
ADF

Auto-lead Data Format / ADF

An Industry Standard Data Format for the Export and Import of Automotive Customer Leads using XML

ADF Version 1.0

Revision History		
Date	Version	Description
12/18/1998	0.1	First draft distributed for comment.
1/26/1999	0.2	Second draft based on comments from Reynolds and Reynolds, Autovantage, Stoneage
5/20/1999	0.2	Review Second Draft
7/1/1999	0.3	Third draft based on comments from Reynolds & Reynolds, Cobalt, Autovantage, Microsoft, Cars.com, AutoSite, and Kelley Blue Book
3/15/2000	0.4	Fourth draft including specification of transfer mechanism
4/17/2000	0.9	Draft
5/3/2000	1.0	Final Document

Objectives

Rationale and Benefits of an Open Standard for Lead Data Interchange

Introduction

The use of the Internet and electronic communications is driving change in the automotive retailing industry. Customers, dealers, manufacturers, and service providers are increasingly relying on electronic means to communicate and do business. One of the great benefits of the Internet in this respect is the ability for heterogeneous systems to communicate using open standards. Otherwise dissimilar email, networking, directory, and operating systems can exchange information empowering users to conduct their business more efficiently and successfully.

One market segment that has burgeoned in this environment is online marketing to car buyers. Manufacturers and dealers have been joined by independent buying services in creating friendly, informative online areas where consumers can start the buying process and submit their name as a lead for follow-up. Invariably, the lead handling process involves the transmission of data between parties. For example, from a manufacturer to a dealer, or even within a single organization such as from the webmaster to the sales department. At present this transmission is generally in the form of email, Fax or through a proprietary lead management system. There is no integration between the systems that capture the data, those that manage it, and those that store it.

As the use of online buying methods continue to grow, the demands placed on the automotive retailer grow as well. Dealerships who want to maximize their effectiveness with Internet customers need to provide nearly immediate customer response, high quality customer management and a consistent experience. The systems currently in place to aid dealers in this task (email, faxes and proprietary systems) are as much a handicap as a help in this process. They bring a new breed of tracking and management challenges and drive up the cost of training.

The opportunity exists to create an open standard that defines a way to format customer information so that the many heterogeneous systems that make up the marketplace can capture, transmit, and store data consistently. By following an open standards approach we can give ourselves and third parties the ability to supply consistent tools and processes to dealerships. This in turn will help them improve their customer service levels, and ultimately serve to sell more cars, and assure a high quality experience to the consumer.

Open lead standards present an opportunity for the entire online automotive industry to work together to assure our continued growth and success, by simultaneously helping automotive retailers and the auto-buying public.

Benefits

There are benefits to each of the constituents in the marketplace:

Dealers

- Sell more cars
- Improve customer service levels
- Consolidate leads from multiple sources
- Reduce errors caused by manual handling of customer information
- Support existing and future sales automation tools
- Lower training costs

Service Providers

- Streamline the transmission of leads to dealers
- Reduce the use and dependence on Faxes
- Exchange customer information with partners and vendors
- Improve consumer satisfaction
- Improve dealer satisfaction

Consumers

- Better service due to faster and more accurate transmission of purchase requests

Deliverables and Milestones

Leading industry representatives have come together to develop a data format of automotive customer information. This effort will be open to all interested parties and input from multiple sources is encouraged. The end results based on the input of the parties will be made publicly available for all interested parties to adopt and implement.

The objective is to create a format that is easy to support at a basic level but comprehensive and extensible so that it supports the needs of manufactures, dealers, and service providers alike. The format will be easy to append to existing email leads making them both human and electronically readable.

Data Format Definition

Types, Categories, and Layout of Customer Data

Overview

To provide a simple yet flexible format for representing automotive customer leads Extensible Markup Language, XML, will be used to define the layout of data. XML is a simplified subset of the Standard Generalized Markup Language (SGML, ISO 8879) which provides a file format for representing data, a schema for describing data structure, and a mechanism for extending and annotating HTML with semantic information.

The XML standard is administered by the W3C. More information can be found at: <http://www.xml.com>.

