

Merchandiser Product Feed

Tech Implementation Guidelines for Publishers – Version 5.1

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This document is your guide to implementing the Rakuten Affiliate Network (formerly Rakuten LinkShare) Merchandiser program. It provides you with information on how to automate the process of obtaining product information from the advertisers that are part of the Rakuten Affiliate Network and have subscribed to the Merchandiser program.

In order to automate the process of obtaining product information, you must be able to

- Download files from an FTP account
- Process XML or pipe-delimited text files that contain the product information

The Rakuten Affiliate Network Merchandiser program allows advertisers to upload their product information to us. We process the uploaded information and create a corresponding publisher tracking URL for each product and make the product information available to publishers via FTP. Advertisers are able to upload changes to their product data once each day and these changes will be processed and made available to publishers within several hours after we receive them. Publishers have several choices of files they can download for each advertiser:

1. A full file that contains all of an advertiser's products, not just the products that changed since the last download.
2. A delta file that only includes an advertiser's new, changed and deleted product records.
3. Files that contain products only from a particular product category based on the categories defined by the advertisers.
4. A Merchandiser Template file that you are responsible for adding your own publisher information to.

The first step toward getting started with the Merchandiser program is to send us an email with your Rakuten Affiliate Network Username, Site ID, and some other info. Please see Appendix E for all the details.

Tech Process

FTP Setup

The Merchandiser feed is available to you via FTP. The Rakuten Affiliate Network FTP server hostname is aftp.linksynergy.com.

When you submit your application for Merchandiser, these five steps are performed:

1. Rakuten Affiliate Network establishes a unique FTP account on our servers for you to download files from.
2. A username and password is assigned to the FTP account. Rakuten Affiliate Network will email this username and password to you once the FTP account is created.
3. Rakuten Affiliate Network deposits initial file into the FTP account for each advertiser you have as a partner. You can get the Merchandiser file from this initial file.
4. Product files are generated dynamically at the time of retrieval. This ensures that all publishers receive the most up-to-date product information at the time that they retrieve advertisers' Merchandiser product files. The timeliness of the product information depends on the frequency with which advertisers update the information in their Merchandiser product database at Rakuten Affiliate Network.
5. Rakuten Affiliate Network will process the product updates shortly after upload. The time to process the file will be dependent on file size.

FTP Access

You can access your Merchandiser FTP account using any FTP client. You also have the choice of automating the process of downloading the file or doing it manually. You should set the transfer mode to binary before you start downloading files, as the files are stored in a compressed format. Using ASCII mode will corrupt the data in the file and render it useless. If you are using a script to automate the process of downloading the files, ensure that you do not open more than five connections to the FTP server at one time. For step-by-step instructions, please see "[How to Download the Merchandiser Feed Manually](#)" in the Publisher Help Center.

Please note:

- Always set mode to binary before downloading files.
- No more than five concurrent connections are allowed per publisher FTP account.

FTP Account Contents

In your FTP account, you will see a file and a folder for each advertiser that you are eligible to get Merchandiser feeds from. The file is your Merchandiser file and the folder contains Merchandiser files that provide you with product data for individual product categories. The files are available in two formats: pipe-delimited text and XML. You can select the format you prefer by going to the Publisher Dashboard and clicking **Links > Data Feeds > Merchandiser** and then the **Edit Settings** link at right. If you do not select a format, your FTP account will contain two files and a folder for each advertiser that you are eligible to get Merchandiser feeds from. From the Edit Settings page, you can also select whether price fields are separated by a decimal point (24.50) or a comma (24,50) and the format of the date:

If you do not select a format for the price and date fields, they default to decimal point and mm/dd/yyyy

Note: Merchandiser by Category is a feature that allows you to download Merchandiser files for individual product categories. Please refer to the section **Merchandiser by Category** to obtain more details on this feature.



Merchandiser File

As noted above, Merchandiser files are available in two formats: pipe-delimited text and XML.

Pipe-Delimited Text File

This file uses the **pipe-delimiter** (|) to divide fields. Each record is terminated by a new line/carriage return. Rakuten Affiliate Network will populate the file with all the fields that advertisers are required to provide and with any other information provided by the advertiser. If there is no data for a field, its position is preserved in the file by its delimiter. Field values containing pipe delimiter will be enclosed in double quotes. The file has three sections: header, product data, and trailer.

Header Section

The first record in the pipe-delimited Merchandiser file is the header. The header starts with the following characters “HDR,” followed by a pipe-delimiter. The header contains the ID and name of the advertiser and a time stamp indicating when the file was deposited in your FTP account. This record is terminated with a carriage return.

MID	The numeric value Rakuten Affiliate Network assigns to identify each advertiser.
Name	The name of the advertiser. This is advertiser-defined and may change.
Time Stamp	The time that the file was deposited in your FTP account in UTC. The format is yyyy-mm-dd hh:mm:ss

Example:

HDR|1234|CDLinkShare|2013-03-14 20:30:40

Product Data Section

This section contains individual product data records. Each line has data for one product. The product data record has two parts, the primary section and the attribute section. The attribute section is optional. The primary section has 28 fields and the attribute section includes up to 10 values. Please note: if an advertiser does not include the attribute section, their Merchandiser file will still include placeholders for all 38 fields and 39 fields for delta files.

Primary Section

The primary section provides basic information about each product, including the SKU number, Product Name, Primary Category, Product URL, and Retail Price. The details of all the fields that are part of this section are explained in Appendix A.

