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Internet Offer Format (IOF) version 2.3

Technical Specification

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Language used in this document: English (en-US)

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Contents of this document

The scope of this document

The scope of this document deals with the product offer description format – **Internet Offer Format (IOF)** – available in **2.3** version. This format has been developed by IAI S.A. and is a sole property of this company.

It should be stressed that the use of the **IOF version 1.0 is undesirable**, because it is considered obsolete. **We strongly recommend using IOF version 2.1 or later.**

Terms and Conditions of using Internet Offer Format (IOF)

Please note that any version of the Internet Offer Format is a product of the IAI S.A. and is distributed on the terms of Creative Commons license defined by [Creative Commons Attribution-No Derivative Works 2.5](#), including the following:

1. You are allowed to copy, distribute and to use the IOF format in terms defined hereby by the IAI S.A. and this document.
2. You may not alter, transform or use it in any modified form for any other purposes.



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What has changed since 2.2

IOF version 2.3 released

The IOF version 2.3 is currently available. We have extended functionality of this format, by adding new features listed below. This document concerns only the IOF 2.3.

List of modifications made in 2.3 version

1. **SRP (Suggested Retail Price)** may be defined for every size defined for product in **light.xml** file.
2. When using the **IAI Downloader** - it is worth to mention - attributes like **@id** can contain '-' (minus) symbol, but this symbol will be modified by the **IAI Downloader** to '_' symbol.
3. The **full.xml** file can hold additional product attributes in the offer – the so-called **Extensions** – which has been described in a separate documentation, accessible on the IAI company page.
4. In the **full.xml** file, in the **<offer>** main tag, a new **@extensions** attribute has been added. It allows for switching on a support for extended information on products in the offer, the so-called **Extensions**.
5. The IOF has gained some flexibility, by removing the necessity of using individual attributes in the IOF files.
6. Another file of the format has been added – **preset.xml** – which stores information on set of configuration options of offer import for the use by applications handling offers.
7. The **full.xml** file has been enhanced with support for namespace for the needs of **Extensions**.

[Go to the IAI company website to learn more about the IOF Extensions format.](#)

Introduction

Internet Offer Format (IOF) version **2.3** is the product offer description format, based on XML.

This format is fully portable and easy to implement in any information system.

The IOF was developed for the **IAI Downloader** application. Although, it is possible to use this format in other system dedicated for processing data of products.

[Learn more about the IAI Downloader.](#)

[Learn more about the IOF format.](#)

This document concerns the entire structure of files included in the IOF format and a client-oriented implementation procedure.

Attachments to this document:

- example XML files,
- example XSD files (XML Schema).

[Learn more about XML.](#)

[Learn more about XML Schema.](#)

Documentation files

Documentation versions

Following technical specification is available to download in two separated packages:

- **IOF 2.3 functional specification in PDF,**
- **IOF 2.3 functional specification in PDF, sample XML and XSD files** (ZIP archive should be unzipped after download).

Sample offer in package of files attached to this documentation

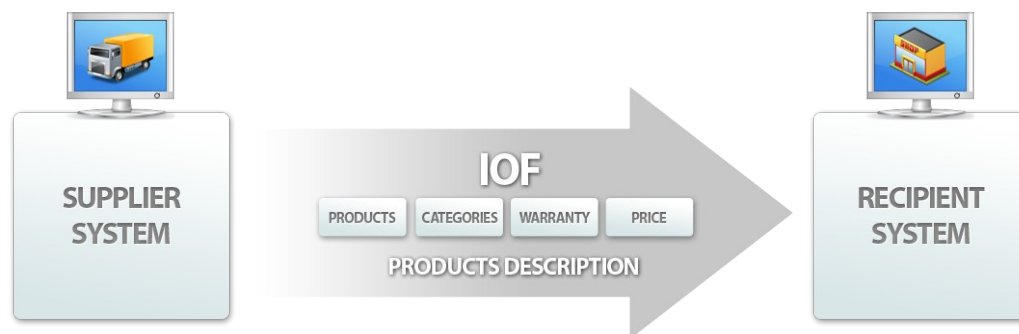
In the **IOF 2.3 functional specification in PDF**, sample XML and XSD files have been added – it can be found in the **EXAMPLE OFFER** folder. A **gateway.xml** file of the offer is also present there – it can be later used as a base for creation of your own offer. This file also contains links by means of which the rest of offer files can be obtained.

The **EXAMPLE OFFER** is ready to be imported to the **IdoSell.com** system by means of the **IAI Downloader**.

[Learn how to use the IAI Downloader.](#)

Idea of IOF format

The IOF format uses meta-data to describe products for the **IAI Downloader**. It is not essential to use exactly that program. This format is ultra portable and can be used in any applications processing full data of products - for the needs of e-commerce. The IOF format describes products in **integration process** between **supplier** and **seller** (distributor), who wishes for the widest assortment and the best conditions of sale (Schematics no. 1).



Schematics no. 1, The IOF principle of operation.

The **IOF format** has modular structure referring to particular categories of information. Reference mechanism is performed via URL requests to files of the IOF format. An integral part of this document is the **gateway.xml** file, which is a so-called **gateway**. That file is a main part of the IOF format.

