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SERIES H: AUDIOVISUAL AND MULTIMEDIA SYSTEMS

Infrastructure of audiovisual services – Supplementary services for multimedia

Name identification supplementary service for ITU-T H.323 systems

Recommendation ITU-T H.450.8

ITU International Telecommunication Union

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Recommendation ITU-T H.450.8

Name identification supplementary service for ITU-T H.323 systems

Summary

Recommendation ITU-T H.450.8 describes Name Identification features for ITU-T H.323 systems. These features are:

– Calling Party Name Presentation and Restriction.

– Connected Party Name Presentation and Restriction.

– Alerting Party Name Presentation and Restriction.

– Busy Party Name Presentation and Restriction.

Calling party name information may be provided by the calling endpoint or by the gatekeeper using the gatekeeper routed call model. Connected party name information, alerting party name information, or busy party name information may be provided by the answering (connected) party, alerting party, or busy party, respectively, or by the gatekeeper using the gatekeeper routed call model.

This revision incorporates a new error code 507 to indicate "Unknown Control Association" and a modification to error code 511 to allow it to be sent from a media gateway.

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T H.450.8	2000-02-17	16
2.0	ITU-T H.450.8	2013-03-16	16

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure, e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

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As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at http://www.itu.int/ITU-T/ipr/.

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Recommendation ITU-T H.450.8

Name identification supplementary service for ITU-T H.323 systems

1 Scope

This Recommendation specifies the Name Identification supplementary service, which is applicable to various basic services supported by ITU-T H.323 system elements.

2 References

The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published. The reference to a document within this Recommendation does not give it, as a stand-alone document, the status of a Recommendation.

[ITU-T H.225.0] Recommendation ITU-T H.225.0 (2009), *Call signalling protocols and media stream packetization for packet-based multimedia communication systems.*

[ITU-T H.323] Recommendation ITU-T H.323 (2009), *Packet based multimedia communications systems.*

[ITU-T H.450.1] Recommendation ITU-T H.450.1 (2011), *Generic functional protocol for the support of supplementary services in ITU-T H.323 systems*.

[ISO/IEC 10646-1] ISO/IEC 10646-1:1993, *Information technology – Universal Multiple-Octet Coded Character Set (UCS) – Part 1: Architecture and Basic Multilingual Plane*.

3 Definitions

None.

4 Abbreviations and acronyms

This Recommendation uses the following abbreviations and acronyms:

APDU Application Protocol Data Unit

ASN.1 Abstract Syntax Notation One

NFE Network Facility Extension

5 Description

5.1 Calling Party Name Presentation

Calling Party Name Presentation is a feature which provides the name of the calling party to the called party. The calling party name may be provided by the calling endpoint or by the gatekeeper for gatekeeper routed calls that originate in the packet network. When the call is routed through the gatekeeper with which the calling endpoint is registered, that gatekeeper may provide a screening service that assures the name provided is actually that of the calling party. The gatekeeper may also provide the calling party name when no name is provided by the calling party, or when the calling

party provides a false name. The method by which a gatekeeper obtains the name information is implementation dependent and outside the scope of this Recommendation.

When a call originates in the switched circuit network and enters the packet network through a gateway, the gateway shall pass to the packet network the calling party name information provided from the switched circuit network.

5.2 Calling Party Name Restriction

Calling Party Name Restriction is a feature which allows the calling user, or the calling user's gatekeeper, to restrict presentation of the calling party name to the called party. This feature may reside in the endpoint or in the gatekeeper for gatekeeper routed calls.

In some cases where Calling Party Name Restriction has been indicated, there may exist certain situations where the restriction is overridden (for example, if the called party provides some emergency service).

5.3 Connected Party Name Presentation

Connected Party Name Presentation is a feature which provides the name of the connected party to the calling party. The connected party name may be provided by the connected endpoint or by the gatekeeper for gatekeeper routed calls. When the call is routed through the gatekeeper with which the connected endpoint is registered, that gatekeeper may provide a screening service that assures the name provided is actually that of the connected party. The gatekeeper may also provide the connected party name when no name is provided by the connected party, or when the connected party provides a false name. The method by which a gatekeeper obtains the name information is implementation dependent and outside the scope of this Recommendation.

Also included is the optional presentation to the calling party of the alerting party's name or of the name of the called party which is busy. The operation for alerting party name presentation and busy party name presentation is similar to connected party name presentation.

5.4 Connected Party Name Restriction

Connected Party Name Restriction is a feature which allows the connected user, or the connected user's gatekeeper, to restrict presentation of the connected party name to the calling party. This feature may reside in the endpoint or in the gatekeeper for gatekeeper routed calls.

The operation for alerting party name restriction and busy party name restriction is similar to connected party name presentation.