Attribute Section

The attribute section comprises the last 10 fields and provides detailed information about each product based on certain product class definitions. The fields in this section are optional. The number of field values in the attribute section will depend on the Class ID for a specific product. The Class ID identifies a product's category and the attributes allow the advertiser to include additional information on a product.

For example, Class ID 40 identifies the product category Computer Hardware. For this Class ID, the fields are Product ID, Platform, RAM, Hard Drive, Processor, Monitor Size, and so on. Rakuten Affiliate Network currently has 14 predefined Class IDs available and each Class ID has a predetermined set of attribute fields. Appendix B provides details on the fields for each Class ID.

Please note: All Class IDs will not have 10 attribute fields and not all attribute fields are required to have data. If a field is not used then its position is preserved by its pipe-delimiter. Appendix D provides you with sample records.

Trailer Section

The last record of the pipe-delimited Merchandiser file is the trailer that begins with the following characters "TRL," followed by a pipe-delimiter. The trailer provides you with the number of product records that were contained in the Merchandiser file.

Example:

TRL|45826

XML Merchandiser File

As noted above, the Merchandiser file is also available as an XML-formatted file. The XML Schema and the XML Document Type Definition that specify the XML-formatted file are available in Appendix C.

Please note:

- The Merchandiser Template Files are only available as pipe-delimited files with a .txt extension. They are not available as XML.
- XML standards specify that all & characters be coded as **&**. This includes any ampersands in the product, buy, image, and impression pixel URLs. Before using a link, you *must* change these instances of **&** to **&**. Here's an example:

Link as it comes in the XML feed:

```
<product>http://click.linksynergy.com/link?id=xxxxxxxxxxx&amp;offerid=90431.10000046&amp;murl=http%3A%2F%2Fwww.examplemerchant.com%2Fa%2Fproducts%2F678262</product>
```

Link that has **& encoded and is ready to be used:**

```
http://click.linksynergy.com/link?id=xxxxxxxxxxx&offerid=90431.10000046&murl=http%3A%2F%2Fwww.examplemerchant.com%2Fa%2Fproducts%2F678262
```

Merchandiser File Names

All Merchandiser file name have three parts, each separated by an underscore: Advertiser ID, Publisher Channel ID, and File Type.

- The Advertiser ID or MID is a unique ID that Rakuten Affiliate Network uses to identify the advertiser. This is always numeric.
- The Publisher Channel ID or SID is a unique ID that Rakuten Affiliate Network uses to identify the Publisher Channel. This is always numeric.
- The file type “mp” defines that the file is a Merchandiser file.

The file name extensions specify what type of Merchandiser file it is. The pipe-delimited file has a .txt extension and the XML-formatted file has an .xml extension. The files are all compressed and hence there is .gz after the file type extension.

Example:

2385_112_mp.txt.gz

2385 is the Advertiser Program ID

112 is the Publisher Channel ID

mp indicates that it is a Merchandiser file

.txt indicates that this is a pipe-delimited Merchandiser file

Downloading Merchandiser Files

You can download the Merchandiser file from your account using any FTP client software. You must make sure that you use the get command to download the file. The mget command will not work.

Example:

```
get 2385_112_mp.txt.gz
```

Downloading Delta Files: If you download Merchandiser files frequently, you can download a Delta file that only includes an advertiser's new and changed product records from their most recent upload. This file downloads faster than the full Merchandiser file.

The delta file name is the same as the one used to download the full Merchandiser file, except that it has the word `delta` appended to it:

```
2385_112_mp_delta.txt.gz (for the text file)
2385_112_mp_delta.xml.gz (for the XML file)
```

The header for the Delta file is the same as the one for the full file and includes MID, Advertiser Name, and Time Stamp in format shown above.

Merchandiser by Category

Merchandiser by Category is a feature that allows you to download Merchandiser files for specific advertiser product categories instead of downloading the full product file. This means that if you are a publisher that only needs products in the electronics product category, you can now download the feed for just this category. For each advertiser that you are eligible to get the Merchandiser files from, you will see a folder. The folder name will be the MID of the advertiser. The folder will contain two types of files: Product Category List File, and Category-Specific Merchandiser File.

Product Category List File

This is a new text file that lists the ID and product category name as specified by the advertiser. The file is named as `MID_category_list.txt` where MID is the Advertiser ID. Each product category is listed on one line and the file is pipe delimited.

Example:

`2385_category_list.txt`

Sample contents

```
10|Lawn and Garden|525 items
11|Toys|625 items
12|Outlet|1024 items
15|Electronics|23 items
```

Category-Specific Merchandiser File

This is a Merchandiser file for a specific advertiser product category. This file is named `MID_SID_XX_cmp.txt.gz` for the text format and `MID_SID_XX_cmp.xml.gz` for the XML format. XX is the numeric ID for the specific product category.

Example:

```
2385_112_15_cmp.txt.gz
2385_112_15_cmp.xml.gz
```

Based on the sample product category list above, these files are for the electronics product category. The contents of the file are formatted identically to the full Merchandiser files.

We suggest that you download the product category file first and use it to determine the categories that you are interested in downloading. Once you have determined the ID of the categories that you want to download, you should be able to create a script that will download the files for just those categories by automatically replacing the XX with the product category ID.

Please note: Products are categorized by the advertisers and there is a chance that they have placed products into the wrong categories. In these cases, please feel free to contact the advertisers to ask them to update their categories.