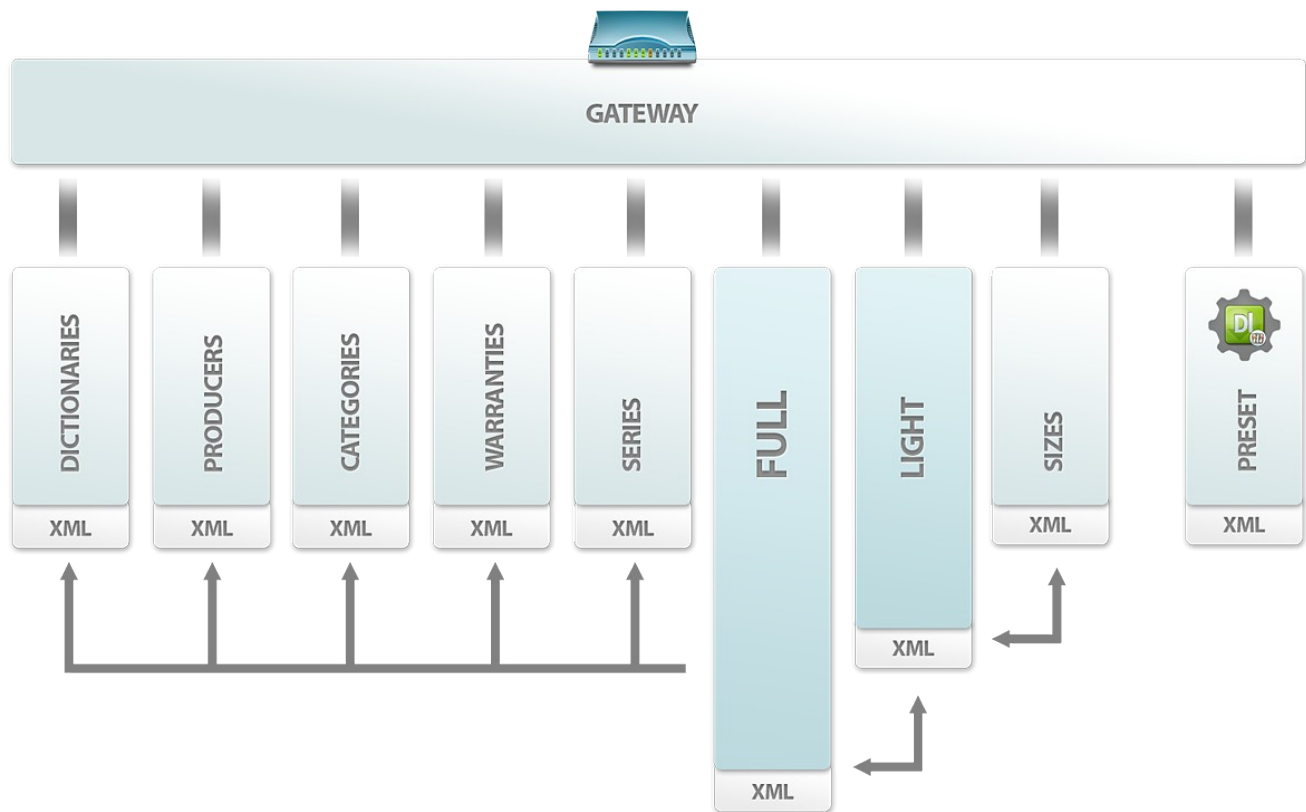
This file holds following elements:

- Meta-data describing a supplier.
- Information about time period within offer is valid.

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- URL to file containing a full description of offer (**full.xml**).
- URL to file containing a short description of offer (**light.xml**).
- URL to file containing a list of categories (**categories.xml**).
- URL to file containing a list of sizes (**sizes.xml**).
- URL to file containing a list of producers (**producers.xml**).
- URL to file containing a list of measure units (**units.xml**).
- URL to file containing a list of dictionaries (**dictionaries.xml**).
- URL to file containing a list of product series (**series.xml**).
- URL to file containing a list of warranties (**warranties.xml**).
- URL to file containing configuration of offer import (**preset.xml**).

Schematics no. 2 shows a structure of the IOF files:



Schematics no. 2, IOF 2.3 structure.

Explanation to Schematics no. 2:

- the main file of the format is the **gateway.xml**. It contains information on supplier and links to the rest of offer files,
- the first file of the format is the **full.xml**. It contains basic information of products – descriptions, photos, attributes,
- second file is the **light.xml**. It contains information on stock quantities, producer codes, weights,
- **sizes.xml**, **series.xml**, **warranties.xml**, **categories.xml**, **producers.xml**, **dictionaries.xml** are additional files, strictly associated with main files – they contain information on attributes of products in offer,
- **preset.xml** is file that contains configuration of offer import for the use by applications handling IOF offers.

All these elements are especially useful for those, who do not use the **IAI Downloader**. Why? Because it becomes easier to import and export product descriptions when you make use of the IOF format. So:

1. **If you are a seller** (offer receiver) prepare appropriate tools designed for processing XML files. If you do not have time to work with these files, you can use the **IAI Downloader** which is entirely integrated with the IdoSell.com system platform.

[Learn how to integrate with wholesale store using the IAI-Shop.com/IdoSell.com system, which offers the two-way support for offer sharing in IOF.](#)

2. **If you are a supplier** (wholesaler), and you wish to integrate your wholesale store with retail stores, prepare an appropriate IOF files in accordance with this specification.

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Familiarize yourself with structure and requirements of each file linked directly in the **gateway.xml**.

[Learn how to become a wholesaler recommended by the IAI-Shop.com/IdoSell.com and have a built-in module to export offer in the IOF \(for users from Poland\).](#)

In order to prepare particular XML files, familiarize yourself with contents of this document.

Descriptive conventions and common issues

There are many common issues that apply to all files of the IOF format. In order not to duplicate them, we introduce them in this section. It concerns tags and attributes in all XML files included in the IOF.

To simplify the XML code, we have created following descriptive conventions for tags and attributes for the IOF document and XSD files:

- **size@id** - specifies **size** tag and its attribute **id**,
- **@name** - specifies attribute **name** for current tag,
- **<product>** - specifies **product** tag.

Attributes such as **@code**, **@code_producer** may contain following symbols: '0-9', 'a-z', 'A-Z', '_', '-'. Content of attributes above must be unique for each product, size, etc. It is not allowed to enter the same **data to @id, @code and @code_producer tags**.

Every file must contain attributes of version and format (placed inside the main tag). For version 2.3 - **@file_format="IOF"** and **@version="2.3"**. In every of the IOF files, except **gateway.xml**, there is an information about current language of particular file, e.g. **eng** – it is held in the main tag in **@language** attribute. This attribute is required.

An **xml:lang** attribute defines language of particular element. Click on the link below to check ISO 639.2 codes for the representation of names of languages.

[Codes arranged alphabetically by ISO 639-2 Code](#)

Elements supported by multi-language feature:

- name of product,
- name of product in group,
- name of group,
- short description of product,
- long description of product,
- name of category,
- name of size,
- name of measure unit,
- name of series,
- name and description of warranty,
- name of attachment.

Files such as: **categories.xml**, **unit.xml**, **series.xml**, **warranties.xml**, **sizes.xml** may contain **@name** (file **warranties.xml** may include also **@description**) in many languages (thanks to **xml:lang** attribute) and those contents will be imported to the **IAI-Shop.com** by means of the **IAI Downloader**. These elements may be defined by only one language in the **full.xml** file - content in this language will be assigned to product.

