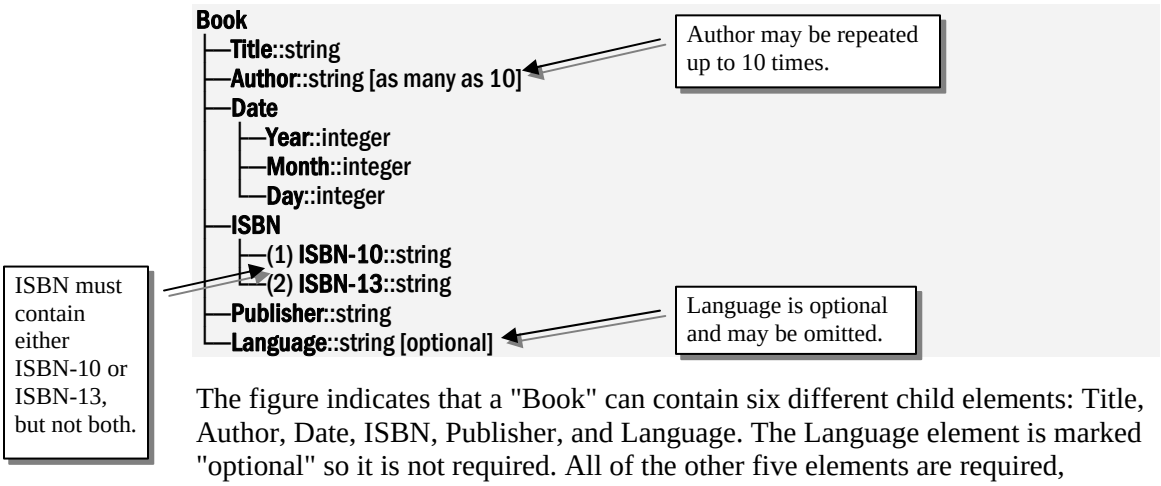
The Address Validation Street Level XML Reference

This section documents the details of the XML messages, including the requests that clients send to UPS and the responses that UPS returns. The first subsection explains the notation that this section uses. It is followed by a section that describes how UPS verifies that client applications are authorized to use UPS API Services. The next subsections define the messages used by the API for its services. The final subsection provides a list of error codes.

Describing UPS API Services Messages

As noted previously, all messages that UPS API Services send and receive consist of XML documents. This reference section defines the specific elements within those XML documents. Because XML documents follow a defined structure, this reference shows those elements using a compact, graphical notation. Here is an example of that notation, with some additional annotations to highlight important conventions:



The figure indicates that a "Book" can contain six different child elements: Title, Author, Date, ISBN, Publisher, and Language. The Language element is marked "optional" so it is not required. All of the other five elements are required, however. Notice that the Author element can appear as many as ten times within the Book document. (The technical name for this property is *cardinality*.)

Some of the child elements can themselves contain child elements. The Date element, for example, consists of a Year element, a Month element, and a Day element.

Finally, notice that the children of the ISBN element (ISBN-10 and ISBN-13) have a number in parentheses preceding them. This number indicates a choice. In this example, the ISBN element must have either an ISBN-10 child element or an ISBN-13 child element, but it cannot have both.

If an element has no child elements, the notation convention shows the type of content that the element can contain. In the example, Year, Month, and Day must contain integer numbers, while other primitive elements can contain arbitrary text strings.

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Authenticating Client Applications

UPS Shipping API Services are only available for authorized UPS customers. To enforce this policy, UPS requires that every message that a client application sends include important authentication information. That information is contained in an AccessRequest XML document that must begin each message.

AccessRequest

```
AccessRequest
├─AccessLicenseNumber::string
├─UserId::string
└─Password::string
```

Each AccessRequest contains three child elements: an AccessLicenseNumber, a UserId, and a Password. The following figure shows an example AccessRequest document.

```
<?xml version="1.0" ?>
<AccessRequest xml:lang='en-US'>
    <AccessLicenseNumber>
        YOURACCESSLICENSENUMBER
    </AccessLicenseNumber>
    <UserId>
        YOURUSERID
    </UserId>
    <Password>
        YOURPASSWORD
    </Password>
</AccessRequest>
```

Example AddressValidationRequest Message

```
<?xml version="1.0" ?>
<AccessRequest xml:lang='en-US'>
    <AccessLicenseNumber>YOURACCESSLICENSENUMBER</AccessLicenseNumber>
    <UserId>YOURUSERID</UserId>
    <Password>YOURPASSWORD</Password>
</AccessRequest>
<?xml version="1.0" ?>
<AddressValidationRequest xml:lang='en-US'>
    <Request>
        <TransactionReference>
            <CustomerContext /><XpciVersion>1.0001</XpciVersion>
        </TransactionReference>
        <RequestAction>XAV</RequestAction>
        <RequestOption>3</RequestOption>
    </Request>
    <MaximumListSize>3</MaximumListSize>
    <AddressKeyFormat>
        <ConsigneeName>UPS Capital</ConsigneeName>
        <BuildingName>Business Credit</BuildingName>
```

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```
        <AddressLine>425 Day Hill Road</AddressLine>
        <AddressLine>P.O. Box 400</AddressLine>
        <AddressLine>Main Office</AddressLine>
        <PoliticalDivision2>Windsor</PoliticalDivision2>
        <PoliticalDivision1>CT</PoliticalDivision1>
        <PostcodePrimaryLow>06095</PostcodePrimaryLow>
        <CountryCode>US</CountryCode>
    </AddressKeyFormat>
</AddressValidationRequest>
```


Example AddressValidationResponse Message


```
<?xml version="1.0" ?>
<AddressValidationResponse>
    <Response>
        <TransactionReference><XpciVersion>1.0001</XpciVersion></TransactionReference>
        <ResponseStatusCode>1</ResponseStatusCode>
        <ResponseStatusDescription>Success</ResponseStatusDescription>
    </Response>
    <AmbiguousAddressIndicator />
    <AddressClassification><Code>2</Code></AddressClassification>
    <AddressKeyFormat>
        <AddressClassification><Code>2</Code></AddressClassification>
        <ConsigneeName>H DEF</ConsigneeName>
        <AddressLine>655 MANSELL RD</AddressLine>
        <PoliticalDivision2>ROSWELL</PoliticalDivision2>
        <PoliticalDivision1>GA</PoliticalDivision1>
        <PostcodePrimaryLow>30076</PostcodePrimaryLow>
        <PostcodeExtendedLow>4868</PostcodeExtendedLow>
        <CountryCode>US</CountryCode>
    </AddressKeyFormat>
    <AddressKeyFormat>
        <AddressClassification><Code>1</Code></AddressClassification>
        <AddressLine>655 MANSELL RD</AddressLine>
        <PoliticalDivision2>ROSWELL</PoliticalDivision2>
        <PoliticalDivision1>GA</PoliticalDivision1>
        <PostcodePrimaryLow>30076</PostcodePrimaryLow>
        <PostcodeExtendedLow>1521</PostcodeExtendedLow>
        <CountryCode>US</CountryCode>
    </AddressKeyFormat>
</AddressValidationResponse>
```


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