6 Messages and information elements

6.1 Calling Party Name Information

Calling Party Name Information shall be sent within h4501SupplementaryService APDUs contained within the ITU-T H.225.0 Setup message. APDU content is for the callingName operation defined in Name-Operations found in Annex A. When conveying the invoke APDU of operations defined in Name-Operations, the destinationEntity data element of the NFE shall contain the value "endpoint".

NOTE – The h4501SupplementaryService APDU structure is defined in Table 3 of [ITU-T H.450.1].

6.2 Connected Party Name Information

Connected Party Name Information shall be sent within h4501SupplementaryService APDUs contained within the ITU-T H.225.0 Connect message. APDU content is for the connectedName operation defined in Name-Operations found in Annex A.

When conveying the invoke APDU of operations defined in Name-Operations, the destinationEntity data element of the NFE shall contain the value "endpoint".

NOTE – The h4501SupplementaryService APDU structure is defined in Table 3 of [ITU-T H.450.1].

6.3 Alerting Party Name Information

Alerting Party Name Information shall be sent within h4501SupplementaryService APDUs contained within the ITU-T H.225.0 Alerting message. APDU content is for the alertingName operation defined in Name-Operations found in Annex A.

When conveying the invoke APDU of operations defined in Name-Operations, the destinationEntity data element of the NFE shall contain the value "endpoint".

NOTE – The h4501SupplementaryService APDU structure is defined in Table 3 of [ITU-T H.450.1].

6.4 Busy Party Name Information

Busy Party Name Information shall be sent within h4501SupplementaryService APDUs contained within the ITU-T H.225.0 Release Complete message. APDU content is for the busyName operation defined in Name-Operations found in Annex A.

When conveying the invoke APDU of operations defined in Name-Operations, the destinationEntity data element of the NFE shall contain the value "endpoint".

NOTE – The h4501SupplementaryService APDU structure is defined in Table 3 of [ITU-T H.450.1].

7 Actions at the originating endpoint

7.1 Gateway as originating endpoint

The calling party's name shall be obtained from the available signalling from the other network and transmitted in the ITU-T H.323 environment as described above in clause 6.1. If no name can be obtained, then the Name element in the callingName operation shall indicate nameNotAvailable. If the name can be obtained, but its presentation is marked as restricted, then the Name element in the callingName operation shall indicate namePresentationRestricted. If the name can be obtained and there exist no restrictions on its presentation, then the Name element in the callingName operation shall indicate namePresentationAllowed.

Name information available from the ITU-T H.323 environment in an ITU-T H.225.0 Connect, Alerting, or Release Complete (to indicate busy user's name) message shall be converted to the signalling format of the other network.

7.2 Terminal or MCU as originating endpoint

For calls originated on the packet network, the originating terminal or MCU may send a Setup message as described above in clause 6.1. If presentation of the name to the called party is desirable, the Name element in the callingName operation should indicate namePresentationAllowed. If presentation of the name to the called party is to be restricted, the Name element in the callingName operation should indicate namePresentationRestricted.

A terminal or MCU in receipt of an ITU-T H.225.0 Connect, Alerting, or Release Complete message containing a connectedName, alertingName, or busyName APDU should not present name information if the Name element indicates namePresentationRestricted.

8 Actions at the terminating endpoint

8.1 Gateway as terminating endpoint

A gateway in receipt of the ITU-T H.225.0 Setup message shall convert name information found in the callingName APDU to the signalling format of the other network.

A gateway in receipt of signalling information from the other network that would result in the transmission in the ITU-T H.323 environment of an ITU-T H.225.0 Alerting, Connect, or Release Complete (in the case of a busy user) message shall attempt to obtain name information from the signalling information of the other network. The gateway shall send the appropriate ITU-T H.225.0 message (Connect, Alerting or Release Complete) as described above in clause 6.2, 6.3 or 6.4.

8.2 Terminal or MCU as terminating endpoint

A terminal or MCU in receipt of the ITU-T H.225.0 Setup message should not present name information if the Name element indicates namePresentationRestricted.

A terminal or MCU in receipt of the ITU-T H.225.0 Setup message may include name information in the Connect, Alerting or Release Complete as described above in clause 6.2, 6.3 or 6.4. If presentation of the name to the calling party is desirable, the Name element in the alertingName, connectedName, or busyName operation should indicate namePresentationAllowed. If presentation of the name to the called party is to be restricted, the Name element in the alertingName, connectedName, or busyName operation should indicate namePresentationRestricted.

9 Actions at a gatekeeper

In gatekeeper routed scenarios, the gatekeeper may provide name information or may provide a screening service. Services that may be provided by a gatekeeper depend on the type of endpoint served.

9.1 Gateway as originating endpoint

In gatekeeper routed cases, a gatekeeper should not modify the information found in a Setup message sent from a gateway. This assumes that the telephone network has provided correct information.

9.2 Terminal or MCU as originating endpoint

In gatekeeper routed cases, a gatekeeper may provide name information in the ITU-T H.225.0 Setup message when the calling party is not a gateway. The gatekeeper may provide name information if none was provided by the calling party, or if the gatekeeper determines the name is not correct. The means by which a gatekeeper may determine that name information is not correct is an implementation issue outside the scope of this Recommendation.