Notice:

xml:lang attribute is required in every element that supports multi-language feature.

The multi-language feature applies to: name of product, its short and long description. The **full.xml** file may include those contents in many languages. All defined contents will be imported.

Every customer, for whom the IOF document is generated, is called a business or target customer.

Structure of gateway.xml file

It is the main file of the IOF format. This file contains data of supplier who share his offer to a business customer, and URL addresses to files of the IOF format, e.g. **full.xml** and **light.xml**.

<meta> section is required and specifies provider details and time period within which the offer is valid. The **<short_name>** tag cannot contain white-spaces. Only using symbols such as '**0-9**', '**a-z**', '**A-Z**', '**_**' is allowed.

Rest of required tags:

- **<full>** – URL to **full.xml** file containing the most important information about products, i.e. name, price provided by supplier, short description, long description, URL address to product tab, relations between categories, producers, picture information, etc.
- **<light>** – URL to **light.xml** file containing information, which are not included in full.xml file, i.e. unique code, prices and stock quantities for particular size,
- **<categories>** – URL to **categories.xml** file containing category tree,
- **<sizes>** – URL to **sizes.xml** file containing groups of sizes,
- **<producers>** – URL to **producers.xml** file containing information about producers.

Optional tags:

- **<units>** – URL to list of units of measure (**units.xml**),
- **<dictionaries>** – URL to list of dictionaries (**dictionaries.xml**),
- **<series>** – URL to list of product series (**series.xml**),
- **<warranties>** – URL list of warranties (**warranties.xml**),
- **<preset>** - URL to configuration of settings for application handling offers (**preset.xml**).

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Notice for optional tags:

In case any unit of measure, series, warranty or dictionary are not specified for particular product in **full.xml**, empty additional tags will not be accepted. E.g. instead of specifying **<series />** tag, do not specify this tag at all:

```
<producer id="23" name="Bosh"/>
<category id="10" xml:lang="eng" name="Drill"/>
<unit />
<series />
```

INCORRECT

```
<producer id="23" name="Bosh"/>
<category id="10" xml:lang="eng" name="Drill"/>
<series id="3" xml:lang="pol" name="Tools"/>
```

CORRECT

Below there is an example gateway.xml file:

```
<?xml version="1.0" encoding="UTF-8"?>
<provider_description file_format="IOF" version="2.3" generated="2012-01-15 12:35:52">
  <meta>
    <long_name><![CDATA[My example]]></long_name>
    <short_name><![CDATA[Super store]]></short_name>
    <showcase_image url="http://iai-shop.com/gfx/iai-logo.gif"/>
    <email><![CDATA[support@superstore.com]]></email>
    <tel><![CDATA[+48 91 000 000]]></tel>
    <fax><![CDATA[+48 91 000 001]]></fax>
    <www><![CDATA[www.iai-shop.com]]></www>
    <address>
      <street><![CDATA[Madali skiego 8]]></street>
      <zipcode><![CDATA[76-234]]></zipcode>
      <city><![CDATA[Szczecin]]></city>
      <country><![CDATA[Polska]]></country>
    </address>
    <time>
      <offer date_created="2012-01-15 12:35:52"/>
      <offer date_expires="2013-01-15 12:35:52"/>
    </time>
  </meta>

  <full url="http://www.iai-shop.com/panel/file-gate.php?id=example_id"/>
  <light url="http://www.iai-shop.com/panel/file-gate.php?id=example_id"/>
  <categories url="http://www.iai-shop.com/panel/file-gate.php?id=example_id"/>
  <sizes url="http://www.iai-shop.com/panel/file-gate.php?id=example_id"/>
  <producers url="http://www.iai-shop.com/panel/file-gate.php?id=example_id"/>
```


