

WCKER wizard guide

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Introduction

This document is a guide to the construction of wicker wizard zip packages for the Wizard Construction Kit Extension for Reload (WCKER).

WCKER is intended to aid course creation whilst using and promoting the use of standards such as IMS Content Packaging (IMSCP) and IMS Metadata (IMSMD). One of the key goals was to remove the details of these standards from practitioners who are not interested in them. As such, the knowledge of these standards must be encapsulated in the WCKER wizard itself – and anyone building a wizard will need a good understanding of them.

Anyone intending to build a WCKER wizard would benefit from experience with:

- XML
- IMS Content Packaging
- IMS Metadata
- HTML
- XSL
- CSS

An example wizard accompanies this guide and is referenced in examples - examine it for illumination of how the wizard is constructed.

Text referring to this example can be substituted with your own wizard details, for instance:

- Its filename "example.wwz".
- The wizard title "Example wizard".

Package format

A wizard package is a zip archive, with the extension changed to .wwz (wcker wizard zip). Any regular zip archive utility can be used with .wwz files.

The files and directories inside the zip must be arranged in a specific way, as follows:

□ wizard.wwz	The zip archive.
📄 wizard.wsi	The Wizard Schema Instance.
📄 summary.xml	A file used to summarise the course structure.
📁 WCKER_templates	A directory of page template files.

The example wizard package contains:

□ example.wwz	The zip archive.
📄 wizard.wsi	The Wizard Schema Instance.
📄 summary.xml	A file used to summarise the course structure.
📁 WCKER_templates	A directory of page template files.
📄 generic.html	A generic HTML template.
📄 overview.html	A HTML template for overview pages.
📄 summary.html	A HTML template for summary pages.
📁 common	A directory of files supporting the template
📄 style.css	CSS styles for the HTML templates.
📄 logo.png	An image for the HTML templates.
📁 Induction	A directory of standard pages for the course's "Induction".
📄 ActivitiesAndAssessment.html	
📄 CommunicationOnYourCourse.html	
📄 CourseOverview.html	
📄 Introductions.html	
📄 ManagingYourLearning.html	
📄 OnlineNetiquette.html	

File descriptions

wizard.wsi

This is a Wizard Schema Instance file, which describes contents of the wizard – including the wizard steps, text, questions, and course structure. This file is described more fully in the section “Wizard Schema Instance”, below.

summary.xsl

This is a XSLT file used by WCKER to create a HTML summary of any course built with the wizard. This can be customised to include whatever HTML is desired.

WCKER_templates

This directory contains HTML templates that will be used by WCKER as the basis for pages in a course built with the wizard. There must be at least one template present, but any number of extra templates can be added for specific uses in the course. Integration between WCKER and template files is described in the section “HTML templates”, below.

HTML templates

The HTML templates are standard HTML files except for one feature; text entered into the wizard can replace tokens in the pages as they are generated during the WCKER export process. A token has the format `<%tokenname%>`, where “tokenname” can be any text string.

Any field in the .wsi can include an input field where the target is a filter token, if the following format:

```
<input target="cp:metadata/wm:wcker/wm:filter/wm:tokenname" />
```

Text inserted into this field will be inserted in the corresponding HTML page, in place of the matching token: `<%tokenname%>`.

There is one pre-defined token that should be present in all templates: `<%title%>`. This is used to copy the page title defined within the wizard into the HTML `title` and `h1` elements.

Wizard Schema Instance

The Wizard Schema Instance must always be named "wizard.wsi", and must always be in the root of the zip archive.

The wsi format is defined in a W3C XML Schema file WCKER-wizard.xsd, which is found in the wcker/resources/schema directory of the WCKER binary package. This wizard schema can be used to validate a wizard.wsi file using standard XML tools.

Discussion of the structure and elements in the wizard schema follows:

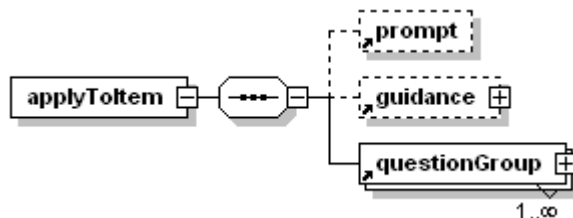
Schema file: **WCKER-wizard.xsd**
 targetNamespace: **http://www.tall.ox.ac.uk/schema/wcker/0.2**
 Root element: **wizard**

Elements	Groups	Attr. groups
applyToItem	text	itemAttribs
guidance		
inputs		
item		
itemPattern		
prompt		
questionGroup		
step		
structureItem		
wizard		

