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OF TELEVISION, SOUND PROGRAMME AND OTHER
MULTIMEDIA SIGNALS

Digital transmission of television signals

Digital Program Insertion–Advertising Systems Interfaces: Part 5 – Placement Opportunity Information Service

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Recommendation ITU-T J.380.5 (ex J.dpi-asi-5)

Digital Program Insertion–Advertising Systems Interfaces: Part 5 – Placement Opportunity Information Service

Summary

This Recommendation defines the messaging protocol for the Placement Opportunity Information Service (POIS) consistent with other parts of the J.380 standard. A POIS holds, maintains, and retains descriptions of content Placement Opportunities (typically for advertisements) and the interface supports query and notification operations for those opportunities.

Keywords

None

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Digital Program Insertion–Advertising Systems Interfaces: Part 5 – Placement Opportunity Information Service

Introduction

This Introduction provides an overview of the Placement Opportunity Information Service.

The POIS provides Placement Opportunity metadata through query and notification services to service endpoints. What a Placement Opportunity is and how it influences an advertising service is discussed in J.380 Part 3. See [ITU-T J.380.3] for additional information. Using the interface defined herein, service endpoints may retrieve detailed information about Placement Opportunities known to the queried POIS.

Figure 1 provides one example of a POIS in an J.380 logical environment.

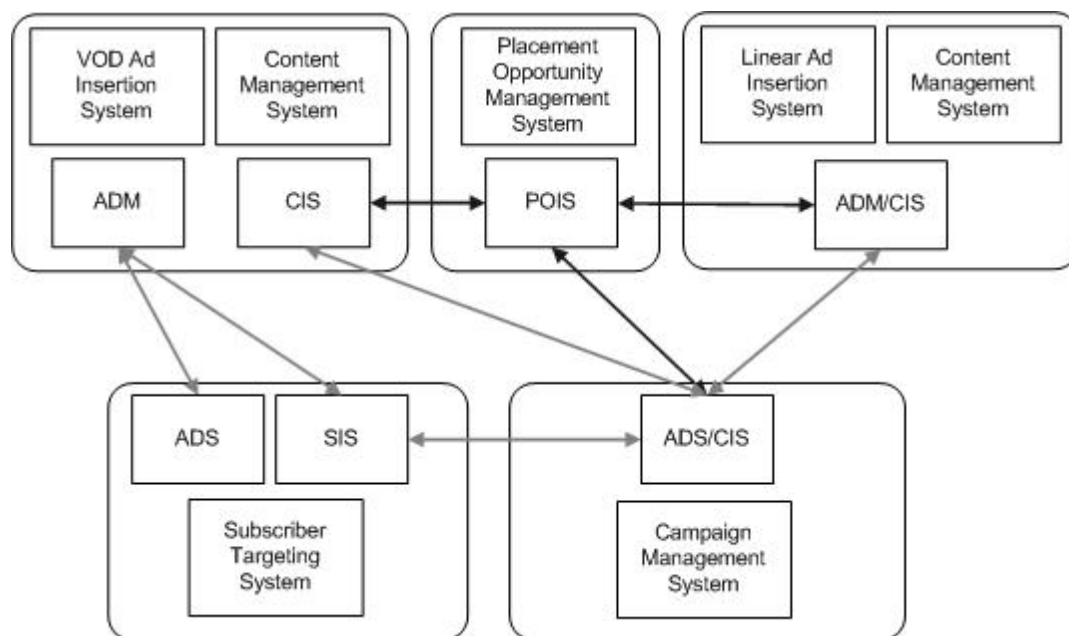


Figure 1 - Example J.380 System Landscape with POIS

As illustrated in Figure 1, a POIS answers queries concerning the Placement Opportunities it is aware of and issues notification messages for registered queries when Placement Opportunity changes are detected. How the Placement Opportunity information is obtained by a POIS is outside the scope of this Recommendation. The anticipated number of content streams is also outside the scope of this Recommendation. The existence of a POIS implementation as a logical service coexisting with other services or systems does not imply the referenced content is available.

1 Scope

This Recommendation defines the messaging protocol for the Placement Opportunity Information Service (POIS) consistent with other parts of the J.380 standard. A POIS holds, maintains, and retains descriptions of content Placement Opportunities (typically for advertisements) and the interface supports query and notification operations for those opportunities.