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```
<units url="http://www.iai-shop.com/panel/file-gate.php?id=example_id"/>
<dictionaries url="http://www.iai-shop.com/panel/file-gate.php?id=example_id"/>
<series url="http://www.iai-shop.com/panel/file-gate.php?id=example_id"/>
<warranties url="http://www.iai-shop.com/panel/file-gate.php?id=example_id"/>
<preset url="http://www.iai-shop.com/panel/file-gate.php?id=example_id"/>
</provider_description>
```

Structure of full.xml file

The **full.xml** file contains complex information about product, except prices for target customer and stock quantities for particular sizes.

The **<product>** tag includes all information about single product: name, description, category, producer, unit of measure, series, warranty, dictionary, asking price, url, images. Each product has an unique **@id** and **@currency** attributes containing information about currency – compliant with the ISO-4217 standard. These attributes are required.

The **<description>** tag contains name of product, its short and long description. All elements may be defined in multiple languages.

The **<images>** tag contains pictures and icons. Each picture may be described by optional attributes: **@date_changed** (last modified date in YYYY-MM-DD hh:mm:ss format) and **@hash** (MD5 value). These attributes are not required.

Asking price and URL to imported product may be also defined. Price of particular size for target customer is defined in the **light.xml** file.

IOF 2.3 allows to include attachments to imported product. Four types of attachment may be added to product: movie file, document file, audio file, or other type of file (e.g. ZIP archive).

There are following relations between data:

- **product.producer@id** is related to **producers.producer@id** from **producers.xml**,
- **product.category@id** is related to **categories.category@id** from **categories.xml**,

- **product.unit@id** is related to **units.unit@id** from **units.xml**,
- **product.series@id** is related to **series.series@id** from **series.xml**,
- **product.warranty@id** is related to **warranties.warranty@id** from **warranties.xml**,
- **product.dictionary@id** is related to **dictionaries.dictionary@id** from **dictionaries.xml**.

Groups of products

There are a few simple rules concerning groups of products – all of them are listed below. Defining groups of products is an additional feature. Please read following list only when you want to define groups of products:

1. Groups of products can be specified in files **full.xml** and **light.xml** as a completely new tag hierarchy. All conventions are specified by following requirements.
2. Group of products is defined by **offer.products.group** tag.
3. Every group of products in **full.xml** has to be specified by using exactly the same structure as in **light.xml**.
4. The first product in group is a main product. If any product in group is missing some data, then all data are inherited from main product, e.g. if picture is assigned to main product and product in group does not have assigned pictures, then product inherits these pictures from main product.
5. Common data for all products are these, which do not appear in all product in group, but appear in main product.
6. Every group of products in **full.xml** file includes text information in **offer.products.group.group_details@name** tag. This is an information about name of group of products, e.g. Colours.
7. Tag **offer.products.group.product.description.version@name** is the only one tag which is not inherited from the main product. This tag specify an additional name for product in group, e.g. Green.

An example of **full.xml** file can be found below:

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```
<?xml version="1.0" encoding="UTF-8"?>
<offer file_format="IOF" version="2.3" extensions="no" generated="2012-01-15 12:35:52">
  <products language="pol">

    <product id="1175009456" currency="PLN" code_producer="ARMACJZAP0022" >
      <producer id="1222413262" name="ActiveJet"/>
      <category id="1222083475" xml:lang="pol" name="Zapachy samochodowe"/>
      <unit id="0" xml:lang="pol" name="szt."/>
      <description>
        <name xml:lang="eng"><![CDATA[Fresh tree]]></name>
        <short_desc xml:lang="eng" ><![CDATA[Fresh tree - lime]]></short_desc>
        <long_desc xml:lang="eng"><![CDATA[Nice smell of lime in your car]]></long_desc>
        <name xml:lang="pol"><![CDATA[Drzewko zapachowe ]]></name>
        <short_desc xml:lang="pol" ><![CDATA[Drzewko zapachowe - limonka]]></short_desc>
        <long_desc xml:lang="pol"><![CDATA[Zapach limonki w Twoim samochodzie]]></long_desc>
      </description>
      <card url="http://exampleurladdress1.com"/>
      <price gross="7.81" net="6.35" vat="23.0"/>
      <images>
        <large>
          <image url="http://iai-shop.com/gfx/iai-logo.gif"/>
          <image url="http://iai-shop.com/gfx/iai-logo.gif"/>
        </large>
        <icons>
          <icon url="http://iai-shop.com/gfx/iai-logo.gif"/>
        </icons>
      </images>
      <warranty id="1222786255" xml:lang="pol" name="plik"/>
      <attachments>
        <audio>
          <sound url="http://exampleattachment1.com" xml:lang="pol" name="mp3 file"/>
        </audio>
        <document>
          <doc url="http://exampleattachment2.com" xml:lang="pol" name="odt doc"/>
        </document>
        <video>
          <movie url="http://exampleattachment3.com" xml:lang="pol" name="video clip"/>
        </video>
        <other>
          <file url="http://exampleattachment4.com" xml:lang="pol" name="bundle"/>
        </other>
      </attachments>
    </product>

    <product id="1175030433" currency="PLN">
      <producer id="1269606328" name="AGATKA"/>
      <category id="1233680906" xml:lang="pol" name="Akcesoria dodatkowe"/>
      <unit id="1" xml:lang="pol" name="para"/>
      <series id="506" xml:lang="pol" name="Modern"/>
    </product>
  </products>
</offer>
```

```

<description>
  <name xml:lang="eng"><![CDATA[Charms - ring]]></name>
  <name xml:lang="pol"><![CDATA[Amulet - pier cie ]]></name>
  <short_desc xml:lang="eng" ><![CDATA[Golden ring]]></short_desc>
  <long_desc xml:lang="eng"><![CDATA[Supernatural golden ring gives power]]></long_desc>
</description>
<card url="http://exampleurladdress2.com"/>
<price gross="100.00" net="81.30" vat="23.0"/>
<images>
  <large>
    <image url="http://iai-shop.com/gfx/iai-logo.gif"/>
  </large>
  <icons>
    <icon url="http://iai-shop.com/gfx/iai-logo.gif"/>
  </icons>
</images>
<dictionary id="1190101090" name="Poradniki">
  <element id="1189689819" name="Wydawnictwo Naukowe PWN">
    <value id="1189689889" name="Prószy ski i S-ka"/>
  </element>
  <element id="1189689517" name="Autor">
    <value id="1189761600" name="Richard Bachman"/>
  </element>
  <element id="1189689538" name="Oprawa">
    <value id="1189690029" name="mi kka"/>
  </element>
  <element id="1195659703" name="ISBN" value="3473467348"/>
  <element id="1189689749" name="Ilo stron" value="120"/>
  <element id="1189689717" name="Format" value="AA"/>
  <element id="1199088154" name="Tekst" value="dodatkowy tekst"/>
</dictionary>
<warranty id="1211183111" xml:lang="pol" name="2 lata"/>
</product>

<product id="47909" currency="PLN">
  <producer id="1207558226" name="Klub Ksi ki Katolickiej"/>
  <category id="1206711779" xml:lang="pol" name="Przewodniki"/>
  <series id="31" xml:lang="pol" name="Active Start"/>
  <unit id="4" xml:lang="pol" name="butelka"/>
  <description>
    <name xml:lang="eng"><![CDATA[Test name in English]]></name>
    <name xml:lang="pol"><![CDATA[Nazwa testowa po polsku]]></name>
    <short_desc xml:lang="eng" ><![CDATA[Example short description]]></short_desc>
    <long_desc xml:lang="eng"><![CDATA[Example long description]]></long_desc>
    <long_desc xml:lang="pol"><![CDATA[Przyk adowy opis d ugi]]></long_desc>
  </description>
  <card url="http://exampleurladdress3.com"/>
  <price gross="2.35" net="1.91" vat="23.0"/>
</product>