In gatekeeper routed cases, a gatekeeper may provide presentation restriction by removing the name information from the ITU-T H.225.0 Alerting, Connect, or Release Complete message (not providing a name operation APDU), or by replacing the name information in the ITU-T H.225.0 Alerting, Connect, or Release Complete message with the nameNotAvailable indication in the Name element.

In gatekeeper routed cases, a gatekeeper may override the presentation indication. For example, a gatekeeper may change namePresentationRestricted to namePresentationAllowed if the originating endpoint should present the name information to the user (such as for a call from an emergency service).

9.3 Gateway as terminating endpoint

In gatekeeper routed cases, a gatekeeper should not modify the information found in a Connect, Alerting, or Release Complete message sent from a gateway. This assumes that the telephone network has provided correct information.

9.4 Terminal or MCU as terminating endpoint

In gatekeeper routed cases, a gatekeeper may provide name information in the ITU-T H.225.0 Setup message when the calling party is not a gateway. The gatekeeper may provide name information if none was provided by the alerting, answering, or busy party, or if the gatekeeper determines the name is not correct. The means by which a gatekeeper may determine that name information is not correct is an implementation issue outside the scope of this Recommendation.

In gatekeeper routed cases, a gatekeeper may provide presentation restriction by removing the name information from the ITU-T H.225.0 Setup message (not providing a name operation APDU), or by replacing the name information in the ITU-T H.225.0 Setup message with the nameNotAvailable indication in the Name element.

In gatekeeper routed cases, a gatekeeper may override the presentation indication. For example, a gatekeeper may change namePresentationRestricted to namePresentationAllowed if the terminating endpoint should present the name information to the user (such as for a call to an emergency service).

Annex A

Operations in support of identification services

(This annex forms an integral part of this Recommendation.)

This annex provides the ASN.1 definition of the operations and elements that may be passed to provide identification services.

```
Name-Operations
     {itu-t recommendation h 450 8 version1(0) name-operations(0) }

DEFINITIONS AUTOMATIC TAGS ::=
BEGIN
IMPORTS OPERATION, ERROR FROM Remote-Operations-Information-Objects
          {joint-iso-itu-t remote-operations (4) informationObjects (5) version1 (0) }
     EXTENSION, Extension {} FROM Manufacturer-specific-service-extension-definition
          {itu-t recommendation h 450 1 version1 (0) msi-definition (18) }
     MixedExtension FROM Call-Hold-Operations
          {itu-t recommendation h 450 4 version1(0) call-hold-operations(0)};

NameOperations OPERATION ::=
     {callingName | alertingName | connectedName | busyName}

callingName OPERATION ::=
{
     ARGUMENT SEQUENCE
     {
          name            Name,
          extensionArg    SEQUENCE SIZE (0..255) OF MixedExtension OPTIONAL,
          ...
     }
     RETURN RESULT        FALSE
     ALWAYS RESPONDS      FALSE
     CODE local:0
}

alertingName OPERATION ::=
{
     ARGUMENT SEQUENCE
     {
          name            Name,
          extensionArg    SEQUENCE SIZE (0..255) OF MixedExtension OPTIONAL,
          ...
     }
     RETURN RESULT        FALSE
     ALWAYS RESPONDS      FALSE
     CODE local:1
}

connectedName OPERATION ::=
{
     ARGUMENT SEQUENCE
     {
          name            Name,
          extensionArg    SEQUENCE SIZE (0..255) OF MixedExtension OPTIONAL,
          ...
     }
     RETURN RESULT        FALSE
     ALWAYS RESPONDS FALSE
     CODE local:2
}

busyName OPERATION ::=
{
     ARGUMENT SEQUENCE
     {
```

```
          name           Name,
          extensionArg   SEQUENCE SIZE (0..255) OF MixedExtension OPTIONAL,
          ...
     }
     RETURN RESULT       FALSE
     ALWAYS RESPONDS     FALSE
     CODE local:3
}
Name ::= CHOICE
{
     namePresentationAllowed   NamePresentationAllowed,
     namePresentationRestrictedNamePresentationRestricted,
     nameNotAvailable          NULL,
     ...
}

NamePresentationAllowed ::= CHOICE
{
     simpleName      SimpleName,
     extendedName    ExtendedName,
     ...
}

NamePresentationRestricted ::= CHOICE
{
     simpleName      SimpleName,
     extendedName    ExtendedName,
     restrictedNull  NULL,-- only used in case of interworking where other network
                     -- provides indication that the name is restricted without
                     -- the name itself
     ...
}

SimpleName ::= OCTET STRING (SIZE (1..50))

ExtendedName ::= BMPString(SIZE (1..256)) -- Basic ISO/IEC 10646-1 (Unicode)

END  -- of Name-Operations
```

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