The Merchandiser Template File

Rakuten Affiliate Network processes the regular Merchandiser file to add information specific to your program. You have the option to download an unprocessed template file and add in your own information. This enables you to download the Merchandiser file much faster.

The Template Merchandiser file name has four parts, each separated by an underscore: Advertiser ID, Publisher Channel ID, File Type, and Template or DeltaTemplate.

- The Advertiser ID or MID is a unique ID that Rakuten Affiliate Network uses to identify the advertiser. This is always numeric.
- The Publisher Channel ID or SID is a unique ID that Rakuten Affiliate Network uses to identify the Publisher Channel. This is always numeric.
- The file type “mp” defines the file as a Merchandiser file.
- ‘Template’ specifies that it’s an unprocessed file and ‘deltatemplate’ specifies that it’s an unprocessed file with only the product records that are new, have changed , or have been deleted since the advertiser’s last upload.

The Template file is only available as a pipe-delimited file with a `.txt` extension. Like the regular Merchandiser file, the template file is compressed, so there is `.gz` after the file type extension.

Example:

`2385_112_mp_template.txt.gz`
`2385_112_mp_deltatemplate.txt.gz`
`2385` is the Advertiser Program ID
`112` is the Publisher Channel ID
`mp` indicates this is a Merchandiser file
`template` indicates it’s a template file
`deltatemplate` indicates it’s a delta template file
`.txt` indicates that this is a pipe-delimited Merchandiser file

You can download the Merchandiser file from your account using any FTP client software. You must make sure that you use the get command to download the file (the mget command will not work). You'll also need to change these file fields from Appendix A:

Merchandiser Field #	Name	Definition	Required/Optional	Key
6	Product URL	VarChar2(2000)	Required	http://<CLICKHOST>/link?id=<LSN EID>&offerid=<LSN OID>.<PRODUCT_ID>&type=15&murl=<PRODUCT_URL>
8	Buy URL	VarChar2(2000)	Optional	http://<CLICKHOST>/link?id=<LSN EID>&offerid=<LSN OID>.<PRODUCT_ID>&type=15&murl=<BUY_URL>
28	Pixel	VarChar2(128)	Optional	http://ad.linksynergy.com/fs-bin/show?id=<LSN EID>&bids=<LSN OID>.<PRODUCT_ID>&type=15&subid=0

<LSN EID> – Replace this parameter with your Affiliate ID. This is a unique 11-character alphanumeric code that can be found by selecting the Links tab on the Publisher Dashboard, clicking on one of your advertisers, selecting a link type in the box at left, and then clicking **Get Link**.

<LSN OID> – Replace this parameter with your Offer ID for that particular advertiser. To get this info, use the [Link Locator API](#) in the API Developer Portal, specifically the advertiser Information request by Application Status.

Merchandiser Frequently Asked Questions (FAQ)

My script only downloads the files when the file date changes. Will this work with the new program?

The date stamp of the file in the directory indicates the creation time in UTC.

Why do I have two of each advertiser file in my account?

Rakuten Affiliate Network offers publishers the choice of a pipe-delimited text file and an XML-formatted file. You can select your preferred format by going to **Links > Data Feeds > Merchandiser** and then clicking the link for Edit Settings. If you do not select a format, your FTP account will contain .txt and .xml versions of each file type.

What are the folders that I see in my FTP account?

The folders in your FTP account are for each advertiser that you are eligible to get Merchandiser files from. The folders contain the category-specific Merchandiser files for the advertisers.

Appendix A: Merchandiser File Field Definitions

Merchandiser Field #	Name	Definition	Required/Optional	Key
1	<i>Product ID</i>	Number	Optional	Unique ID that is used to identify a product. It will be an integer greater than 2 and have less than 31 total characters.
2	<i>Product Name</i>	VarChar(255)	Required	Product name.
3	SKU Number	VarChar(64)	Required	SKU Number. Majority of advertisers provide a unique value in this field. Some advertisers provide duplicate SKU values and as such duplicate SKUs for select advertisers will be available in some Merchandiser feed files.
4	<i>Primary Category</i>	VarChar(50)	Required	Primary product category.
5	<i>Secondary Category(ies)</i>	VarChar(500)	Optional	Secondary product categories, delimited with double tildes (~~).
6	<i>Product URL</i>	VarChar(2000)	Required	URL of the product page.
7	Product Image URL	VarChar(2000)	Required	URL of product image. This will be an absolute URL.
8	Buy URL	VarChar(2000)	Optional	URL of shopping cart with product.
9	<i>Short Product Description</i>	VarChar(500)	Optional	Short description of product.
10	Long Product Description	VarChar(2000)	Optional	Long description of product.
11	Discount	Number	Optional	Relies on discount type (below) to determine how to apply. If Discount Type is amount, then discount is deducted. If it is percentage, then percentage is deducted. The format uses either a decimal point or a comma, depending on what you select on the Publisher Dashboard under Merchandiser > Edit Settings.
12	Discount Type	VarChar(10)	Optional	Values: amount or percentage.
13	Sale Price	Number	Optional	This price reflects any discounts. The format uses either a decimal point or a comma, depending on what you select under Merchandiser > Edit Settings.
14	<i>Retail Price</i>	Number	Required	This price does not reflect any discounts. The format uses either a decimal point or a comma, depending on what you select on the Publisher Dashboard under Merchandiser > Edit Settings.
15	Begin Date	Date(mm/dd/yyyy hh:mm:ss)	Optional	Date and time that the product becomes available. The format depends on what you select on the Publisher Dashboard under Merchandiser > Edit Settings.
16	End Date	Date(mm/dd/yyyy hh:mm:ss)	Optional	Date and time that the product ceases to be available. The format depends on what you select under Merchandiser > Edit Settings.
17	Brand	VarChar(255)	Optional	Brand name.