Key Data Categories

There are five key categories of information in version 1.0 of the Auto-lead Data Format (ADF):

- Lead (prospect) information
- Vehicle information
- Customer (buyer) information
- Vendor (dealer) information
- Service provider information

Each lead in the ADF file is divided accordingly into four blocks representing each of these categories. Although there are several tags proposed, only the most basic information is actually required to create a valid lead:

- Date and time
- Vehicle: year, make, model
- Customer: name, and either phone number or email address
- Vendor: name (e.g. Acura of Bellevue)

An example of this minimal lead in XML looks like:

```
<?ADF VERSION "1.0"?>
<?XML VERSION "1.0"?>
<adf>
  <prospect>
    <requestdate>2000-03-30T15:30:20-08:00</requestdate>
    <vehicle>
      <year>1999</year>
      <make>Chevrolet</make>
      <model>Blazer</model>
    </vehicle>
    <customer>
      <contact>
        <name part="full">John Doe</name>
        <phone>393-999-3922</phone>
      </contact>
    </customer>
    <vendor>
      <contact>
        <name part="full">Acura of Bellevue</name>
      </contact>
    </vendor>
  </prospect>
</adf>
```

Clearly this is a very basic lead but it represents the minimum data that is absolutely required to comply with the specification. All other tags are optional and are included in the standard to provide flexibility for different industry participants to support their own needs. For webmasters and developers, the primary task to support this format is to map their existing data fields to the appropriate tags in the Auto-lead Data Format and write a converter to read or write the data according to their needs. Any "customization" or alterations to the ADF, such as custom tags or attributes, is not conformant to the standard

Definition of Tags

ADF has five categories, as discussed above. Each is designed to support a range of elements, most optional, that accurately define the information for that category. In some cases, such as vehicle options, there is also a sub-category tag. This section describes the full set of tags proposed.

Note that ADF will make use of the ISO 4217 3-letter code for currency in all monetary fields, a subset of ISO 8601 for all date-time fields, and the ISO 3166 2-letter country code for fields specifying country.

The ISO 4217 standard can be viewed at:

http://www.xe.net/currency/iso_4217.htm

The ISO 3166 standard can be viewed at :

http://userpage.chemie.fu-berlin.de/diverse/doc/ISO_3166.html

Base and Parent

In an ADF lead, the first line contains the standard XML identifier.

The <adf> and </adf> tags enclose the data for the set of leads.

Note that the <adf> tag was added in version 1.0 of the ADF document, to allow multiple leads within one file. The adf version, as shown in the <?ADF version> tag should be the same as an approved (not draft) version of the ADF document.

The <prospect> and </prospect> tags enclose the data for a single lead.

The id is assigned from the service provider's lead tracking system.

The <requestdate> and </requestdate> tags define the date and time that the lead was created, in ISO 8601 format. These are required. The <requestdate> will use the formats described in sections 5.4.1(a) and 5.3.3.1 of the ISO 8601:1988(E) standard document. These formats are:

CCYYMMDDThhmmss+hhmm

CCYYMMDDThhmmss-hhmm

CCYY-MM-DDThh:mm:ss+hh:mm

CCYY-MM-DDThh:mm:ss-hh:mm

The <prospect> tag has an optional parameter called "status" to identify leads that are being resent. It has two states: "new" and "resent".

Example:

```
<?ADF version "1.0"?>  
  
<?XML VERSION "1.0"?>  
  
<adf>  
  
  <prospect status="resend">  
  
    <id sequence=1 source="Cobalt">38889</id>  
  
    <requestdate>2000-03-30T15:30:20-08:00</requestdate>  
  
  </prospect>  
  
</adf>
```

Vehicle

The vehicle tags are used to describe the vehicle that the customer has requested. There is one sub-category for the vehicle tag that is used to define vehicle options. Example:

```
<vehicle interest="buy" status="used">

  <year>1999</year>

  <make>Chevrolet</make>

  <model>Blazer</model>

  <vin>2GTEK19R7V1511644</vin>

  <stock>P7286</stock>

  <trim>LT</trim>

  <doors>4</doors>

  <bodystyle>SUV</bodystyle>

  <transmission>A</transmission>

  <odometer status="replaced" units="miles">90000</odometer>

  <colorcombination>

    <interiorcolor>lush brown</interiorcolor>

    <exteriorcolor>emerald green</exteriorcolor>

    <preference>2</preference>

  </colorcombination>

  <colorcombination>

    <interiorcolor>gray</interiorcolor>

    <exteriorcolor>cobalt blue</exteriorcolor>

    <preference>1</preference>

  </colorcombination>

  <price type="quote" currency="USD">26995</price>

  <option>

    <optionname>Sport</name>

    <manufacturercode>p394</manufacturercode>

    <weighting>65</weighting>

  </option>
```

```
<option>
    <optionname>Keyless Entry</name>
    <manufacturercode>p395</manufacturercode>
    <weighting>100</weighting>
</option>
<finance>
    <method>Finance</method>
    <amount type="downpayment" currency="USD">5000</amount>
    <amount type="monthly" currency="USD">1000</amount>
    <amount type="total" currency="USD">50000</amount>
    <balance type="residual" currency="USD">2000</balance>
</finance>
<comments>keyless entry essential</comments>
```