```

```

<group type="versions">

  <group_details name="Ok adka">
    <name xml:lang="eng"><![CDATA[Cover]]></name>
    <name xml:lang="pol"><![CDATA[Ok adka]]></name>
  </group_details>

  <product id="433" currency="PLN" code_producer="BBTK29" >
    <producer id="58" name="Rosa"/>
    <category id="35" xml:lang="pol" name="Bluzki"/>
    <unit id="0" xml:lang="pol" name="szt."/>
    <series id="1170" xml:lang="pol" name="Byblos Byblos"/>
    <description>
      <version name="bluzka">
        <name xml:lang="eng"><![CDATA[blouse]]></name>
        <name xml:lang="pol"><![CDATA[bluzka]]></name>
      </version>
      <name xml:lang="pol"><![CDATA[Bluzka z d ugi r kawem]]></name>
      <name xml:lang="eng"><![CDATA[Long sleeve]]></name>
      <long_desc xml:lang="eng"><![CDATA[Shirt 100% cotton]]></long_desc>
      <long_desc xml:lang="pol"><![CDATA[Bluzka z d ugi r kawem]]></long_desc>
    </description>
    <card url="http://exampleurladdress4.com"/>
    <price gross="4.67" net="3.80" vat="23.0"/>
    <images>
      <large>
        <image url="http://iai-shop.com/gfx/iai-logo.gif"/>
      </large>
      <icons>
        <icon url="http://iai-shop.com/gfx/iai-logo.gif"/>
      </icons>
    </images>
  </product>

  <product id="450" currency="PLN" code_producer="BBTK1181" >
    <description>
      <version name="Koszula">
        <name xml:lang="eng"><![CDATA[Shirt]]></name>
        <name xml:lang="pol"><![CDATA[Koszula]]></name>
      </version>
      <long_desc xml:lang="eng"><![CDATA[Example long description]]></long_desc>
      <long_desc xml:lang="pol"><![CDATA[Przyk adowy opis d ugi]]></long_desc>
    </description>
    <card url="http://exampleurladdress5.com"/>
    <price gross="5.63" net="4.58" vat="23.0"/>
  </product>

  <product id="452" currency="PLN" code_producer="BBTK20" >

```

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```
<description>
  <version name="Koszula z d ugi m r kawem">
    <name xml:lang="eng"><![CDATA[Shirt]]></name>
    <name xml:lang="pol"><![CDATA[Koszula z d ugi m r kawem]]></name>
  </version>
  <long_desc xml:lang="eng"><![CDATA[Example long description]]></long_desc>
  <long_desc xml:lang="pol"><![CDATA[Przyk adowy opis d ugi]]></long_desc>
</description>
<price gross="4.40" net="3.58" vat="23.0"/>
</product>

</group>

</products>
</offer>
```

Structure of light.xml file

The **light.xml** file contains information about products, except information included in **full.xml** file: prices in currency for target customer and stock level of particular sizes.

Price of particular product is contained in **<price>** tag. Price is automatically calculated to currency requested by target customer – in **@currency** attribute.

Each **<product>** has an unique **@id** – the same as in **full.xml** file. Within **<product>** tag, a **<price>** tag with **@net** attribute is required. To specify different prices for particular **<size>**, enter a **<price>** tag within **<size>**.

Suggested retail price (SRP) may be defined for each product in **<srp>** tag. That tag may contain information about gross price, net price and vat rate. That tag is optional.

Each size has following attributes: **@id**, **@code**, **@code_producer**, **@weight**.

Required attributes:

- **@id** – product ID (the same ID used in **full.xml** file)
- **@code** – unique product code, e.g. 1454-03

Optional attributes:

- **@code_producer** – manufacturer code
- **@weight** – weight of product in particular size

Information of price of particular size is an optional feature. Optional is also a product quantity. A

<stock> tag contains information about **@quantity** of product (product in particular size).

Remember, that stock **@id** should be specified.

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Example stocks in IdoSell.com and their **@id** attributes:

- M0 – **id="0"**
- M1 – **id="1"**
- M2 – **id="2"** etc.

@quantity attribute may contain a fractional value.

Notice:

-1 value in **@quantity** attribute is interpreted by the **IAI Downloader** and **IdoSell.com** platform as an infinity value of stock level.

There are following relations between data:

- **size@id** tag is related to **sizes.group.size@id** from sizes.xml file
- product price is assembled from following fields:
 - **offer.products.product.price@gross**
 - **offer.products.product.price@net**
 - **offer.products.product.price@vat**

In case only **@net** price is specified, it shall be set as a retail price.

In both cases, **@vat** is not required.

An example **light.xml** file can be found below:

```
<?xml version="1.0" encoding="UTF-8"?>
<offer file_format="IOF" version="2.3" generated="2012-01-15 12:35:52">
  <products currency="PLN">

    <product id="1175009456">
      <price gross="111.68" net="101.37" vat="23.0"/>
      <srp gross="90.00" net="69.30" vat="23.0" />
      <sizes>
```

```

    <size id="757" code="117557" weight="657" code_producer="zxcvbnm">
      <stock id="1" quantity="1"/>
    </size>
    <size id="756" code="117556" weight="555" code_producer="mnbvcxz">
      <srp gross="95.00" net="72.30" vat="23.0" />
      <stock id="2" quantity="6"/>
    </size>
    <size id="755" code="117755" weight="900" code_producer="bnmzxcv">
      <price gross="115.68" net="105.37" vat="23.0"/>
      <stock id="1" quantity="7"/>
    </size>
  </sizes>
</product>

<product id="1175030433">
  <price gross="2.15" net="1.75" vat="23.0"/>
  <srp gross="4.00" net="3.20" vat="23.0" />
  <sizes>
    <size id="757" code="1175057" weight="657" >
      <stock id="1" quantity="3"/>
    </size>
    <size id="756" code="1175056" weight="555" >
      <stock id="2" quantity="6"/>
    </size>
    <size id="755" code="1175055" weight="900" >
      <price gross="2.05" net="1.68" vat="23.0"/>
      <srp gross="3.00" net="2.50" vat="23.0" />
      <stock id="2" quantity="6"/>
    </size>
  </sizes>
</product>

<product id="47909">
  <price gross="80.50" net="70.41" vat="23.0"/>
  <sizes>
    <size id="0" code="4790" weight="151" ></size>
  </sizes>
</product>

<group type="versions">

  <product id="433">
    <price gross="41.00" net="35.81" vat="23.0"/>
    <srp gross="50.00" net="42.50" vat="23.0" />
    <sizes>
      <size id="783" code="433783" weight="0" >
        <stock id="2" quantity="3"/>
      </size>
    </sizes>
  </product>

```

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```
</product>

<product id="450">
  <price gross="21.21" net="19.98" vat="23.0"/>
  <sizes>
    <size id="782" code="450782" weight="20" >
      <stock id="1" quantity="1"/>
    </size>
    <size id="783" code="450783" weight="100" >
      <stock id="1" quantity="984"/>
    </size>
  </sizes>
</product>

<product id="452">
<price gross="0.95" net="0.77" vat="23.0"/>
  <sizes>
    <size id="0" code="4520" weight="0" ></size>
  </sizes>
</product>

</group>

</products>
</offer>
```

Structure of categories.xml file

The **categories.xml** file uses a tree structure to present all product categories. Every category has an **@id** and **@name** attributes which have a unique content. These attributes are required. Each category may contain subcategories. The multi-language feature is available for every **@name** attribute of category.

