as action. If an arrival time accompanies the message, then delivery deferral has occurred and **deferred-time** is set to the current time and **arrival-time** is set to the accompanying timestamp value. Otherwise no deferral has occurred and the **arrival-time** is set to the current time.

3) If any of the extension fields is marked critical for relaying but is not semantically understood by the MTA, the procedure returns a report generation instruction. The **non-delivery-reason-code** is set to **transfer-failure** and the **non-delivery-diagnostic-code** to **unsupported-critical-function**. The procedure then terminates.

Note - This procedure may be called multiple times for any particular message. In such cases, the procedure ignores per recipient instructions generated by previous calls to this procedure which have not yet been acted upon elsewhere.

If the per recipient instruction indicates a delivery failure, then the value for **Originator-requested-alternate-recipient** is examined for possible recipient substitution. If an alternate recipient is determined and no security parameters are violated, then a redirection instruction is generated and the procedure terminates.

Otherwise the procedure returns a report generation instruction for this recipient. The **non-delivery-reason-code** and **non-delivery-diagnostic-code** are those supplied by the Message-delivery or Report-delivery procedure. The procedure then terminates.

recipient. If not, the value for **Originator-requested-alternate-recipient** is examined for possible recipient substitution. If this reveals no alternate recipient, then the value for alternate-recipient-allowed and any MD specified

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alternate recipient are considered. If an alternate recipient is determined and no security parameters are violated, then a redirection instruction is generated and the procedure terminates.

Otherwise the procedure returns a report generation instruction for this recipient.

assigned- reassignment-

using the **recipient-name** from argument 2 to form the **intended-recipient-name**, obtaining the **redirection-reason** from argument 4 and containing the Time at which this redirection is performed. The **OR-name** supplied in the first argument is then substituted for that **recipient-name**.

3) In the **other-actions** field the current **trace-information**, the value **redirected** is set to true.

4) The message transfer envelope is updated as follows:

recipient-name:	replaced	
trace-information:	indicate redirected	
redirection-history:	append previous	
	recipient-name and	
	redirection-reason	
originator-requested-alternate-recipient:	deleted if, and only if the	redirection-
reason indicates	originator-requested-	alternate-
recipient.		

8) If the new report request values (determined in step 5) or the DL's local policy will prevent the originator from receiving a requested delivery report from the DL's members, then a copy of the message, with delivery report request instructions for the expanded DL, is constructed and returned along with the message.

9) The procedure returns the revised message and the optional report request and then terminates.

for which $0 < j \leq p$ the associated trace info element is [MD(j) relayed, op(j)] and op(j) = nil. That is, a loop is detected if M arrives at an MD which has already relayed it and each MD afterwards has also relayed it without performing any operation other than routing. If a loop is detected, then the algorithm returns an error indicating the problem, and terminates.

If the report is not to be suppressed, the MTA then replaces the **OR-name** currently in the **report-destination-name** field by the **OR-name** immediately preceding that one in the **originator-and-DL-expansion-history** field. Thus the report acquires, as a new destination, the next entry back along the chain of entries in the **originator-and-DL-expansion-history** field:

4) If authentication is not required Messages-waiting is returned if the **MTS-user** subscribes to the Hold for Delivery element-of-service, and the procedure terminates.

In the case of **recipient-name** the MTA may use the **requested-delivery-method**, if present, as an indication of which form of **OR-address** the **directory-name** should be mapped to. If a form of **OR-address** appropriate to the **request-delivery-method** cannot be found, the recipient-improperly-specified abstract-error is returned by the MTA.

c) If a **recipient-name** contains an **OR-address** of a form not appropriate to the **requested-delivery-method**, if present, the **recipient-improperly-specified** abstract-error is returned by the MTA.

1) An empty or, if requested, a **proof-of-delivery** and optional **recipient- certificate** result passed back from the MTS-user as an indication of successful delivery with no reporting requirements.

2) If a report is required, the main module is invoked and passed the message with per-recipient instructions describing any delivery problems encountered and/or indicating successful deliveries to be reported on.

unable-to-transfer and **unsupported-critical-function** respectively.

then, subject to the security policy, a report instruction for this recipient is generated. The values of **non-delivery-reason-code** and **non-delivery-diagnostic-code** are **unable-to-transfer** and **secure-messaging-error** respectively.

6) If delivery is barred by restrictions imposed in a previously invoked Register or Delivery-control abstract-operation, then, subject to the security-policy in force, the MAT will hold the message pending the lifting of the applicable restriction(s).

8) If restricted delivery is enforced, and the recipient falls in the category of unauthorized senders, then a report instruction is generated for this recipient. The value of **non-delivery-reason-code** is set to **restricted-delivery**. Processing then terminates for this recipient.

unable-to-transfer and **unsupported-critical-function** respectively.

security-policy, then the report is discarded.

2) If Report delivery is barred by restrictions imposed in a previously invoked Register or Delivery-control abstract-operation, then, subject to the security-policy in force, the MAT will hold the report pending the lifting of the applicable restriction(s). Restrictions are established by arguments of the Delivery-control or Register abstract-operation as described in clause 8.3.1.3.1.