Elements

element applyToItem

diagram



children [prompt](#) [guidance](#) [questionGroup](#)
 used by elements [step/applyToHierarchy](#) [step](#)

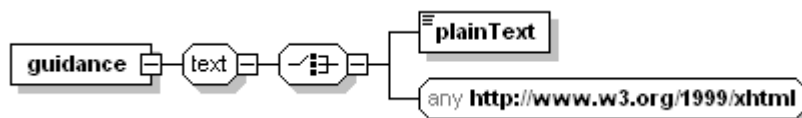
attributes	Name	Type	Use	Default	Fixed
	targetHook	xs:string	required		

Usage applyToItem is a call to WCKER functionality, whereby:

1. a single part of the course structure (e.g. a unit or page) is identified via the "targetHook" attribute,
2. help text can be included in the "prompt" and "guidance" children, and
3. the questions defined in any nested "questionGroups" are presented to the user, for that part of the course.

element guidance

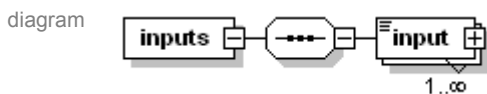
diagram



children [plainText](#)
 used by elements [step/applyToHierarchy](#) [applyToItem](#) [inputs/input](#) [questionGroup/question](#) [step](#)

Usage guidance is a place to put text to help the user understand and operate the wizard. The text can be plain text, with line breaks preserved, or any xhtml content.

element inputs

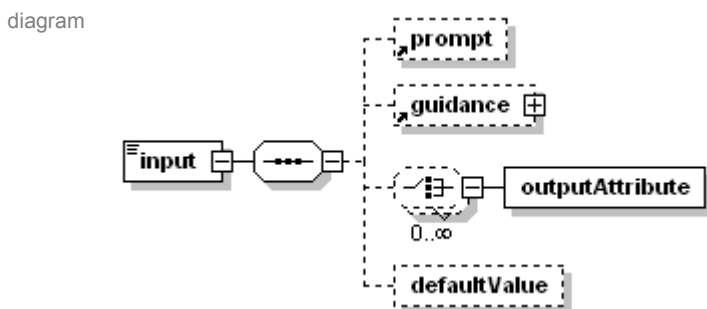


children [input](#)
 used by element [questionGroup/question](#)

Usage The inputs element allows one or more input components, in order to:

- form a question in the wizard GUI, and
- describe how to insert the data provided by the user into the (IMSCP) manifest.

element inputs/input



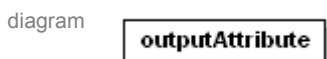
children [prompt](#) [guidance](#) [outputAttribute](#) [defaultValue](#)

attributes	Name	Type	Use	Default	Fixed
	target	xs:string	required		
	additionalTargets	xs:string	optional		
	type	xs:string	optional		
	conditions	xs:NMTOKENS	optional		

Usage The input element describes:

1. what part(s) of the (IMSCP) manifest will receive any value given for this input by the user, via
 - a. the "target" attribute, which is a simple xpath to the relevant field (e.g. cp:metadata/imsm:lom/imsm:lifecycle/imsm:contribute/imsm:role/imsm:source/imsm:langstring)
 - b. and the "additionalTargets" attribute, which is a comma separated list of simple xpaths.
2. whether this input will be visible in the GUI, via a value of "hidden" in the "type" attribute.
3. the conditions attribute is intended for enforcing conditions such as required fields, but is currently unimplemented.

element inputs/input/outputAttribute



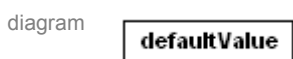
attributes	Name	Type	Use	Default	Fixed
	name	xs:string	required		
	value	xs:string	optional		

Usage outputAttribute is used to specify attributes required on the element defined in an input element's target attribute, with the name and value attributes of the outputAttribute element defining the new attribute to be produced.

E.g. an xml:lang attribute on an imsm:langstring element:

```
<outputAttribute name="xml:lang" value="x-none"/>
```

element inputs/input/defaultValue



Usage The defaultValue element can contain a predefined string, where there is no need or benefit in asking the user, e.g. for specifying metadata vocabularies in IMSMD.

element item

diagram



children [item](#) [itemPattern](#)
 used by elements [item](#) [itemPattern](#) [wizard/init/organization](#)

attributes	Name	Type	Use	Default	Fixed
	title	xs:string	required		
	itemType	xs:NMTOKEN	required		
	typeLabel	xs:string	required		
	questionHook	xs:string	required		
	templatesrc	xs:anyURI	optional		
	templatetype	xs:string	optional		
	allowedChildren	xs:NMTOKENS	optional		

