



1

2 **WSRP – UDDI Technical Note**

3 **Version**

4 1.0

5 **WSRP Publish Find Bind SC**

6 **Created**

7 12/09/2003

8 **Document Identifier**

9 wsrp-pfb-uddi-tn-1.0.doc

10 **Editors**

11 Richard Jacob, IBM (richard.jacob@de.ibm.com)

12 Andre Kramer, Citrix Systems Inc. (Andre.Kramer@eu.citrix.com)

13 **Status**

14 This technical note is an approved OASIS WSRP TC draft. This document is
15 final.

16 Committee members should send comments on this technical note to the
17 wsrp@lists.oasis-open.org list. Others should send comments to the [wsrp-](mailto:wsrp-comments@lists.oasis-open.org)
18 comments@lists.oasis-open.org list. To subscribe, send an email message
19 to wsrp-comment-request@lists.oasis-open.org with the word "subscribe" as
20 the body of the message or use the web form [http://www.oasis-](http://www.oasis-open.org/committees/comments/form.php?wg_abbrev=wsrp)
21 [open.org/committees/comments/form.php?wg_abbrev=wsrp](http://www.oasis-open.org/committees/comments/form.php?wg_abbrev=wsrp) at the WSRP TC
22 homepage.

1	Table of Contents	
2	1 Preface	5
3	2 Terminology	5
4	3 Conventions	5
5	4 General Concepts	6
6	4.1 <i>WSRP Actors</i>	6
7	4.1.1 Producers	6
8	4.1.2 Portlets	6
9	4.2 <i>WSRP PortTypes and Bindings</i>	7
10	4.3 <i>WSRP WSDLs</i>	8
11	4.4 <i>Publishing Web Services in UDDI</i>	8
12	4.5 <i>UDDI Version Considerations</i>	9
13	5 Publishing WSRP Services to UDDI	10
14	5.1 <i>Overview</i>	11
15	5.2 <i>Publishing Producers</i>	12
16	5.2.1 Producer businessService	13
17	5.2.2 Producer WSDL address bindingTemplate.....	14
18	5.2.3 Producer's Metadata.....	15
19	5.3 <i>Publishing Portlets</i>	15
20	5.3.1 Portlet businessService.....	16
21	5.3.2 Portlet's Metadata	18
22	6 Canonical tModels	19
23	6.1 <i>WSRP Service Type tModel</i>	19
24	6.1.1 Purpose.....	19
25	6.1.2 Definition.....	19
26	6.1.2.1 UDDI V2 tModel Structure.....	19
27	6.1.3 Valid Values	20
28	6.2 <i>WSRP v1 Bindings tModel</i>	20
29	6.2.1 Purpose.....	20
30	6.2.2 Definition.....	20
31	6.2.2.1 UDDI V2 tModel Structure.....	21
32	6.3 <i>WSRP Producer Service Reference tModel</i>	22
33	6.3.1 Purpose.....	22
34	6.3.2 Definition.....	22
35	6.3.2.1 UDDI V2 tModel Structure.....	22
36	6.3.3 Valid Values	23
37	6.4 <i>WSRP Portlet Handle tModel</i>	23
38	6.4.1 Purpose.....	23
39	6.4.2 Definition.....	23