An example **categories.xml** file can be found below:

```
<?xml version="1.0" encoding="UTF-8"?>
<categories file_format="IOF" version="2.3" language="pol" generated="2012-01-15 12:35:52">

  <category id="1222083475" name="Zapachy samochodowe">
    <name xml:lang="pol">Zapachy samochodowe</name>
    <name xml:lang="eng">Car Fresheners</name>
  </category>

  <category id="1233680906" name="Akcesoria dodatkowe">
    <name xml:lang="pol">Akcesoria dodatkowe</name>
    <name xml:lang="eng">Accessories</name>
  </category>

  <category id="1233677105" name="Książki">
    <name xml:lang="pol">Książki</name>
    <name xml:lang="eng">Books</name>

    <category id="1233677121" name="Sensacyjna">
      <name xml:lang="pol">Sensacyjna</name>
      <name xml:lang="eng">Thriller</name>

      <category id="1206711779" name="Przewodniki">
        <name xml:lang="pol">Przewodniki</name>
        <name xml:lang="eng">Guide books</name>
      </category>
    </category>

  </category>

</categories>

<category id="35" name="Bluzki">
  <name xml:lang="pol">Bluzki</name>
```

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```
      <name xml:lang="eng">Blouses</name>  
    </category>
```

```
</categories>
```

Structure of sizes.xml

File **sizes.xml** defines groups of sizes and same sizes as well. Each product may be assigned only to one group of sizes. Similarly to product categories, every group and size require to be specified by **@id** and **@name** tags. **@name** and **@id** tags should be unique within group – the same as for sizes in groups. **@id** and **@name** tags of each size may be duplicated, if particular sizes are in different groups. The multi-language feature is available for **size@name** attribute.

An example **sizes.xml** file can be found below:

```
<?xml version="1.0" encoding="UTF-8"?>
<sizes file_format="IOF" version="2.3" language="pol" generated="2012-01-15 12:35:52">

  <group id="-1" name="Grupa rozmiarów uniwersalnych">
    <size id="0" name="uniwersalny">
      <name xml:lang="eng">onesize</name>
      <name xml:lang="pol">uniwersalny</name>
    </size>
  </group>

  <group id="1271319313" name="top">
    <size id="783" name="80B">
      <name xml:lang="eng">80B</name>
      <name xml:lang="pol">80B</name>
    </size>
    <size id="782" name="75C">
      <name xml:lang="eng">75C</name>
      <name xml:lang="pol">75C</name>
    </size>
  </group>

  <group id="1271319287" name="biustonosze">
    <size id="757" name="90E">
      <name xml:lang="eng">90E</name>
      <name xml:lang="pol">90E</name>
    </size>
    <size id="756" name="70H">
      <name xml:lang="eng">70H</name>
      <name xml:lang="pol">70H</name>
    </size>
  </group>
</sizes>
```

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```
<size id="755" name="105G">  
  <name xml:lang="eng">105G</name>  
  <name xml:lang="pol">105G</name>  
</size>  
</group>  
  
</sizes>
```

Structure of dictionaries.xml

The **dictionaries.xml** file defines dictionaries of products, that may be useful for e.g. price comparison websites. Main dictionary contains all elements. Rest of defined dictionaries (with specified **@id** element) use elements defined in the **<main_dictionary>**. Main dictionary defines elements and their values and types. There are four types of dictionary elements:

- **predefined** – contains many values, but only one value may be assigned to product in **full.xml** file,
- **multi-predefined** – contains many values, and many of them may be assigned to product in **full.xml** file,
- **text** – element containing text value,
- **group** – element containing name of a element called group – that element cannot contain other elements.

Type of dictionary element is defined by **@type** tag – but only in **<main_dictionary>**.

Example shown below presents two dictionaries created on the basis of main dictionary. **@id** and **@name** tags of dictionary element have to be the same as in the main dictionary. All of **@id** tags of dictionary and its elements, have to be unique.

An example **dictionaries.xml** file can be found below:

```
<?xml version="1.0" encoding="UTF-8"?>
<dictionaries file_format="IOF" version="2.3" language="pol" generated="2012-01-15 12:35:52">

  <main_dictionary>
    <element id="1193325505" name="Parametr 1" type="text"/>
    <element id="1193325547" name="Parametr 2" type="text"/>
    <element id="1193325569" name="Parametr 3" type="text"/>
    <element id="1193325596" name="Supper lekki parametr" type="predefined">
      <value id="1193325755" name="Supper lekki parametr"/>
    </element>
    <element id="1189689819" name="Wydawnictwo Naukowe PWN" type="predefined">
```


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```
<value id="1189689929" name="Helion"/>
<value id="1189689889" name="Prószyski i S-ka"/>
<value id="1189689880" name="Wydawnictwo Naukowe PWN"/>
</element>
<element id="1189689517" name="Autor" type="multi-predefined"><![CDATA[A]]><element>
  <value id="1189690326" name="Stephen King"><![CDATA[HTML desc]]></value>
  <value id="1189761600" name="Richard Bachman"><![CDATA[HTML desc]]></value>
</element>
<element id="1189689538" name="Oprawa" type="predefined"><![CDATA[HTML desc]]></element>
  <value id="1189690029" name="mi kka"><![CDATA[HTML description]]></value>
  <value id="1189690057" name="twarda"><![CDATA[HTML description]]></value>
</element>
<element id="1195659703" name="ISBN" type="text"><![CDATA[HTML description]]></element>
<element id="1189689749" name="Ilo stron" type="text"/>
<element id="1189689717" name="Format" type="text"/>
<element id="1199088154" name="Tekst" type="text"/>
<element id="128635" name="Warto ci" type="multi-predefined"><![CDATA[HTML]]></element>
  <value id="1286361742" name="pozycja 1"><![CDATA[opis z HTML]]></value>
  <value id="1286361793" name="pozycja 2"><![CDATA[opis z HTML]]></value>
</element>
<element id="34512351454132" name="To jest grupa 1" type="group"/>
<element id="34512353466366" name="To jest grupa 2" type="group"/>
<element id="34512351455555" name="To jest grupa 3" type="group"/>
<element id="34512351222222" name="To jest grupa 4" type="group"/>
</main_dictionary>