The following table defines each tag. Those tags in **bold type** are required. Other fields are optional. Parameters are always optional. Default values are shown in *italics*.

Tag	Parameters	Valid Values	Purpose
<vehicle>	interest	<i>buy</i> <i>lease</i> <i>sell</i> <i>trade-in</i> <i>test-drive</i>	Identify the vehicle section of the ADF file. Multiple vehicles may be described for each lead.
	status	<i>new</i> <i>used</i>	Identify vehicle as new or used.
<id>	<u>See id section</u>	<u>See id section</u>	<u>See id section</u>
<year>		free text	Model year of vehicle.
<make>		free text	Manufacturer of vehicle.
<model>		free text	Model of vehicle.
<vin>		free text	VIN number of vehicle.
<stock>		free text	Vendor's stock number for vehicle.
<trim>		free text	Trim description.
<doors>		free text	Number of doors.
<bodystyle>		free text	Generic body style. E.g. SUV, Sedan, Coupe, etc.
<transmission>		free text	Usually A (Automatic) or M (Manual)
<odometer>	status	unknown rolledover replaced original	For example <odometer status="replaced" units="miles">90000</odometer>
	units	km mi	
<condition>		excellent good fair poor unknown	Condition of vehicle
<colorcombination>			Interior and exterior color combinations. Multiple entries can be listed using <preference> to specify order of preference
<interiorcolor>		free text	Interior color
<exteriorcolor>		free text	Exterior color.
<preference>		1-n	Preference. <colorcombination> tags will be listed in order of preference, 1 being the favorite.
<imagetag>		URL	For example, <imagetag width="100" height="120" alttext="1997 Honda Accord">http://www.something.org/accord.jpg</imagetag>
	width	free text	
	height	free text	
	alttext	free text	
<price>	<u>See price section</u>	<u>See price section</u>	<u>See price section</u>
<pricecomments>		free text	Explanatory note for pricing. e.g "Anniversary Edition"
<option>			Subcategory of <vehicle> for describing additional vehicle options.
<optionname>		free text	Name of option.
<manufacturercode>		free text	Manufacturer ID code.
<stock>		free text	Stock number.
<weighting>		-100 to +100	Percentage indicating the importance of this option to the customer, +100 being essential to have and -100 being essential to not have, 0 meaning don't care
<price>	<u>See price section</u>	<u>See price section</u>	<u>See price section</u>

<finance>			Identifies finance sub-category within <customer>
<method>		cash finance lease	Identifies financing option. E.g, Cash, Finance, Lease, etc.
<amount>	type	downpayment monthly <i>total</i>	Payment numbers for financing.
	limit	<i>maximum</i> minimum exact	
	currency	ISO 4217	
<balance>	type	<i>finance</i> residual	Remaining balance on trade-in vehicles.
	currency	ISO 4217	
<comments>		free text	Comments about vehicle

Customer

This category defines information about the customer. Customer makes use of the <contact> sub-category and also has timeframe and comments tags. Here is an example of a customer:

```
<customer>
  <contact>
    <name part="first">John</name>
    <name part="last">Doe</name>
    <email>jdoe@hotmail.com</email>
    <phone type="voice" time="morning">393-999-3922</phone>
    <phone type="voice" time="evening" besttime="1">393-991-2999
  </phone>
    <phone type="fax" time="evening">393-991-2999</phone>
    <address type="home">
      <street line="1">10 first avenue</street>
      <apartment>G-17</apartment>
      <city>Spokane</city>
      <regioncode>WA</regioncode>
      <postalcode>98002-3903</postalcode>
      <country>US</country>
    </address>
  </contact>
  <timeframe>
    <description>Within 1 month</description>
  </timeframe>
  <comments>Can you deliver my new car by next Thursday?
</comments>
</customer>
```

The following table defines each tag. Those tags in **bold type** are required. Other fields are optional. Parameters are always optional. Default values are shown in *italics*.