Usage Produces one item in the (IMSCP) organization, which may result in a file containing course content, or just be a container for other items. This is analogous to the item element in IMSCP.
 Attributes:

- title: the title of the item
- itemType: one of: "root" for the course root; "container" for a unit/module containing pages; "leaf" for a content page.
- typeLabel: the label applied to this type of item, customised to local conventions (e.g. Course, unit, screen – vs – Module, section, page)
- questionHook: a string used to associate particular questions to any specific course item
- templatesrc: the relative path to a template file to use for this item.
- templatetype: the MIME type of a template defined in templatesrc. Currently only HTML templates are supported.
- allowedChildren: a list of which types of items are allowed as children of this item, specified as one or more itemType:typeLabel children (e.g. "leaf:screen"), separated by spaces

element itemPattern

diagram



children [item](#) [itemPattern](#)
 used by elements [item](#) [itemPattern](#) [wizard/init/organization](#)

attributes	Name	Type	Use	Default	Fixed
	count	xs:positiveInteger	required		
	title	xs:string	required		
	itemType	xs:NMTOKEN	required		
	typeLabel	xs:string	required		
	questionHook	xs:string	required		
	templatesrc	xs:anyURI	optional		
	templatetype	xs:string	optional		
	allowedChildren	xs:NMTOKENS	optional		

Usage itemPattern is derived from the item element but, rather than producing one IMSCP item, produces as many as defined in the count attribute.

element prompt

diagram



used by elements [step/applyToHeirarchy](#) [applyToItem](#) [inputs/input](#) [questionGroup/question](#)

Usage A text heading element for questions and help text.

element questionGroup

diagram



children [question](#)

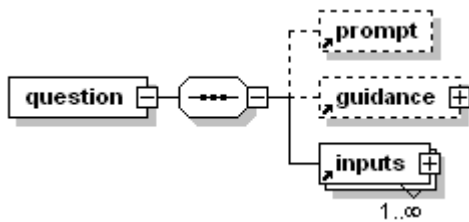
used by elements [applyToItem wizard/questions](#)

attributes	Name	Type	Use	Default	Fixed
	id	xs:ID	optional		
	ref	xs:IDREF	optional		

Usage A set of questions grouped together, with an "id" attribute used to identify that set of questions when applying them to a particular input.. The "ref" attribute is not used.

element questionGroup/question

diagram



children [prompt](#) [guidance](#) [inputs](#)

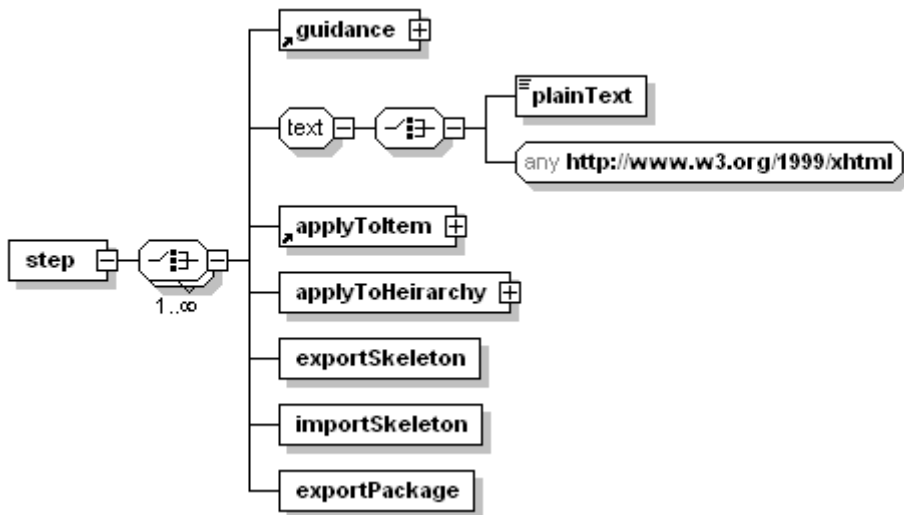
attributes	Name	Type	Use	Default	Fixed
	priority	xs:string	optional		

Usage A single question with:

- optional prompt,
- optional guidance, and
- one or more inputs for user input or pre-defined values.

element step

diagram



children [guidance](#) [plainText](#) [applyToItem](#) [applyToHierarchy](#) [exportSkeleton](#) [importSkeleton](#) [exportPackage](#)