1	6.4.2.1	UDDI V2 tModel Structure.....	23
2	6.4.3	Valid Values	24
3	7	Sample Queries.....	25
4	7.1	<i>Find WSRP Producers.....</i>	25
5	7.1.1	Find WSRP Producers Independent of the Version Supported.....	25
6	7.1.2	Find WSRP Producers Supporting Version 1	25
7	7.2	<i>Get WSRP Producer Service WSDL URL.....</i>	26
8	7.3	<i>Find WSRP Portlets.....</i>	26
9	7.4	<i>Find WSRP Portlets Hosted by a Particular Producer.....</i>	27
10	7.5	<i>Find WSRP Portlets by Portlet Handle.....</i>	28
11	7.6	<i>Get WSRP Portlet Access Information.....</i>	28
12	8	Private UDDI Registries Considerations.....	28
13	A	Additional tModels.....	29
14	A.1	<i>WSRP v1 ServiceDescription PortType tModel.....</i>	29
15	A.1.1	Purpose.....	29
16	A.1.1	Definition.....	29
17	A.1.1.1	UDDI V2 tModel Structure.....	30
18	A.2	<i>WSRP v1 Markup PortType tModel.....</i>	31
19	A.2.1	Purpose.....	31
20	A.2.2	Definition.....	31
21	A.2.2.1	UDDI V2 tModel Structure.....	31
22	A.3	<i>WSRP v1 Registration PortType tModel.....</i>	32
23	A.3.1	Purpose.....	32
24	A.3.2	Definition.....	32
25	A.3.2.1	UDDI V2 tModel Structure.....	32
26	A.4	<i>WSRP v1 PortletManagement PortType tModel.....</i>	33
27	A.4.1	Purpose.....	33
28	A.4.2	Definition.....	33
29	A.4.2.1	UDDI V2 tModel Structure.....	33
30	A.5	<i>WSRP v1 ServiceDescription SOAP Binding tModel.....</i>	33
31	A.5.1	Purpose.....	33
32	A.5.2	Definition.....	33
33	A.5.2.1	UDDI V2 tModel Structure.....	34
34	A.6	<i>WSRP v1 Markup SOAP Binding tModel.....</i>	35
35	A.6.1	Purpose.....	35
36	A.6.2	Definition.....	35
37	A.6.2.1	UDDI V2 tModel Structure.....	36
38	A.7	<i>WSRP v1 Registration SOAP Binding tModel.....</i>	36
39	A.7.1	Purpose.....	36
40	A.7.2	Definition.....	36
41	A.7.2.1	UDDI V2 tModel Structure.....	37

1	<i>A.8 WSRP v1 PortletManagement SOAP Binding tModel</i>	38
2	A.8.1 Purpose.....	38
3	A.8.2 Definition.....	38
4	A.8.2.1 UDDI V2 tModel Structure.....	39
5	B References	40
6	<i>B.1 Normative</i>	40
7	C Revision History	41
8	D Acknowledgements	42
9	E Notices	43
10		

1 Preface

This document proposes a standard methodology for publishing and finding WSRP Producer and Portlet services in a UDDI registry. It is not the purpose of this document to educate on WSRP [1], WSDL [4] or UDDI [5, 6]. The reader of this document should have a good understanding of the WSRP specification, the WSDL specification and the UDDI specifications and data structures.

2 Terminology

The key words MUST, MUST NOT, REQUIRED, SHALL, SHALL NOT, SHOULD, SHOULD NOT, RECOMMENDED, MAY, and OPTIONAL in this document are to be interpreted as described in [RFC2119].

3 Conventions

Throughout the document XML code fragments are employed to define the data structures used. The following text formatting conventions are used to aide readability:

- **Key value Placeholders**

Data structures may contain values which reference UDDI key values such as tModel keys, service keys and business keys. These keys uniquely identify the data structures within the UDDI repository. For convenience and better readability, these key values are replaced by meaningful textual variables to represent such keys.

For all canonical tModels defined by this TN, V3 keys are fixed while V2 keys need to be generated. Thus, placeholders are used to represent those keys.

In the following example the placeholder “`${TMODELKEY_WSRP_SERVICE_TYPE}`” refers to a tModel key identifying the WSRP Service Type tModel:

```
<tModel tModelKey="${TMODELKEY_WSRP_SERVICE_TYPE}"/>
```

- **Constants**

Constant values are printed in the *Courier New* font always, regardless of whether they are defined by this document or a referenced document. In addition, constant values defined by this document are printed using **bold face**. The following example shows the tModel name defined by this technical note for the WSRP Service Type tModel:

1
2
3
4
5
6
7
8
9
10
11
12
13

```
<tModel tModelKey="{TMODELKEY_WSRP_SERVICE_TYPE}" >  
  <name>  
    urn:oasis:names:tc:wsrp:tmodel:wsrp_service_type  
  </name>
```

- **Example Values**

These values are represented in *italic* font. In the following, an access point example value is shown:

```
<accessPoint useType="http">  
  http://vendor.com/producer/ServiceDescription  
</accessPoint>
```

4 General Concepts

4.1 WSRP Actors

The WSRP specification describes two major actors relevant to this technical note. WSRP Producers are presentation-oriented Web Services that host Portlets which are able to render markup fragments and process user interaction requests. Consumers use these Web Services to aggregate and present the generated markup to End-Users and manage the user's interaction with the Portlet markup.