Tag	Parameters	Valid Values	Purpose
<customer>			Identify the customer category of an ADF file.
<contact>	<u>See contact section</u>	<u>See contact section</u>	<u>See contact section</u>
<id>	<u>see id section</u>	<u>see id section</u>	<u>see id section</u>
<timeframe>			
<description>		free text	Description of customer's timing intention.
<earliestdate>		ISO 8601	Earliest date customer is interested in. If timeframe tag is present, it is required to specify earliestdate and/or latestdate
<latestdate>		ISO 8601	Latest date customer is interested in. If timeframe tag is present, it is required to specify earliestdate and/or latestdate
<comments>		free text	Comments captured from the customer.

Vendor

The vendor section provides information about the vendor, usually the dealer, that the customer has requested service from. The data is the vendorname followed by contact data. Here is an example.

```

<vendor>

    <vendorname>Koons Internet Outlet</vendorname>

    <contact primarycontact="1">

        <name part="full">Jane Smith</name>

        <email>jsmith@koons.com</email>

        <phone type="voice" time="evening">333-999-2222

        </phone>

        <phone type="fax" time="evening">393-991-2999</phone>

        <address>

            <street line="1">10 First Avenue</street>

            <street line="2">Third Floor</street>

            <city>Spokane</city>

            <regioncode>WA</regioncode>

            <postalcode>98002-3903</postalcode>

            <country>US</country>

            <url>http://www.koons.com</url>

```

```
</address>
```

```
</contact>
```

```
</vendor>
```

The following table defines each tag. Those tags in **bold type** are required. Other fields are optional. Parameters are always optional. Default values are shown in *italics*.

Tag	Parameters	Valid Values	Purpose
<vendor>			Identify the vendor category of an ADF file.
<id>	<u>see id section</u>	<u>see id section</u>	<u>see id section</u>
<vendorname>		free text	Name of vendor (dealer)
<url>		free text	Dealer's web site address.
<contact>	<u>See contact section</u>	<u>See contact section</u>	<u>See contact section</u>

Provider

The provider category is optional. It is used to identify the service provider that originated the lead. For example, Autoweb, Ford, Cobalt, etc. Here is an example:

```
<provider>
  <name part="full">CarPoint</name>
  <service>Used Car Classifieds</service>
  <url>http://carpoint.msn.com</url>
  <email>carcomm@carpoint.com</email>
  <phone>425-555-1212</phone>
  <contact primarycontact="1">
    <name part="full">Fred Jones</name>
    <email>support@carpoint.com</email>
    <phone type="voice" time="day">425-253-2222</phone>
    <phone type="fax" time="day">393-991-2999</phone>
    <address>
      <street line="1">One Microsoft Way</street>
      <street line="2">Building 8</street>
      <city>Redmond</city>
      <regioncode>WA</regioncode>
      <postalcode>98052</postalcode>
      <country>US</country>
    </address>
  </contact>
</provider>
```

The tags are defined below. Default parameter values are shown in *italics*.

Tag	Parameters	Valid Values	Purpose
<provider>			Identify the provider category of an ADF file.
<id>	<u>see id section</u>	<u>see id section</u>	<u>see id section</u>
<name>		<u>As name in contact section</u>	Name of service provider.
<service>		free text	Name of service that originated the lead.
<url>		free text	Web address of provider.
<email>		<u>As email in contact section</u>	General reply address for issues related to the lead.
<phone>		<u>As phone in contact section</u>	Phone number of provider.
<contact>	<u>See contact section</u>	<u>See contact section</u>	<u>See contact section</u>

Contact.

The contact structure, which is used in consumer, vendor, provider, is defined below:

Tag	Parameters	Valid Values	Purpose
<contact>	primarycontact	<i>1</i> <i>0</i>	Identifies contact sub-category for lead. Optional parameter identifies primary contact.
<name>	part	first middle suffix last <i>full</i>	Name of contact. Type of name
	type	<i>individual</i> business	
<email>		free text	Email address of contact. Note that <email> is not required if <phone> is present. Use preferredcontact="1" to indicate this as the preferred method of contact
	preferredcontact	<i>0</i> <i>1</i>	
<phone>	type	<i>phone</i> fax cellphone pager	Phone number for contact. Note that <phone> is not required if <email> is present. The time parameter indicates that this entry is the preferred contact number. Use preferredcontact="1" to indicate this as the preferred method of contact
	time	morning afternoon evening <i>nopreference</i> day	
	preferredcontact	<i>0</i> <i>1</i>	
<address>	type	work home delivery	Identifies address sub-category for <contact> tag. Type of address.
<street>	line	1-5	Street name. Allowed up to 5 lines.
<apartment>		free text	Apartment #.
<city>		free text	City name.