Merchandise Field #	Name	Definition	Required/Optional	Key
18	Shipping	Number	Optional	The cost of the default shipping option available. The format uses either a decimal point or a comma, depending on what you select under Merchandise > Edit Settings.
19	Keyword(s)	VarChar(500)	Optional	Keywords for searches, delimited with double tildes (~).
20	Manufacturer Part #	VarChar(50)	Optional	Manufacturer's part number (may sometimes be the same as SKU).
21	Manufacturer Name	VarChar(250)	Optional	Manufacturer's name.
22	Shipping Information	VarChar(50)	Optional	Text-based shipping information – provides details on the default shipping option.
23	Availability	VarChar(50)	Optional	Denotes whether the product is in stock. Values will be one of 'in-stock', 'out-of-stock', 'preorder' or 'backorder'.
24	Universal Product Code	VarChar(15)	Optional	Universal Product Code. May be UPC, EAN or JAN.
25	Class ID	Number	Optional	Classification ID based on product type (see class definition table).
26	Currency	VarChar(3)	Required	The 3-character ISO Currency Code. Use ('USD', 'CAD', 'GBP', 'JPY', 'AUD', or 'EUR') for U.S. dollar, Canadian dollar, British pound, Japanese yen, Australian dollar, or Euro. USD is default.
27	M1	VarChar(2000)	Optional	Blank field unless other arrangements have been made.
28	Pixel	VarChar(128)	Optional	1x1 pixel tag used to track impression data for the link. This is a full tag with all appropriate attributes. See Appendix D for a sample record.
29	Miscellaneous Attribute	VarChar(128)	Optional	See Attribute definitions in Appendix B
30	Attribute 2	VarChar(128)	Optional	See Attribute definitions in Appendix B
31	Attribute 3	VarChar(128)	Optional	See Attribute definitions in Appendix B
32	Attribute 4	VarChar(128)	Optional	See Attribute definitions in Appendix B
33	Attribute 5	VarChar(128)	Optional	See Attribute definitions in Appendix B
34	Attribute 6	VarChar(128)	Optional	See Attribute definitions in Appendix B
35	Attribute 7	VarChar(128)	Optional	See Attribute definitions in Appendix B
36	Attribute 8	VarChar(128)	Optional	See Attribute definitions in Appendix B
37	Attribute 9	VarChar(128)	Optional	See Attribute definitions in Appendix B
38	Attribute 10	VarChar(128)	Optional	See Attribute definitions in Appendix B
39	Modification	Char(1)	Required (for delta files)	Available only in Delta files I = Insert U = Update D = Delete

Please note: Bold-faced entries in the table indicate required fields. If an advertiser does not submit attribute data, their Merchandiser file still contain 38 fields (39 fields in delta files).



Appendix B: Attribute File Class Definitions

Class ID	Class Name	Merchandise Field #	Attribute Name	Definition	Key
10	Books	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Title	VarChar(128)	Title of Book
		31	Author	VarChar(128)	Name of Author
		32	ISBN	VarChar(128)	An ISBN number
		33	Publisher	VarChar(128)	Publisher
		34	Publish Date	VarChar(128)	Publish Date
20	Music	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Genre	VarChar(128)	Jazz, Blues, etc.
		31	Artist	VarChar(128)	Artist
		32	Format	VarChar(128)	CD, Cassette, or LP
		33	Album	VarChar(128)	Album Title
		34	Song Title	VarChar(128)	Titles of Songs on Album
		35	Label	VarChar(128)	Record Label
		36	Release Date	VarChar(128)	Date Album was released
30	Movies	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Genre	VarChar(128)	Movie category – horror, sci-fi, etc.
		31	Title	VarChar(128)	Movie title
		32	Format	VarChar(128)	DVD, VHS
		33	Director	VarChar(128)	Director
		34	Actor	VarChar(128)	Lead Actors in cast
		35	Rating	VarChar(128)	MPAA rating
		36	Studio	VarChar(128)	Studio
		37	Release Date	VarChar(128)	Date movie was released

Class ID	Class Name	Merchandise Field #	Attribute Name	Definition	Key
40	Computer Hardware	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Platform	VarChar(128)	Mac, Windows, or Unix
		31	Ram	VarChar(128)	Amount of RAM in MB
		32	Hard Drive	VarChar(128)	Available memory in MB
		33	Processor	VarChar(128)	Speed in MHZ
		34	Monitor Size	VarChar(128)	Size in inches. 0 if no screen
		35	Modem	VarChar(128)	Speed in kbps. 0 if no modem
		36	Drive	VarChar(128)	CD DVD Floppy Zip
50	Computer Software	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Platform	VarChar(128)	Platform – Windows, Mac, etc.
		31	Category	VarChar(128)	Category – accounting, educational, etc.
		32	Age	VarChar(128)	Adult or Kids
60	Clothing & Accessories	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Product Type	VarChar(128)	Type of clothing or accessory
		31	Size	VarChar(128)	U.S. Sizes
		32	Material	VarChar(128)	Material
		33	Color	VarChar(128)	Color
		34	Gender	VarChar(128)	Male or Female or Unisex
		35	Style	VarChar(128)	Style
		36	Age	VarChar(128)	Adult, Kids, Infant
70	Art	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Product Type	VarChar(128)	Type of art work
		31	Artist	VarChar(128)	Artist
		32	Title	VarChar(128)	Title of work
		33	Dimensions	VarChar(128)	L x W or L x W x H

