
OASIS WSIA Technical Committee

**Requirements Document
Business Scenario Report: Product Configurator**

Version 1.0

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FastMem.doc	

Revision History

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1. Product Configurator

1.1 Description

FastMem is a manufacturer of semiconductor memory modules. It provides a memory configurator that is incorporated into the commerce sites of its retailer partners. The scenario concerns focuses on the relationship between FastMem, a manufacturer, as a Producer, and Acme, a retailer, as a Consumer.

2. Participants

2.1 "Producer": FastMem

2.1.1 Role

FastMem is a leading manufacturer of after-market memory modules.

2.1.2 Relationships

FastMem sells its products through various online retailers including Acme.

2.1.3 Business Objectives

- Increase channel sales
- Increase brand awareness
- Get a better understanding of customer buying behaviors
- Minimize the cost of adding new channels and maintaining existing channels
- Delegate primary responsibility for integration and customization to the retailers, while minimizing their integration costs

2.1.4 Solution Requirements

FastMem has memory configurator application that can help identify FastMem memory modules that are compatible with a particular hardware configuration. FastMem wants to make this configurator application available to its retailers to aid customers in finding the right memory product, in order to increase sales of FastMem memory. FastMem wants to continue to operate the configurator, in order to ensure that it always reflects the latest product information.

2.1.4.1 Business Needs

- Maintain brand control subject to restrictions imposed by the retailer.
- Provide retail customers with easy access to product configuration information
- Delegate primary responsibility for integration and customization to the retailers
- Maintain the ability to upgrade the configurator layout, functionality, or navigation flow at any time without having to coordinate with the retailers

2.1.4.2 Technology Requirements

- *Loose Coupling*. Support changes to the configurator (including adding new pages and changing page layout and flow) without requiring changes at the retailers (including changes to the adaptations that the retailer has implemented)
- *Standards-based interface* to maximize adoption by retailers.

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- The configurator must be interoperable with any retailer's Web site, regardless of the retailer's IT vendor or architecture
- *Easy for Consumer.* Integrate easily into the retailer's site, without substantial new investments in skills or software
- *Easy for Producer.* Facilitate conversion of the existing configurator application, without substantial new investments in skills or software

2.1.4.3 Functionality

Here are the main functionality use cases that are required in this scenario:

- Create a machine-readable description of the configurator interface
- Describe how the configurator can be invoked by the retailer, and what input data is expected
- Describe what parts of the configurator's output the retailer can examine or adapt
 - "Markup adaptation points" specify the presentation elements and data elements in the markup generated by the Producer that are accessible to the Consumer, and the manner in which they may be accessed, adapted or reused. Markup adaptation enables a Consumer to:
 - Change look and feel
 - e.g. change background color, font type and size, logo images
 - Replace content
 - e.g. replace a company logo, contact information, or terms and conditions
 - Insert markup fragments
 - e.g. add a new table or a new link to a URL
 - e.g. add local operations
 - Delete markup fragments
 - e.g. remove an image
 - Modify markup fragments
 - to accomplish changes that cannot be easily made by inserting or deleting individual markup fragments
 - e.g. add/delete a column to/from a table
 - Lookup markup fragments in markup generated by the Producer:
 - e.g. a form field value such as a part number or customer ID
 - e.g. extract a presentation element for use without the surrounding markup
- Describe the expected user inputs so that they can be examined and, if desired, adapted
 - "Operation adaptation points" specify the user inputs expected by a Producer that a Consumer can intercept, enhance and/or redirect. Operation adaptation enables a Consumer to:
 - implement completely new behavior instead of Producer behavior
 - add new logic before or after invoking a Producer operation
 - change user inputs (such as user id) before invoking a Producer operation
- Implement, test, and deploy the configurator service

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- Use familiar programming models and tools
- Any special markup must be a small increment on top of normal (X)HTML
- Enable secure communication between Producer and Consumer
 - Using existing Web security technologies
- Publish the service in a private or public UDDI directory
- Modify, test, and re-deploy the configurator service
 - Producer autonomy: Producer must be able to change non-adaptable markup without impacting Consumers using allowed adaptations
 - The set of allowed adaptations on markup must be robustly specified
 - All the Consumer's dependencies on the service must be described in the service description
- Maintain a list of retailers that are expected to invoke the configurator service
- Upon invocation, determine which retailer is invoking the configurator service

2.1.4.4 Usability

The configurator must be easy to use by the retailers' end users

2.1.4.5 Reliability

The configurator must be available 24/7.