<regioncode>		Free-form, 2-char code recommended for N. America	State or province.
<postalcode>		free text	Post code.
<country>		ISO 3166 2-letter code	Country.

Price.

The price tag is used by vehicle, and option within vehicle.:

Tag	Parameters	Valid Values	Purpose
<price>	type	quote offer msrp invoice call appraisal asking	Price associated with request. for example: <price type="invoice" currency="USD" source="Kelley Blue Book">19500</price> The "delta" value and "relativeto" parameters can be used to express the price as a percentage relative to, say, invoice. For example: <price type="quote" currency="USD" delta="percentage" relativeto="invoice">2</price> would denote a price of 2% above invoice price.
	currency	ISO 4217 3-letter code	
	delta	absolute relative percentage	The source is where this value came from , e:g Kelley Blue Book
	relativeto	msrp invoice	
	source	free text	

id.

The id tag is used by all five categories (prospect, customer, vendor, provider, vehicle).:

Tag	Parameters	Valid Values	Purpose
<id>	sequence	1-n	The id of this piece of data. A key identifying this prospect, this vehicle or whatever. The source is the name of the source that created this id. Different sources may use different ids for the same data as it is passed around. The sequence is a number used to track the history of this piece of data Example <id sequence=1 source="Autonation">12345</id> <id sequence=2 source="Cobalt">56789</id> and so on. Source attribute is required
	source	free text	

Standard ADF Transfer mechanism

All parties adhering to the ADF standard should support the standard transfer mechanism for exchanging ADF formatted leads.

The standard transfer mechanism options are as follows:

1. A MIME/SMTP email will be sent to an Internet email address furnished by the party wishing to receive such leads. This will be a multipart MIME email. There will be one message part that is of type application/xml , and this is the ADF formatted lead. Another message part could contain a human-readable text version of the lead. Other message parts are optional, such as an HTML version of the lead.

This mechanism provides the ability to send ADF and human-readable leads in the same message, allowing it to be read either by a human or an xml parser. This simplifies lead generation. This mechanism also provides support for internationalization.

2. A simple email will be sent to an Internet email address furnished by the party wishing to receive such leads. The ADF lead will be the entire body of the email. No additional commentary should be included in the lead.

This mechanism provides for the simplest implementation of the ADF standard, for lead providers who do not require multiple parts to their leads. Note that this does not support UTF-8 and may result in character set issues if a language other than English is used.

For either option, if an error occurs accepting the lead, the lead email should be bounced back to the source email address, with an additional text message part describing the error.