Class ID	Class Name	Merchandise Field #	Attribute Name	Definition	Key
80	Toys	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Age	VarChar(128)	Age range
		31	Gender	VarChar(128)	Male or Female
		32	Theme	VarChar(128)	Theme or character
90	Pets	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Pet Type	VarChar(128)	Dogs, Cats, Lizards, etc.
		31	Product Type	VarChar(128)	Toys, treats, etc.
100	Games	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Format	VarChar(128)	Format or Platform
		31	Title	VarChar(128)	Game Title
		32	Publisher	VarChar(128)	Publisher
		33	Age	VarChar(128)	Age Range
		34	Release Date	VarChar(128)	Release Date
110	Food & Drink	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Product type	VarChar(128)	Type of food or drink
		31	Region	VarChar(128)	Origin of product
		32	Size	VarChar(128)	Volume in oz., fl oz., grams, etc
120	Gifts & Flowers	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Occasion	VarChar(128)	Occasion – Mother's Day, Valentine's, etc.
		31	Recipient	VarChar(128)	Intended recipient – mother, father, spouse, friend, etc.
130	Auto	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Make	VarChar(128)	Make
		31	Model	VarChar(128)	Model

Class ID	Class Name	Merchandise Field #	Attribute Name	Definition	Key
		32	Part Number	VarChar(128)	Manufacturer's part number
		33	Category	VarChar(128)	Product subcategory – type of part
		34	Color	VarChar(128)	Color
140	Electronics	29	Miscellaneous	VarChar(128)	Extraneous Information
		30	Category	VarChar(128)	Product sub-category – type of product (CD/DVD player, PDA, etc.)
		31	Model	VarChar(128)	Model
		32	Features/Specs	VarChar(128)	Features and Specifications
		33	Color	VarChar(128)	Color
		34	Dimensions	VarChar(128)	L x W or L x W x H
		35	Power Type	VarChar(128)	AC/DC, battery, solar
		36	Warranty	VarChar(128)	Length of Warranty
150	Credit Cards	29	Card Type	VarChar(128)	Business or Consumer Card
		30	Intro APR	VarChar(128)	Introductory APR & Period
		31	Regular APR	VarChar(128)	APR after Intro Period (if applicable)
		32	Annual Fee	VarChar(128)	Annual Fees (if applicable)
		33	Incentive	VarChar(128)	Incentive/Reward Offers
		34	Balance Transfer	VarChar(128)	Balance Transfer Details
		35	Benefits	VarChar(128)	Brief Card Benefits
		36	TermsURL	VarChar(128)	Link to Terms and Conditions

Appendix C: XML Formatting Standards

XML Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <xsd:element name="url">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="product"/>
        <xsd:element ref="productImage"/>
        <xsd:element ref="buy"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name="amount" type="xsd:string"/>
  <xsd:element name="attribute1" type="xsd:string"/>
  <xsd:element name="attributeClass">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element maxOccurs="unbounded" minOccurs="1" ref="attribute1"/>
      </xsd:sequence>
      <xsd:attribute name="class_id" type="xsd:string" use="optional"/>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name="availability" type="xsd:string"/>
  <xsd:element name="brand" type="xsd:string"/>
  <xsd:element name="buy" type="xsd:string"/>
  <xsd:element name="category">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="primary"/>
        <xsd:element ref="secondary"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
  <xsd:element name="cost">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element ref="amount"/>
        <xsd:element ref="currency"/>
      </xsd:sequence>
      <xsd:attribute name="currency" type="xsd:string" use="optional"/>
    </xsd:complexType>
  </xsd:element>
</xsd:schema>
```

```
</xsd:complexType>
</xsd:element>
<xsd:element name="createdOn" type="xsd:string"/>
<xsd:element name="currency" type="xsd:string"/>
<xsd:element name="description">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element ref="short"/>
      <xsd:element ref="long"/>
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
<xsd:element name="discount">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element ref="amount"/>
      <xsd:element ref="type"/>
    </xsd:sequence>
    <xsd:attribute name="currency" type="xsd:string" use="optional"/>
  </xsd:complexType>
</xsd:element>
<xsd:element name="header">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element ref="merchantId"/>
      <xsd:element ref="merchantName"/>
      <xsd:element ref="createdOn"/>
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
<xsd:element name="information" type="xsd:string"/>
<xsd:element name="keywords" type="xsd:string"/>
<xsd:element name="long" type="xsd:string"/>
<xsd:element name="m1" type="xsd:string"/>
<xsd:element name="modification" type="xsd:string"/>
<xsd:element name="merchandise">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element ref="header"/>
      <xsd:element ref="product"/>
      <xsd:element ref="trailer"/>
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
<xsd:element name="merchantId" type="xsd:string"/>
<xsd:element name="merchantName" type="xsd:string"/>
<xsd:element name="numberOfProducts" type="xsd:string"/>
<xsd:element name="pixel" type="xsd:string"/>
```