<dictionary id="1190101090" name="Poradniki">
  <element id="1189689517" required="true"/>
  <element id="1189689819" required="true"/>
  <element id="1195659703" required="true"/>
  <element id="1189689749" required="true"/>
  <element id="1189689717" required="true"/>
  <element id="1189689538" required="true"/>
  <element id="1199088154" required="true"/>
  <element id="34512353466366" required="false"/>
  <element id="1286355317" required="false"/>
</dictionary>

<dictionary id="1190101099" name="Przewodniki">
  <element id="34512351222222" required="true"/>
  <element id="1193325569" required="true"/>
  <element id="1189689749" required="true"/>
  <element id="1195659703" required="true"/>
  <element id="1199088154" required="true"/>
</dictionary>

</dictionaries>
```

Structure of producers.xml, units.xml and series.xml

These files have a similar structure, so all three of them are discussed in one section. Content of these files includes main tags consisting of **@id** and **@name** attributes. The multi-language feature is not available for **@name** attribute in **<producer>** tag. The multi-language feature is available for **<name>** tags in **<unit>** and **<series>** tags.

Sample files are included in ZIP archive: **producers.xml**, **series.xml** and **units.xml**.

Structure of warranties.xml

This file includes an information about warranties. One product may be assigned to only one warranty. Similarly to product categories, every **<warranty>** requires to be specified by **@id** and **@name** attributes. Warranty terms may be specified in **<terms>** tag by following attributes:

- **@type** (defines a provider of warranty) – three values are available: **seller**, **producer**, **none**,
- **@period_number** (defines number of months within warranty is valid) – integer value,
- **@period_unit** (defines name of time unit) – one value is available: **month**.

The **<terms>** tag is an optional-one, but all other three attributes are required when **<terms>** tag is specified for **<warranty>**.

The multi-language feature is available for **<name>** and **<description>** tags.

An example **warranties.xml** file can be found below:

```
<?xml version="1.0" encoding="UTF-8"?>
<warranties file_format="IOF" version="2.3" language="pol" generated="2012-01-15 12:35:52">

  <warranty id="1222786255" name="Przyk adowa">
    <terms type="seller" period_number="12" period_unit="month"/>
    <name xml:lang="pol"><![CDATA[Przyk adowa nazwa]]></name>
    <description xml:lang="pol"><![CDATA[Przyk adowy opis]]></description>
  </warranty>

  <warranty id="1211183111" name="2 lata">
    <terms type="producer" period_number="24" period_unit="month"/>
    <name xml:lang="eng"><![CDATA[2 years]]></name>
    <description xml:lang="eng"><![CDATA[Example description of warranty]]></description>
    <name xml:lang="pol"><![CDATA[2 lata]]></name>
    <description xml:lang="pol"><![CDATA[2 lata bezpiecznego u ytkowania]]></description>
  </warranty>

</warranties>
```

Structure of preset.xml

The **preset.xml** file has been developed for the needs of applications handling offers in the IOF. It contains multiple supplier settings, that can be read by application with every offer import and synchronization.

This option is particularly helpful, when import configurations plays a very important role and the entity – which wants to use the IOF – wants to gain a ready-to-use offer from supplier. Provided **preset.xml** file – with a set of settings uploaded directly to application – allows for service-free offer of import.

Notice:

IAI Downloader fully supports **preset.xml** file. It can of course generate **preset.xml** file with import settings and download import settings from provided **preset.xml** file.

Explanations to specific tags can be found below. They allow to properly configure IOF files for applications handling offers, i.e. **IAI Downloader**:

- **long_name, short_name, showcase_image, description, email, tel, fax, www, address_street, address_zipcode, address_city, address_country, currency, offerCreated, offerExpires** – supplier data, which will be displayed in application,
- **url, full, light, categories, sizes, producers, units, dictionaries, series, traits, warranties** – URLs to specific offer files,
- **categories_auto_mapping, sizes_auto_mapping, series_auto_mapping, units_auto_mapping** – can contain **True** or **False** values, that are responsible for turning on/off an automatic elements mapping/assignment,
- **selected** – can contain **True** or **False** values, that are responsible for selecting/deselecting

supplier offer to be synchronized on the application list,

- **remote_gateway** – contains **True** or **False** values that are responsible for the **gateway.xml** file is/is not present on the computer local hard drive,
- **fully_configured** – contains **True** or **False** values, that are responsible for full configuration of offer and its readiness to be synchronized,
- **external_program** – contains **True** or **False** values, that are responsible for the offer source (application plugin),
- **external_program_xml_path** – URL to the **gateway.xml** file, generated by the application plugin,
- **size_code_prefix** – prefix added to external system codes,
- **old_size_code_prefix** – obsolete and unused element,
- **iai_shop_deliverer_id** – supplier ID, to which products from offer should be assigned,
- **plugin_id** – plugin ID,
- **size_code_auto** – contains **True** or **False** values, that are responsible for turning on/off an option of automatic building external system codes from prefix and product/size@id XML node,
- **size_code_code_size** - contains **True** or **False** values, that are responsible for turning on/off an option of downloading external system codes from product/size@code XML node,
- **update_name, update_short_description, update_long_description, ...** - contains **1** or **0** values, that are responsible for turning on/off update of selected attribute during synchronization process,
- **updateExtSysCodePending** – outdated and unused element,
- **debug_product_import** - contains **True** or **False** values, that are responsible for turning on/off option of confirming each import of a new product (debug mode),
- **debug_product_update** - contains **True** or **False** values, that are responsible for turning on/off option of confirming each update of product in system,
- **debug_product_always_import** - contains **True** or **False**, that are responsible for

importing/not importing each new product from offer to system,

- **debug_product_always_update** - contains **True** or **False**, that are responsible for updating/not updating each product in the system to find out if they have changed,
- **products_allowed_operations** – contains application rights to perform changes in the system:
 - **all** – application can edit synchronized products and nullify stock quantities in the system,
 - **edit** – application can edit synchronized products – perform changes in the system,
 - **reset** – application can nullify stock quantities of synchronized products in the system,
- **version_mode** – contains values for grouped products import mode:
 - **1** – import products groups in accordance to supplier offer,
 - **0** – import only first products from groups,
 - **2** – import all products from groups as separate products,
- **gatewayGeneratedOn** – date and hour data of **gateway.xml** file generation,
- **full_lastModified**, **light_lastModified**, **categories_lastModified**, ... - date and hour of last modification of selected file,
- **providerImageLastModified** – date and hour of last modification of (<showcase_image>) supplier picture,
- **imageHash** – hash for (<showcase_image>) supplier picture,
- **full_xml_generated**, **light_xml_generated**, **categories_xml_generated**, ... - date and hour of selected file generation,
- **clonedProductsMode** – outdated and unused element,
- **overwrite_products** – contains **True** or **False** values and determines if all pictures and descriptions should be overwritten during the next synchronization process,
- **SRP_price** - contains **1** or **0** values, that are responsible for turning on/off downloading information on SRP from supplier option.

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An example **preset.xml** file can be found below:

```
<preset file_format="IOF" version="2.3" generated="2012-01-15 12:35:52">
  <long_name>My Supplier Ltd.</long_name>
  <short_name>Supplier</short_name>
  <showcase_image_url></showcase_image_url>
  <description></description>
  <email>support@iai-sa.com</email>
  <tel>442352355</tel>
  <fax>445245234</fax>
  <www>www.idosell.com</www>
  <address_street>Madali skiego 8</address_street>
  <address_zipcode>70-101</address_zipcode>
  <address_city>Szczecin</address_city>
  <address_country>Poland</address_country>
  <currency>PLN</currency>
  <offerCreated>2011-10-31 12:41:23</offerCreated>
  <offerExpires>2011-11-14 12:41:23</offerExpires>
  <url>file:///C:/Users/Admin/AppData/Local/IAI/IAI-Shop.com
Downloader/cache/books/gateway.xml</url>
  <full>file:///C:/Users/Admin/AppData/Local/IAI/IAI-Shop.com Downloader/cache/books/full.xml</full>
  <light>file:///C:/Users/Admin/AppData/Local/IAI/IAI-Shop.com
Downloader/cache/books/light.xml</light>
  <categories>file:///C:/Users/Admin/AppData/Local/IAI/IAI-Shop.com
Downloader/cache/books/categories.xml</categories>
  <sizes>file:///C:/Users/Admin/AppData/Local/IAI/IAI-Shop.com
Downloader/cache/books/sizes.xml</sizes>
  <producers>file:///C:/Users/Admin/AppData/Local/IAI/IAI-Shop.com
Downloader/cache/books/producers.xml</producers>
  <units>file:///C:/Users/Admin/AppData/Local/IAI/IAI-Shop.com
Downloader/cache/books/units.xml</units>
  <dictionaries>file:///C:/Users/Admin/AppData/Local/IAI/IAI-Shop.com
Downloader/cache/books/dictionaries.xml</dictionaries>
  <series>file:///C:/Users/Admin/AppData/Local/IAI/IAI-Shop.com
Downloader/cache/books/series.xml</series>
  <traits></traits>
  <warranties>file:///C:/Users/Admin/AppData/Local/IAI/IAI-Shop.com
Downloader/cache/books/warranties.xml</warranties>
  <categories_auto_mapping>False</categories_auto_mapping>
  <sizes_auto_mapping>False</sizes_auto_mapping>
  <series_auto_mapping>False</series_auto_mapping>
  <units_auto_mapping>True</units_auto_mapping>
  <selected>False</selected>
  <remote_gateway></remote_gateway>
  <fully_configured>True</fully_configured>
  <external_program>True</external_program>
  <external_program_xml_path>C:/Users/Admin/AppData/Local/IAI/IAI-Shop.com
Downloader/plugins/integrators/books.xml</external_program_xml_path>
  <size_code_prefix>books-</size_code_prefix>
  <old_size_code_prefix>books-</old_size_code_prefix>
  <iai_shop_deliverer_id>4</iai_shop_deliverer_id>
  <plugin_id>3</plugin_id>
```

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```
<size_code_auto>True</size_code_auto>
<size_code_code_size>False</size_code_code_size>
  <update_name>1</update_name>
<update_short_description>1</update_short_description>
<update_long_description>1</update_long_description>
<update_version_name>1</update_version_name>
<update_series>1</update_series>
<update_producer>1</update_producer>
<update_category>1</update_category>
<update_unit>1</update_unit>
<update_price>1</update_price>
<update_icon>1</update_icon>
<update_images>1</update_images>
<update_quantities>1</update_quantities>
<update_code_producer>1</update_code_producer>
<update_deliverer>1</update_deliverer>
<update_weight>1</update_weight>
<update_visibility>1</update_visibility>
<updateExtSysCodePending></updateExtSysCodePending>
<debug_product_import>True</debug_product_import>
<debug_product_update>True</debug_product_update>
<debug_product_always_import>False</debug_product_always_import>
<debug_product_always_update>False</debug_product_always_update>
<products_allowed_operations>all,edit,reset</products_allowed_operations>
<version_mode>1</version_mode>
<gatewayGeneratedOn>2011-10-31 12:41:23</gatewayGeneratedOn>
<full_lastModified></full_lastModified>
<light_lastModified></light_lastModified>
<categories_lastModified></categories_lastModified>
<sizes_lastModified></sizes_lastModified>
<producers_lastModified></producers_lastModified>
<units_lastModified></units_lastModified>
<series_lastModified></series_lastModified>
<warranties_lastModified></warranties_lastModified>
<providerImageLastModified></providerImageLastModified>
<imageHash></imageHash>
<full_xml_generated></full_xml_generated>
<light_xml_generated></light_xml_generated>
<categories_xml_generated></categories_xml_generated>
<producers_xml_generated></producers_xml_generated>
<series_xml_generated></series_xml_generated>
<sizes_xml_generated></sizes_xml_generated>
<units_xml_generated></units_xml_generated>
<warranties_xml_generated></warranties_xml_generated>
<clonedProductsMode>0</clonedProductsMode>
<overwrite_products>False</overwrite_products>
<SRP_price>1</SRP_price>
</preset>
```


Document History

Specyfikacja techniczna Internet Offer Format (IOF) wersja 2.1

Language: pl-PL

Compiled by IAI S.A. on 13.11.2009

Technical specification of the Internet Offer Format (IOF) version 2.1

Language: en-GB

Compiled by IAI S.A. on 02.08.2010

Technical specification of the Internet Offer Format (IOF) version 2.2

Language: en-GB

Compiled by IAI S.A. on 19.04.2011

Technical specification of the Internet Offer Format (IOF) version 2.3

Language: en-US

Compiled by IAI S.A. on 27.02.2012