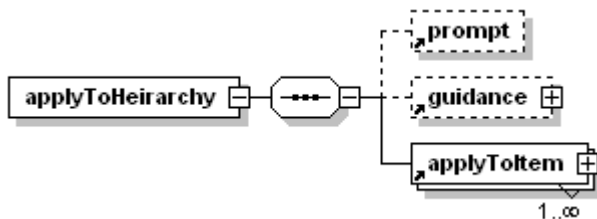
used by element [wizard/steps](#)

attributes	Name	Type	Use	Default	Fixed
	title	xs:string	required		
	strapLine	xs:string	required		
	type	xs:string	optional		

Usage A single step in the wizard, i.e. a single page in the wizard dialogue. The "title" and "strapLine" attribute values are presented in the wizard interface, and the "type" attribute is used to define the main purpose of the step.

element **step/applyToHeirarchy**

diagram

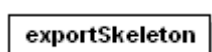


children [prompt](#) [guidance](#) [applyToItem](#)

Usage A call to WCKER functionality which displays a tree view or the course structure, allowing selection and modification of each item, Each child applyToItem element dictates what input fields are available for each part of the course structure.

element **step/exportSkeleton**

diagram



Usage A call to WCKER functionality, whereby an uncompressed content package is created from the imported skeleton, containing:

- the course structure as nested directories
- HTML files for each page in the course structure (and supporting CSS and images)
- A summary page (summary.html), which gives overview for the course structure and each page, and links to each the pages.
- an IMSCP manifest.xml of the course structure

WCKER wizard files, to allow importing the course back into WCKER

element **step/importSkeleton**

diagram

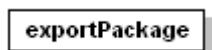


Status Deprecated – do not use.

Usage A call to WCKER functionality, whereby the skeleton version of the course (generated by exportSkeleton) which has had the templates completed in, is imported by Reload.

element **step/exportPackage**

diagram



Status Deprecated – do not use.

Usage exportPackage is a call to WCKER functionality, whereby a content package is created from the imported skeleton.

element **structureItem**

diagram



children [structureItem](#)
 element [structureItem](#)

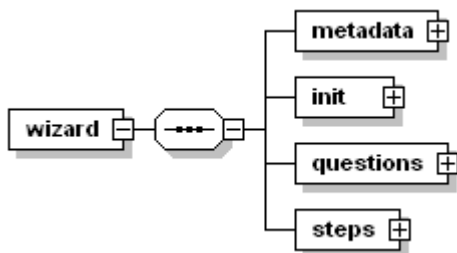
attributes	Name	Type	Use	Default	Fixed
label	label	xs:string	required		
	type	xs:string	required		

Status Deprecated – do not use.

Usage Was used to assign custom terms to course structure items.

element wizard

diagram

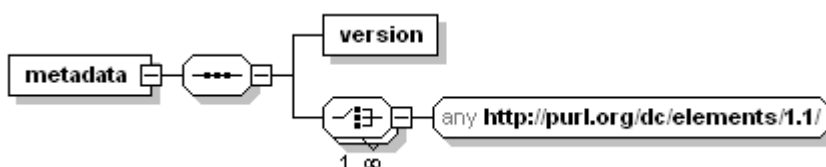


children [metadata](#) [init](#) [questions](#) [steps](#)

Usage The root element of the wizard, containing a sequence of elements representing the component parts of the individual wizard.

element wizard/metadata

diagram



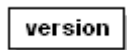
children [version](#)

Usage An element to support information describing this wizard:

- a string to identify different revisions of a wizard, and
- one or more Dublin Core metadata elements. A **dc:title** element is required to provide the wizard title throughout the WCKER interface.

element wizard/metadata/version

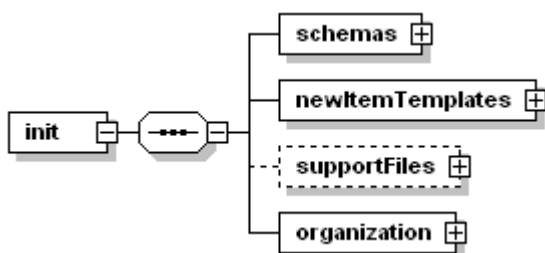
diagram



Usage A string to identify different revisions of a wizard.

element wizard/init

diagram

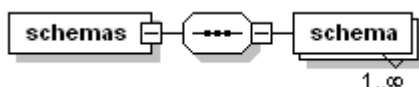


children [schemas](#) [newItemTemplates](#) [supportFiles](#) [organization](#)

Usage A sequence of elements that are needed in the initialisation of the wizard.

element wizard/init/schemas

diagram



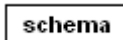
children [schema](#)

Usage A sequence of one or more **schema** elements, each defining schemas used in the wizard, typically the IMSCP and IMSMD schemas.