```
<xsd:element name="price">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element ref="sale"/>
      <xsd:element ref="retail"/>
    </xsd:sequence>
    <xsd:attribute name="currency" type="xsd:string" use="optional"/>
  </xsd:complexType>
</xsd:element>
<xsd:element name="primary" type="xsd:string"/>
<xsd:element name="product">
  <xsd:complexType mixed="true">
    <xsd:choice maxOccurs="unbounded" minOccurs="0">
      <xsd:element ref="category"/>
      <xsd:element ref="url"/>
      <xsd:element ref="description"/>
      <xsd:element ref="discount"/>
      <xsd:element ref="price"/>
      <xsd:element ref="brand"/>
      <xsd:element ref="shipping"/>
      <xsd:element ref="keywords"/>
      <xsd:element ref="upc"/>
      <xsd:element ref="m1"/>
      <xsd:element ref="pixel"/>
      <xsd:element ref="attributeClass"/>
      <xsd:element ref="modification"/>
    </xsd:choice>
    <xsd:attribute name="manufacturer_name" type="xsd:string" use="optional"/>
    <xsd:attribute name="name" type="xsd:string" use="optional"/>
    <xsd:attribute name="part_number" type="xsd:string" use="optional"/>
    <xsd:attribute name="product_id" type="xsd:string" use="optional"/>
    <xsd:attribute name="sku_number" type="xsd:string" use="optional"/>
  </xsd:complexType>
</xsd:element>
<xsd:element name="productImage" type="xsd:string"/>
<xsd:element name="retail" type="xsd:string"/>
<xsd:element name="sale">
  <xsd:complexType>
    <xsd:attribute name="begin_date" type="xsd:string" use="optional"/>
    <xsd:attribute name="end_date" type="xsd:string" use="optional"/>
  </xsd:complexType>
</xsd:element>
<xsd:element name="secondary" type="xsd:string"/>
<xsd:element name="shipping">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element ref="cost"/>
      <xsd:element ref="information"/>
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
```

```
<xsd:element ref="availability"/>
</xsd:sequence>
</xsd:complexType>
</xsd:element>
<xsd:element name="short" type="xsd:string"/>
<xsd:element name="trailer">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element ref="numberOfProducts"/>
    </xsd:sequence>
  </xsd:complexType>
</xsd:element>
<xsd:element name="type" type="xsd:string"/>
<xsd:element name="upc" type="xsd:string"/>
</xsd:schema>
```

XML Document Type Definition (DTD)

```
<!ELEMENT Actor ( #PCDATA ) >
<!ELEMENT Age ( #PCDATA ) >
<!ELEMENT Album ( #PCDATA ) >
<!ELEMENT Artist ( #PCDATA ) >
<!ELEMENT Author ( #PCDATA ) >
<!ELEMENT Category ( #PCDATA ) >
<!ELEMENT Color ( #PCDATA ) >
<!ELEMENT Dimensions ( #PCDATA ) >
<!ELEMENT Director ( #PCDATA ) >
<!ELEMENT Drive ( #PCDATA ) >
<!ELEMENT Features_Specs ( #PCDATA ) >
<!ELEMENT Format ( #PCDATA ) >
<!ELEMENT Gender ( #PCDATA ) >
<!ELEMENT Genre ( #PCDATA ) >
<!ELEMENT Hard_Drive ( #PCDATA ) >
<!ELEMENT ISBN ( #PCDATA ) >
<!ELEMENT Label ( #PCDATA ) >
<!ELEMENT Make ( #PCDATA ) >
<!ELEMENT Material ( #PCDATA ) >
<!ELEMENT Miscellaneous ( #PCDATA ) >
<!ELEMENT Model ( #PCDATA ) >
<!ELEMENT Modem ( #PCDATA ) >
<!ELEMENT Monitor_Size ( #PCDATA ) >
<!ELEMENT Occasion ( #PCDATA ) >
<!ELEMENT Part_Number ( #PCDATA ) >
<!ELEMENT Pet_Type ( #PCDATA ) >
<!ELEMENT Platform ( #PCDATA ) >
<!ELEMENT Power_Type ( #PCDATA ) >
<!ELEMENT Processor ( #PCDATA ) >
<!ELEMENT Product_Type ( #PCDATA ) >
<!ELEMENT Publish_Date ( #PCDATA ) >
<!ELEMENT Publisher ( #PCDATA ) >
<!ELEMENT Ram ( #PCDATA ) >
<!ELEMENT Rating ( #PCDATA ) >
<!ELEMENT Recipient ( #PCDATA ) >
<!ELEMENT Region ( #PCDATA ) >
<!ELEMENT Release_Date ( #PCDATA ) >
<!ELEMENT Size ( #PCDATA ) >
<!ELEMENT Song_Title ( #PCDATA ) >
<!ELEMENT Studio ( #PCDATA ) >
<!ELEMENT Style ( #PCDATA ) >
<!ELEMENT Theme ( #PCDATA ) >
<!ELEMENT Title ( #PCDATA ) >
<!ELEMENT URL ( product, productImage, buyLink ) >
```