A POIS additionally contains features, characteristics and constraints for each Placement Opportunity, appropriate for the platform, rights, and policies including those of the content in

which it exists. These Placement Opportunities may or may not be content specific and the traits and constraints may vary by network, geographic region, or other content distribution dimension. This Recommendation defines a standardized interface for accessing the Placement Opportunity information known to a POIS.

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 J.380.2]	ITU-T J.380.2 (2011), <i>Digital Program Insertion—Advertising Systems Interfaces: Part 2 - Core Data Elements</i> .
[ITU-T J.380.7]	ITU-T J.380.7 (2011), <i>Digital Program Insertion—Advertising Systems Interfaces: Part 7 - Message Transport</i> .
[ITU-T J.380.8]	ITU-T J.380.8 (2011), <i>Digital Program Insertion—Advertising Systems Interfaces: Part 8 - General Information Service</i> .
[W3C-XSD]	W3C Recommendation (2004), <i>XML Schema Part 1: Structures Second Edition</i> .
[SCTE 130-5 Schema]	SCTE 130-5 schema file.
[SCTE 130-5 WSDL]	SCTE 130-5 Placement Opportunity Information Service (POIS) Web Services Description Language file.

3 Definitions

Throughout this standard the terms below have specific meanings. Because some of the terms are defined in other ITU-T J.380 sub-series Recommendations having very specific technical meanings, the reader is referred to the original source for their definition. For terms defined by this standard, brief definitions are given below.

All [ITU-T J.380.2], [ITU-T J.380.7], and [ITU-T J.380.8] definitions are included herein. See [ITU-T J.380.2], [ITU-T J.380.7], and [ITU-T J.380.8] for additional information. This interface is an advertising service of [ITU-T J.380.8] and makes references accordingly. In the event of a conflict between [ITU-T J.380.8] and this Recommendation, this document's language shall be considered standard.

4 Abbreviations and acronyms

All [ITU-T J.380.2], [ITU-T J.380.7], and [ITU-T J.380.8] abbreviations are included herein. See [ITU-T J.380.2], [ITU-T J.380.7], and [ITU-T J.380.8] for additional information.

Further, this Recommendation uses the following abbreviations and acronyms:

POIS Placement Opportunity Information Service

5 Conventions

5.1. Normative XML Schema

J.380.5 employs the same notational conventions as [ITU-T J.380.8]. Refer to [ITU-T J.380.8] for an explanation of notational conventions.

5.2. Document Conventions

ITU-T J.380.5 employs the same document conventions as [ITU-T J.380.8]. Refer to [ITU-T J.380.8] for an explanation of document conventions. For example, the XML schema illustration is explained there.

5.3. Processing Conventions

Unknown/Unrecognized/Unsupported XML Elements and Attributes.

See [ITU-T J.380.2] for information.

5.4. XML Namespaces

This Recommendation uses the ‘pois’ prefix for the interface associated with the specific XML namespace URI that shall be used by all implementations. Table 1 lists the prefix, the corresponding namespace, and a description of the defining Recommendation used herein.

Table 1 – XML Namespace Declarations

Prefix	Namespace	Description
core	http://www.scte.org/schemas/130-2/2008a/core	See [ITU-T J.380.2].
gis	http://www.scte.org/schemas/130-8/2010a/gis	See [ITU-T J.380.8].
pois	http://www.scte.org/schemas/130-5/2010/pois	This Recommendation.
wsdl	http://www.scte.org/wsdl/130-5/2010/pois	This Recommendation.
xsd	http://www.w3.org/2001/XMLSchema	See [W3C-XSD].

Unless otherwise stated, all references to XML elements illustrated in this Recommendation are from the ‘pois’ namespace. Elements from other namespaces will be prefixed with the name of the external namespace, e.g. <core:XXXX>.

6. Data Model And Query Support

A POIS may support one or more placement opportunity data models as defined in [ITU-T J.380.3]. One or more of the data models may be available for query using the basic query syntax defined in [ITU-T J.380.8]. See [ITU-T J.380.8] for additional information.

A POIS should include advanced query support for a data model as specified in [ITU-T J.380.8].