Appendix

Document Type Definition for ADF 1.0

An aid to developers and web masters for verifying the validity of XML documents is the Document Type Definition, or DTD file. This file can be used in conjunction with an XML parser, such as that included in IE5.0, to validate a document. Below is the DTD for the Auto-lead Data Format 1.0.

```
<!ELEMENT adf (prospect+)>

<!ELEMENT prospect (id*, requestdate, vehicle+, customer, vendor,
                    provider?)>
<!ATTLIST prospect status (new | resend) "new">

<!ELEMENT requestdate (#PCDATA)>

<!-- Vehicle -->
<!ELEMENT vehicle (id*, year, make, model, vin?, stock?, trim?, doors?,
                    bodystyle?, transmission?, odometer?,
                    colorcombination*, imagetag?, price?,
                    pricecomments?, option*, finance?, comments?)>
<!ATTLIST vehicle interest (buy | lease | sell | trade-in |
                            test-drive) "buy">
<!ATTLIST vehicle status (new | used) "new">

<!ELEMENT year          (#PCDATA)>
<!ELEMENT make          (#PCDATA)>
<!ELEMENT model         (#PCDATA)>
<!ELEMENT vin          (#PCDATA)>
<!ELEMENT trim         (#PCDATA)>
<!ELEMENT doors        (#PCDATA)>
<!ELEMENT bodystyle    (#PCDATA)>
<!ELEMENT transmission  (#PCDATA)>

<!ELEMENT odometer (#PCDATA)>
<!ATTLIST odometer
    status (unknown | rolledover | replaced | original) #IMPLIED
    units  (km | mi) #IMPLIED>

<!ELEMENT condition (#PCDATA)>
<!ELEMENT colorcombination (((interiorcolor | exteriorcolor) |
                             (interiorcolor, exteriorcolor)),
                             preference)>

<!ELEMENT imagetag      (#PCDATA)>
<!ATTLIST imagetag
    width  CDATA #IMPLIED
    height CDATA #IMPLIED
    alttext CDATA #IMPLIED>

<!ELEMENT pricecomments (#PCDATA)>

<!ELEMENT option (optionname, manufacturercode?, stock?, weighting
                 price?)>

<!ELEMENT finance (method, amount+, balance?)>
```

```

<!-- Vehicle subtags -->
<!ELEMENT interiorcolor      (#PCDATA)>
<!ELEMENT exteriorcolor     (#PCDATA)>
<!ELEMENT preference         (#PCDATA)>
<!ELEMENT optionname        (#PCDATA)>
<!ELEMENT manufacturercode   (#PCDATA)>
<!ELEMENT weighting         (#PCDATA)>
<!ELEMENT method            (#PCDATA)>

<!ELEMENT amount    (#PCDATA)>
<!ATTLIST amount
  type      (downpayment | monthly | total)      "total"
  limit     (maximum | minimum | exact)          "maximum"
  currency  CDATA                                #IMPLIED>

<!ELEMENT balance  (#PCDATA)>
<!ATTLIST balance
  type      (finance | residual)                "finance"
  currency  CDATA                                #IMPLIED>

<!-- Customer -->
<!ELEMENT customer      (contact, id*, timeframe?, comments?)>
<!ELEMENT timeframe     (#PCDATA)>
<!ELEMENT description   (#PCDATA)>
<!ELEMENT earliestdate  (#PCDATA)>
<!ELEMENT latestdate    (#PCDATA)>

<!-- Vendor -->
<!ELEMENT vendor (id*, vendorname, url?, contact)>
<!ELEMENT vendorname      (#PCDATA)>

<!-- Provider -->
<!ELEMENT provider (id*, name, service?, url?, email?, phone?,
  contact?)>
<!ELEMENT service  (#PCDATA)>

<!-- Contact -->
<!ELEMENT contact (name+, ((email | phone+) | (email, phone+)),
  address?)>

<!ELEMENT name (#PCDATA)>
<!ATTLIST name
  part (surname | first | middle | last | full) "full"
  type (business | individual) "individual">

<!ELEMENT email (#PCDATA)>
<!ATTLIST email
  preferredcontact (0 | 1) "0">

<!ELEMENT phone (#PCDATA)>
<!ATTLIST phone
  type (voice | fax | cellphone | pager)      "voice"
  time (morning | afternoon | evening | nopreference | day)
  "nopreference"
  preferredcontact (0 | 1)                      "0">

<!ELEMENT address (street+, apartment?, city?, regioncode?,
  postalcode?, country?)>
<!ATTLIST address
  type (work | home | delivery) #IMPLIED>

```

```

<!ELEMENT street (#PCDATA)>
<!ATTLIST street
    line CDATA #IMPLIED>

<!ELEMENT apartment (#PCDATA)>
<!ELEMENT city (#PCDATA)>
<!ELEMENT regioncode (#PCDATA)>
<!ELEMENT postalcode (#PCDATA)>
<!ELEMENT country (#PCDATA)>

<!-- Price
-->
<!ELEMENT price (#PCDATA)>
<!ATTLIST price
    type (quote | offer | msrp | invoice | call | appraisal |
    asking) "quote"
    currency CDATA #IMPLIED
    delta (absolute | relative | percentage) #IMPLIED
    relativeto (msrp | invoice) #IMPLIED
    source CDATA #IMPLIED>

<!-- Id
-->

<!ELEMENT id (#PCDATA)>
<!ATTLIST id
    sequence CDATA #IMPLIED
    source CDATA #IMPLIED>

<!-- Other tags used in more than one place
-->
<!ELEMENT comments (PCDATA)>
<!ELEMENT stock (#PCDATA)>
<!ELEMENT url (#PCDATA)>

```