

Interoperable Interface Control Document ICD-04: Webservices – Tag Lookup

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Version 1.2

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SOFTWARE RELEASE

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1 Introduction

1.1 Purpose

This Interoperability Interface Control Document (ICD) describes the general structure used by interoperable Authorities to provide data lookup via a webservice

1.2 Definitions, Acronyms and Abbreviations

A comprehensive glossary of terms is being maintained for the entire Interoperability project. The terms, acronyms and abbreviations used in this document will be contained in the Interoperable Project Glossary.

For easy reference, the following terms are provided.

Table 1.2: Definitions, Acronyms, and Abbreviations¹

Term	Description
Home Authority (HA)	An Authority that issues transponders to patrons, owns and manages accounts associated with those transponders, and posts transactions to those accounts.
Service Providers (SP)	An Authority that operates and maintains a customer service center that issues AVI transponders for electronic payment of AVI transactions, such as toll road fees and parking fees. For this document, the Service Provider shall be defined as an authority that sends transponder transactions and toll variance transactions to the IOPHub system for reconciliation.
Subscriber	An authority that employs a Service Provider to conduct customer service center operations. These types of authorities do not maintain their own customer accounts, or operate a customer service center.
Tag Validation List (TVL)	A comprehensive list of transponders issued by each interoperable Authority.
Tag Validation List Update	A list of Tag Validation List (TVL) changes since the last TVL Update or TVL.
Visited Authority (VA)	Any Authority, or its designated representative, that is not the customer's Home Authority.
SSL	Cryptographic protocols that provide secure communications on the Internet for such things as web browsing, e-mail, Internet faxing, instant messaging and other data transfers.
SOAP	A protocol for exchanging XML-based messages over computer networks, normally using HTTP/HTTPS. SOAP forms the foundation layer of the web services protocol stack providing a basic messaging framework upon which abstract layers can be built.
XML	The Extensible Markup Language (XML) is a general-purpose <i>specification</i> for creating custom markup languages. It is classified as an extensible language because it allows its users to define their own elements. Its primary purpose is to facilitate the sharing of

¹ Note: If changes are made to this table, please verify against the IOPHub Project Glossary.

Term	Description
	structured data across different information systems, particularly via the Internet, and it is used both to encode documents and to serialize data.
HTTPS	Hypertext Transfer Protocol over Secure Socket Layer or https is a URI scheme used to indicate a secure HTTP connection. Using an https: URL indicates that HTTP is to be used, but with a different default TCP port (443) and an additional encryption/authentication layer between the HTTP and TCP.
URL	Uniform Resource Locator (URL) in popular usage, it means a web page address.
WSDL	The Web Services Description Language (WSDL) , pronounced 'wiz-dəl' or spelled out, 'W-S-D-L' is an XML-based language that provides a model for describing Web services.
GUID	A Globally Unique Identifier or GUID (pronounced /'gu:ɪd/or /'gwɪd/) is a special type of identifier used in software applications in order to provide a reference number which is unique in any context (hence, "Globally"), for example, in defining the internal reference for a type of access point in a software application, or for creating unique keys in a database.

1.3 References

The following items are referenced in this document:

- *Interoperability Business Requirements Document*
- *IOPHub Data Security Guidelines*
- *IOPHub Project Glossary*

1.4 Overview

The IOPHub uses a standard set of data exchange protocols that provide Interoperability between one or more authorized Service Providers and Subscribers to communicate and exchange data.

This document contains the specifications for the format of the webservice to provide Tag Lookup. The exact specifications are detailed in this document. Security related issues and processing guidelines are also addressed. The exchange of data (Tag Lookup) is governed by the requirements as set forth in the Interoperability Business Requirements document.

2 Webservice – Tag Lookup

2.1 Type

A service using SSL security and SOAP/XML protocol.

2.2 Security

SSL security will be used for the webservises on the IOPHub. **SSL (secure sockets layer)** is a communications protocol which is now the global standard for security SSL creates an encrypted link between a web server and a web browser to ensure that all data transmitted remains private and secure. The Secure Sockets Layer protects data transferred over http using encryption enabled by a server's SSL Certificate.

SSL uses a cryptographic system that uses two keys to encrypt data - a public key known to everyone and a private or secret key known only to the recipient of the message. The public key is used to encrypt information and the private key is used to decipher it. When a Web browser points to a secured domain, a Secure Sockets Layer handshake authenticates the server (Web site) and the client (Web browser). An encryption method is established with a unique session key.

2.3 Processing Guidelines

Connectivity to a webservice will be done over HTTPS connectivity using SSL security.

An IOPHub user will be able to select an Authority to perform a tag lookup on and then enter a Tag ID. The IOPHub application will then call the webservice provided by the authority and pass the Tag ID, License number, License State and transaction date. The only required field is the Tag ID and all other fields can be sent as null.

The expected returned values will be account ID, account status, account status description, payment type description, revenue description, create date, Tag ID, tag status, tag status description, license number, license state, effective date, modify date, vehicle description, vehicle make, vehicle model, vehicle year, vehicle color, and vehicle classification code, if available.

2.4 Parameters

The expected parameters are defined below. It is expected that the authority writing the service will provide a URL to the service that uses SSL security, as well as their WSDL file for review prior to the service being activated.

2.4.1 Outgoing Parameter Types

The outgoing parameter fields with *string* type are as follows:

Tag_ID, License_num, License_state and Transaction_dt.

A GUID and password if required by the authority or identity of the server that will be sending the request for the webservice can be provided as well.

2.4.2 Incoming Parameter Types

The incoming parameter fields with *string* type are as follows:

Element Account_info will include

Account_id, Account_status, Account_status_desc, Pmt_type_desc, Rev_desc and Create_date.

Element Tag_info will include

Tag_id, Tag_status, Tag_status_desc, License_num, License_state, Effective_date and Modify_date.

Vehicle_Info will be sent as an array of strings will include

Vehicle_descr, Vehicle_make, Vehicle_model, Vehicle_year, Vehicle_color, Vehicle_classcode.