```
<!ELEMENT Warranty ( #PCDATA ) >
<!ELEMENT amount ( #PCDATA ) >
<!ELEMENT attributes ( Actor | Age | Album | Artist | Author | Category | Color | Dimensions | Director | Drive
    | Features_Specs | Format | Gender | Genre | Hard_Drive | ISBN | Label | Make | Material |
    Miscellaneous | Model | Modem | Monitor_Size | Occasion | Part_Number | Pet_Type |
    Platform | Power_Type | Processor | Product_Type | Publish_Date | Publisher | Ram | Rating
    | Recipient | Region | Release_Date | Size | Song_Title | Studio | Style | Theme | Title |
    Warranty )* >
<!ATTLIST attributes class_id NMTOKEN #REQUIRED >
<!ELEMENT availability ( #PCDATA ) >
<!ELEMENT brand EMPTY >
<!ELEMENT buyLink ( #PCDATA ) >
<!ELEMENT category ( primary, secondary ) >
<!ELEMENT cost ( amount ) >
<!ATTLIST cost currency NMTOKEN #REQUIRED>
<!ELEMENT createdOn ( #PCDATA ) >
<!ELEMENT description ( short, long ) >
<!ELEMENT discount ( amount, type ) >
<!ATTLIST discount currency NMTOKEN #REQUIRED>
<!ELEMENT header ( merchantId, merchantName, createdOn ) >
<!ELEMENT information EMPTY >
<!ELEMENT keywords ( #PCDATA ) >
<!ELEMENT long ( #PCDATA ) >
<!ELEMENT m1 EMPTY >
<!ELEMENT modification ( #PCDATA ) >
<!ELEMENT merchandiser ( header, product+, trailer ) >
<!ELEMENT merchantId ( #PCDATA ) >
<!ELEMENT merchantName ( #PCDATA ) >
<!ELEMENT numberOfProducts ( #PCDATA ) >
<!ELEMENT pixel ( #PCDATA ) >
<!ELEMENT price ( sale, retail ) >
<!ATTLIST price currency NMTOKEN #REQUIRED>
<!ELEMENT primary ( #PCDATA ) >
<!ELEMENT product ( category, URL, description, discount, price, brand, shipping, keywords, upc, m1, pixel,
    attributes, modification? ) >
<!ATTLIST product manufacturer_name CDATA #FIXED "" >
<!ATTLIST product name CDATA #REQUIRED >
<!ATTLIST product part_number CDATA #FIXED "" >
<!ATTLIST product product_id NMTOKEN #REQUIRED >
<!ATTLIST product sku_number ID #REQUIRED >
<!ELEMENT productImage ( #PCDATA ) >
<!ELEMENT product ( #PCDATA ) >
<!ELEMENT retail ( #PCDATA ) >
<!ELEMENT sale EMPTY >
<!ATTLIST sale begin_date CDATA #FIXED "" >
<!ATTLIST sale end_date CDATA #FIXED "" >
<!ELEMENT secondary ( #PCDATA ) >
<!ELEMENT shipping ( cost, information, availability ) >
```

<!ELEMENT short (#PCDATA) >
<!ELEMENT trailer (numberOfProducts) >
<!ELEMENT type (#PCDATA) >
<!ELEMENT upc EMPTY >

Appendix D: Sample Records

Pipe-Delimited Merchandiser File

HDR|1234|CDLinkShare|2013-03-14/20:30:40

202232415|Great

Expectations|A01245|books|Classics|http://click.linksynergy.com/link?id=xxxxxxxxxxx&offerid=xxxxx.xx
xxxxxxxxx&type=15&murl=http%3A%2F%2Fwww.examplemerchant.com%2Fa%2Fproducts%2F10003|
http://www.merchantsite.com/images/A01245.gif|http://click.linksynergy.com/link?id=xxxxxxxxxxx&offe
rid=xxxxx.xxxxxxxxxx&type=15&murl=http%3A%2F%2Fwww.examplemerchant.com%2Fa%2Fproduct
s%2F10003|Charles Dickens Masterpiece|What this cautionary tale of a young man raised high above
his station by a mysterious benefactor lacks in length, it more than makes up for in its remarkable
characters and compelling
story.|0|Amount|29.95|29.95|01/01/2013|12/31/2013||4.00|Dickens~~Expectations|CU12345||Overnigh
t|UPS|IN|788334995|10|USD||http://ad.linksynergy.com/fs-
bin/show?id=xxxxxxxxxxx&bids=xxxxx.xxxxxxxxxx&type=15&subid=0|hardcover|Great
Expectations|Charles Dickens|023119240|Columbia University Press|10/25/1998|

201132306|Akadema APM-42 Praying Mantis Series 32.5 Inch Baseball Catcher's Mitt

|201132306|Sports |Sports~~Baseball Gloves Catchers

Mitts|http://affiliate.buy.com/link?id=xxxxxxxxxxx&offerid=xxxxx.xxxxxxxxxx&type=15&murl=http%3A%
2F%2Fwww.examplemerchant.com%2Fa%2Fproducts%2F10002|http://ak.buy.com/PI/0/500/2011323
06.jpg|http://affiliate.buy.com/link?id=xxxxxxxxxxx&offerid=xxxxx.xxxxxxxxxx&type=15&murl=http%3A
%2F%2Fwww.examplemerchant.com%2Fa%2Fproducts%2F10002||Akadema APM-42 Praying
Mantis Series 32.5 Inch Baseball Catcher's Mitt|The Akadema(r) APM-42 Praying Mantis Series 32.5-
in baseball catcher's mitt uses Stress Wedge technology with shock-absorbing protection for the hand
against injury and sting when receiving the ball. Double-sided Slim Padding allows for increased
pocket size and easier ball retention and the unique shape gives the throwing hand easier access into
the pocket, resulting in a quicker glove-to-hand transfer and faster times to second
base.||amount|149.44|199.99|05/01/2013|12/30/2013|Akadema|0.00||APM-
42REG|Akademia|Overnight/FedEx|yes|008962990||USD||http://ad.linksynergy.com/fs-
bin/show?id=xxxxxxxxxxx&bids=xxxxx.xxxxxxxxxx&type=15&subid=0|U

TRL|2



Please note: The first entry (first nine lines) is an appropriate record for the book *Great Expectations*. Data items have been omitted for brand, manufacturer name, and M1. Omitted data items are represented by consecutive pipe-delimiters. Field values containing pipe delimiter will be enclosed in double quotes.

XML Merchandiser File