7. POIS Messages

This Recommendation includes a query and a notification model for POIS to endpoint messaging. The model includes associated notification management functions such as registration, deregistration and active registration listing.

The following topics are covered by [ITU-T J.380.2] and by [ITU-T J.380.8].

- Message format

- XML message carriage
- Transport mechanisms
- Message error handling

This Recommendation considers all aspects defined therein to be normative and applicable herein. See [ITU-T J.380.2] and [ITU-T J.380.8] for additional information.

A POIS implementation shall be built using the General Information Service (GIS) interface defined by [ITU-T J.380.8]. The POIS message interface shall include the messages defined by [ITU-T J.380.2] and [ITU-T J.380.8].

7.1. @version Attribute

For all J.380.5 messages defined herein (i.e., those messages prefixed with the string “POIS”), the @version attribute shall be set to the value “1.0” for this Recommendation’s revision. For messages defined by the core namespace, for example core:ServiceStatus and core:ServiceNotification, their @version attribute shall contain the value defined by the normatively referenced specification (e.g., “1.1”). See [ITU-T J.380.2] for additional information.

7.2. Request Base Message

All POIS top level **request** messages are derived from the request message types defined in [ITU-T J.380.8] which inherit from the core:Msg_RequestBaseType abstract base message type. See the [ITU-T J.380.2] Recommendation for details on the attributes and elements contained in this base message.

7.2.1. Request Base Message Attributes

All Request Base Message Attributes are consistent with those listed in [ITU-T J.380.8].

7.2.2. Request Base Message Elements

All Request Base Message Elements are consistent with those listed in [ITU-T J.380.8].

7.3. Response Base Message

All POIS top level **response** messages are derived from the response message types defined in [ITU-T J.380.8] which inherit from the core:Msg_ResponseBaseType abstract base message type. See the [ITU-T J.380.2] Recommendation for details on the attributes and elements contained in this base message.

7.3.1. Base Response Message Attributes

All Response Base Message Attributes are consistent with those listed in [ITU-T J.380.8].

7.3.2. Base Response Message Elements

All Response Base Message Elements are consistent with those listed in [ITU-T J.380.8], except those elements listed below in this Clause.

7.4. Notification Base Message

All POIS top level **notification** messages are derived from the notification message types defined in [ITU-T J.380.8] which inherit from the core:Msg_NotificationBaseType abstract base message type. See the [ITU-T J.380.2] Recommendation for details on the attributes and elements contained in this base message.

7.4.1. Notification Base Message Attributes

All Notification Base Message Attributes are consistent with those listed in [ITU-T J.380.8].

7.4.2. Notification Base Message Elements

All Notification Base Message Elements are consistent with those listed in [ITU-T J.380.8].

7.5. Acknowledgement Base Message

All POIS top level **acknowledgement** messages are derived from the acknowledgement message types defined in [ITU-T J.380.8] which inherit from the core:Msg_AcknowledgementBaseType abstract base message type. See the [ITU-T J.380.2] Recommendation for details on the attributes and elements contained in this base message.

7.5.1. Acknowledgement Base Message Attributes

All Acknowledgement Base Message Attributes are consistent with those listed in [ITU-T J.380.8].

7.5.2. Acknowledgement Base Message Elements

All Acknowledgement Base Message Elements are consistent with those listed in [ITU-T J.380.8].

7.6. POIS Message Exchange

Figure 2 illustrates a typical message exchange between a POIS client and a POIS implementation.