There should be at least two schemas present – one for IMSCP, one for IMSMD. There is scope for expansion to include other standards such as IMS Learning Design at a later stage.

element wizard/init/schemas/schema

diagram



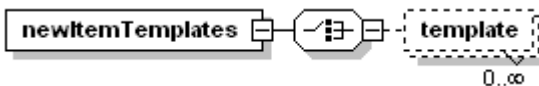
attributes	Name	Type	Use	Default	Fixed
	namespace	xs:anyURI	required		
	prefix	xs:NCName	required		
	role	xs:NMTOKEN	required		

Usage A definition of a XML schema used in the wizard, through the attributes:

- role – “container” for IMSCP or “metadata” for IMSMD
- namespace – the targetNamespace of the schema
- prefix – the xml namespace prefix to be used for the schema in this wizard

element wizard/init/newItemTemplates

diagram



children [template](#)

Usage A collection of definitions used for creating new items in the course hierarchy.

element wizard/init/newItemTemplates/template

diagram

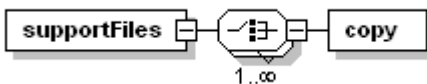


attributes	Name	Type	Use	Default	Fixed
	id	xs:ID	required		
	title	xs:string	required		
	itemType	xs:NMTOKEN	required		
	typeLabel	xs:string	required		
	questionHook	xs:string	required		
	templatesrc	xs:anyURI	optional		
	templatetype	xs:string	optional		
	allowedChildren	xs:NMTOKENS	optional		

Usage A definition used as a basis for creating new items in the course hierarchy.

element wizard/init/supportFiles

diagram

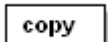


children [copy](#)

Usage Available to define one or more copy elements, which enable the inclusion of arbitrary content files when exporting from the wizard. Typically HTML pages and templates will have supporting CSS and images that need to be copied.

element wizard/init/supportFiles/copy

diagram

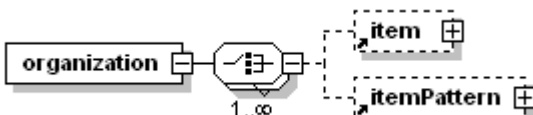


attributes	Name	Type	Use	Default	Fixed
	source	xs:string	required		
	dest	xs:string	required		

Usage Used to define a “source” file or directory to copy from the wizard package into a “dest” location in the wizard export.

element wizard/init/organization

diagram



children [item](#) [itemPattern](#)

Usage An element containing the course template – a standard course structure for this template (as a sensible starting point for users to customise). This is analogous to the organization element in IMSCP.

element wizard/questions

diagram

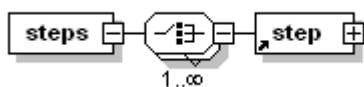


children [questionGroup](#)

Usage An element containing questionGroups.

element wizard/steps

diagram



children [step](#)

Usage The steps element should contain one or more step elements – which represent pages of the wizard dialogue - in the order that they should appear. Two is the minimum useful number of steps:

1. A "applyToHeirarchy" type step
2. An "export" type step

Groups

group text

diagram



children [plainText](#)

used by elements [guidance step](#)

Usage A group providing a seamless choice between including plain text or HTML formatted text for user help.

element text/plainText

diagram



Usage An element to hold user help in plain text format.

Attribute groups

attributeGroup itemAttribs

used by elements [item](#) [itemPattern](#) [wizard/init/newItemTemplates/template](#)

attributes	Name	Type	Use	Default	Fixed
	title	xs:string	required		
	itemType	xs:NMTOKEN	required		
	typeLabel	xs:string	required		
	questionHook	xs:string	required		
	templatesrc	xs:anyURI	optional		
	templatetype	xs:string	optional		
	allowedChildren	xs:NMTOKENS	optional		

Usage Common attributes used by item and itemPattern elements.

- title: the title of the item
- itemType: one of: "root" for the course root; "container" for a unit/module containing pages; "leaf" for a content page.
- typeLabel: the label applied to this type of item, customised to local conventions (e.g. Course, unit, screen – vs – Module, section, page)
- questionHook: a string used to associate particular questions to any specific course item
- templatesrc: the relative path to a template file to use for this item.
- templatetype: the MIME type of a template defined in templatesrc. Currently only HTML templates are supported.
- allowedChildren: a list of which types of items are allowed as children of this item, specified as one or more itemType:typeLabel children (e.g. "leaf:screen"), separated by spaces