```
<?xml version="1.0" encoding="UTF-8"?>
<merchandiser>
  <header>
    <merchantId>3354</merchantId>
    <merchantName>LinkSquare, Inc.</merchantName>
    <createdOn>2013-05-19/22:03:34</createdOn>
  </header>
  <product product_id="1" name="A Simple Product" sku_number="SKU-SIM10001" manufacturer_name=""
    part_number="" >
    <category>
      <primary>Primary Category</primary>
      <secondary>Secondary Category</secondary>
    </category>
    <url>
      <product>http://click.linksynergy.com/link?id=xxxxxxxxxx&offerid=90431.10000046&murl=http%3A%2F%2Fwww.examplemerchant.com%2Fa%2Fproducts%2F678262</product>
      <productImage>http://m.banner.linksynergy.com/fs/banners/2385/2385_10000046.gif</productImage>
      <buyLink>http://click.linksynergy.com/link?id=xxxxxxxxxx&offerid=90431.10000046&murl=http%3A%2F%2Fwww.examplemerchant.com%2Fa%2Fproducts%2F678263</buyLink>
    </url>
    <description>
      <short>This is the Short Description of the Product</short>
      <long>This is the Long Description of the Product</long>
    </description>
    <discount currency="USD">
      <amount>0</amount>
      <type>amount</type>
    </discount>
    <price currency="USD">
      <sale begin_date="" end_date=""></sale>
      <retail>2.5</retail>
    </price>
    <brand></brand>
    <shipping>
      <cost currency="USD">
        <amount></amount>
      </cost>
      <information></information>
      <availability>AVAILABLE</availability>
```

```
</shipping>
<keywords>Simple~~Simple Product</keywords>
<upc></upc>
<m1></m1>
<pixel>http://ad.linksynergy.com/fs-
    bin/show?id=wYeATVOgEnE& bids=80126.2& type=15& subid=0</pixel>
<attributes class_id="1"></attributes>
<modification>I</modification>
</product>
<product product_id="101" name="Sample Book" sku_number="SKU-SIM10101" manufacturer_name=""
    part_number="" >
<category>
  <primary>Primary Category</primary>
  <secondary>Secondary Category</secondary>
</category>
<url>
  <product>http://click.linksynergy.com/link?id=xxxxxxxxxx& offerid=90431.10000046& murl=htt
  p%3A%2F%2Fwww.examplemerchant.com%2Fa%2Fproducts%2F678262</product>
  <productImage>http://m.banner.linksynergy.com/fs/banners/2385/2385_10000046.gif</productImage>
  <buyLink>http://click.linksynergy.com/link?id=xxxxxxxxxx& offerid=90431.10000046& murl=http%3
  A%2F%2Fwww.examplemerchant.com%2Fa%2Fproducts%2F678263</buyLink>
</url>
<description>
  <short>This is the Short Description</short>
  <long>This is the Long Description of the Product</long>
</description>
<discount currency="USD">
  <amount>0</amount>
  <type>amount</type>
</discount>
<price currency="USD">
  <sale begin_date="" end_date=""></sale>
  <retail>2.5</retail>
</price>
<brand></brand>
<shipping>
  <cost currency="USD">
    <amount></amount>
  </cost>
  <information></information>
  <availability>AVAILABLE</availability>
</shipping>
<keywords>Simple~~Simple Product</keywords>
<upc></upc>
<m1></m1>
<pixel>http://ad.linksynergy.com/fs-
    bin/show?id=wYeATVOgEnE& bids=80126.2& type=15& subid=0</pixel>
<attributes class_id="10">
```

```
<Miscellaneous>Extraneous Information</Miscellaneous>
<Title>Title of Book</Title>
<Author>Name of Author</Author>
<ISBN>An ISBN number (13 characters long; ignore dashes, spaces, etc. when processing; first 9 are
        always numeric)</ISBN>
<Publisher>Publisher</Publisher>
<Publish_Date>Publish Date</Publish_Date>
</attributes>
<modification>U</modification>
</product>
<trailer>
  <numberOfProducts>2</numberOfProducts>
</trailer>
</merchandise>
```

Appendix E: Getting Enabled for Merchandiser

As a prerequisite, all Merchandiser publishers must first register to become a member of the Rakuten Affiliate Network. If your company has yet to do so, please sign up at our [Registration page](#). It's free.

Next, send an email to ls-merchandiser-a@linkshare.com with your:

- Rakuten Affiliate Network username
- Site ID (this appears in the Publisher Dashboard, top right)
- Channel name

"Within one business day, a Rakuten Affiliate Network support representative will respond to your request with your username, password, and the URL of your FTP account at Rakuten Affiliate Network.

Be sure to add the LinkShare domain—"@linkshare.com" and "@support.linkshare.com"—to the safe sender's list in your email program, so our reply doesn't end up in your spam folder."

Thank you for joining Rakuten Affiliate Network's Merchandiser program!