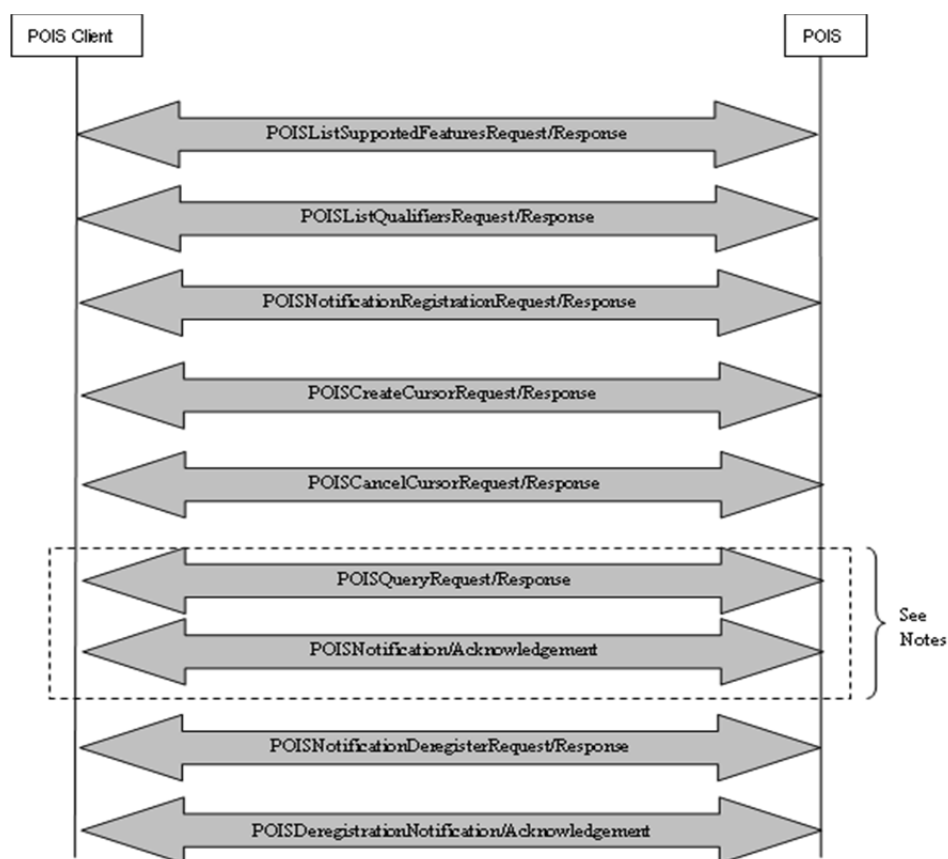


Figure 2 - POIS Top Level Messages Exchanges

NOTE - The Query and Notification exchange may occur repeatedly between logical service channel setup and tear down.

Table 2 provides brief description of each POIS message.

Table 2 – POIS Top Level Messages

Message	Description
POISListSupportedFeaturesRequest	Request to retrieve a list of the POIS's supported features.
POISListSupportedFeaturesResponse	Response to POISListSupportedFeaturesRequest.
POISListQualifiersRequest	Request to retrieve a list of names that can be used to construct basic queries using name/value pairs.
POISListQualifiersResponse	Response to POISListQualifiersRequest.
POISListNotificationRegistrationRequest	Request to list existing registrations.
POISListNotificationRegistrationResponse	Response to POISListNotificationRegistrationRequest.
POISNotificationRegistrationRequest	Registration request for notification.
POISNotificationRegistrationResponse	Response to POISNotificationRegistrationRequest.
POISNotification	Notification message indicating a change to the result set of a registered query.
POISNotificationAcknowledgement	Response to POISNotification.
POISQueryRequest	Request to acquire records from the POIS.
POISQueryResponse	Response to POISQueryRequest.
POISCreateCursorRequest	Request to create a cursor.
POISCreateCursorResponse	Response to POISCreateCursorRequest.
POISCancelCursorRequest	Request to cancel an existing cursor.
POISCancelCursorResponse	Response to POISCancelCursorRequest.
POISNotificationDeregisterRequest	Request to de-register a previously accepted registration.
POISNotificationDeregisterResponse	Response to POISNotificationDeregisterRequest.
POISDeregistrationNotification	Deregistration notification.
POISDeregistrationAcknowledgement	Deregistration notification acknowledgement.

7.7. POISListSupportedFeaturesRequest and Response Messages

The ListSupportedFeaturesRequest and ListSupportedFeaturesResponse messages allow clients to inquire about the data models and advanced query languages supported by a POIS implementation. A POIS implementation shall implement the appropriate basic query support per Clause 10 and should implement advanced query language support as defined by [ITU-T J.380.8]. See Clause 10 and [ITU-T J.380.8] for additional information.

7.7.1. POISListSupportedFeaturesRequest Message

The POISListSupportedFeaturesRequest message allows a POIS client to inquire about the data models and advanced query languages supported by a POIS implementation.

Figure 3 illustrates the POISListSupportedFeaturesRequest message's schema.