2.1.4.6 Performance

The configurator must be highly scalable in order to support all retailers in the network. Unnecessary roundtrips must be avoided.

2.1.4.7 Supportability

The configurator must support a change of database content with minimal downtime.

The configurator must be upgradable, for example in terms of browsers supported, etc., without impact on the Consumers.

2.1.4.8 Constraints

None

2.2 "Consumer": Acme

2.2.1 Role

Acme.com is a web based retail store that sells consumer electronics products, including FastMem memory modules, to retail customers. Acme has had problems in the past with customers ordering the wrong kind of memory modules for their computers and returning them. Acme would like to help its customers find the right memory product through its Web site, but it does not want to have to implement and maintain its own memory configurator.

2.2.2 Relationships

Acme sells products made by FastMem and many other vendors. Acme has substantial brand control over the retail presentation, and will leverage the vendor brands when it perceives this to be to its advantage.

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2.2.3 Business Objectives

Maximize sales, customer satisfaction, and return visits. In order to accomplish this, the retailer must be able to

- Maintain brand control over the presentation, but leverage the vendor brands from time to time
- Maintain control over the interaction with the end user
- Maintain a consistent look and feel across the entire site
- Provide an easy-to-use experience to the end user
- Display “list price”, “our price”, “delivery time” and “product review” with every product presentation
- Present relevant promotional opportunities within the screen area occupied by the configurator

2.2.4 Solution Requirements

To maximize sales of memory products, Acme incorporates a memory configurator application in the memory product selection page. The general intent is to increase sales by assisting customers in finding the right memory product.

For the customer’s benefit, Acme wants the user to enter the hardware make and model information only once, into the user interface provided by the configurator. It then wants to get access to this information and use it to identify relevant promotional opportunities, such as replacement PC or PC accessories, using a business rules engine. It then wants to have the ability to place these promotional opportunities on the screen near the user’s focus of attention, within the screen area occupied by the configurator.

Acme would like to delete some portions of FastMem’s page that are not relevant to its site.

2.2.4.1 Business Needs

- *Integrated Presentation.* Integrate with the site to present a seamless customer experience
- *Access to content.* Observe the make and model entered by the user, and the memory part numbers that are displayed
- *Presentation adaptation.* Adapt the presentation, in order to:
 - Implement the desired branding relationship
 - Conform to the look and feel of the surrounding page
 - Include additional e-commerce content
- *Behavior adaptation.* Override the standard response to user inputs
- *Integrated Flow/Data.* Integrate with the commerce environment (“Add to Cart”).
- *Open standards.* Acme plans to implement many relationships such as the one proposed by FastMem. For this reason, it much prefers an interface based on widely accepted standards over an *ad hoc* or vendor-specific interface

2.2.4.2 Functionality

The end user should be offered a seamless user experience, in which the origin of displayed content (Producer or Consumer) may be apparent in some instances, but need not be apparent in all instances.

- Obtain a machine-readable description of the configurator interface, for example from a UDDI directory
- *Data transfer.* The retailer can pass information to the configurator upon invocation

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- *Embedding.* Seamless integration of the configurator into the surrounding application
 - Support familiar programming models and tools
- *Adaptation.* Each retailer adapts the configurator for his own needs – for example
 - Set the background color and font to match the style of the surrounding content
 - Delete or resize images on the page, and substitute or add new images
 - Look up the make and model entered by the user, and insert relevant promotional content
 - Look up the part numbers in a table, and add columns of relevant information to the table
 - Intercept clicks on the “more information” button, and provide an alternative information page
 - Note: this adaptation must be able to exploit personalization technology at the retailer
- Test the integrated application including the configurator service

2.2.4.3 Usability

The description of the configurator interface and its adaptation points must be easy to understand by retailer’s IT staff

The overall end user experience, including the configurator and its integration into the surrounding Web site, must be easy to use by the end users

2.2.4.4 Reliability

The configurator and surrounding Web site must be available 24/7.

2.2.4.5 Performance

N/A

2.2.4.6 Supportability

N/A

2.2.4.7 Constraints

N/A