4.1.1 Producers

Producers are modeled as Web Service containers hosting and managing Portlets. Producers provide Web Service PortTypes (interfaces) that allow Consumers to interact with the Producer and with Portlets hosted by that particular Producer (see Section 4.2).

4.1.2 Portlets

Portlets are hosted by Producer Web Services and generate markup and process user interactions with that markup. In general, a Portlet includes both code and a particular configuration of any settings or properties the Portlet exposes. Portlets are addressed by a Portlet Handle scoped by the Producer environment.

4.2 WSRP PortTypes and Bindings

The WSRP interfaces are factored into multiple PortTypes. Each PortType provides a certain functionality subset of the full WSRP protocol. Some PortTypes are optional. Each PortType is defined in the WSRP Interfaces WSDL file (see http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_interfaces.wsdl for v1 PortType definitions).

The following PortTypes are defined by the WSRP v1 specification:

1. **Service Description PortType**

This PortType provides a means for the Consumer to discover capabilities of the Producer and its Portlets. This metadata MAY be context sensitive, for example, applying to a particular consumer registration. The Service Description PortType is mandatory.

2. **Markup PortType**

WSRP compliant services MUST implement and expose this PortType which deals with the generation of markup and the user interaction with this markup.

3. **Registration PortType**

Producer MAY choose to support in-band registration of Consumers and then must implement this PortType.

4. **Portlet Management PortType**

In addition to “Producer Offered Portlets” available through the service description, the Producer MAY expose this interface to allow Consumer to clone and customize Portlets. Such Portlets are referred to as “Consumer Customized Portlets”.

For each of the above PortTypes, WSRP Producers define one or more Bindings. Producers must provide at least the default SOAP over HTTP/HTTPS bindings for the mandatory PortTypes. See http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_bindings.wsdl for the definitions of WSRP bindings.

4.3 WSRP WSDLs

The WSRP Web Service description is factored into three parts. Firstly, the Types XSD document defines the types used by the WSRP protocol. Secondly, the Interface WSDL document defines the PortTypes and their operations. It imports the Types XSD. Thirdly, the Bindings WSDL defines the bindings for the portTypes. It imports the Interfaces WSDL and provides the standard SOAP HTTP(S) bindings.

Both the Bindings and the PortTypes adhere to the following naming schema:

```
SPEC_VERSION_FACTOR_WSDLTYPE[_TYPESPECIFIC]
```

Where

```
SPEC           = "WSRP"
VERSION        = "v1"
FACTOR         = "ServiceDescription" | "Markup" |
                "Registration" | "PortletManagement"
WSDLTYPE       = "Binding" | "PortType"
TYPESPECIFIC   = "SOAP" | [...]
```

Note that, additional standard Bindings may be added in future which define SOAP attachments mechanisms such as SwA/MIME, DIME or proposals currently being formulated in the W3C XML Protocol Working Group. Such additional Bindings will probably add new TYPESPECIFIC binding names.

Each Producer service has to provide its own *Service Implementation WSDL* which contains a Service definition containing Ports for the various Bindings. This WSDL MUST import the WSRP *Binding WSDL*. The WSRP Bindings and Interfaces WSDLs are published on the OASIS web site (http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsrp).

4.4 Publishing Web Services to UDDI

In the domain of UDDI specifications, two documents can be identified which describe how WSDLs and their contents can be published to UDDI registries.

The best practices document "Using WSDL in a UDDI Registry, Version 1.08" [3] clarifies the relationship between WSDL and UDDI and describes how WSDL can be used to help create UDDI business service descriptions.

The technical note "Using WSDL in a UDDI Registry, Version 2.0" [2] describes a more sophisticated mapping of WSDL elements and UDDI data structures. This enables more specific and flexible UDDI queries based on WSDL artifacts and metadata.

Both UDDI technical notes mandate the UDDI registry as the authoritative source for WSDL artifacts as all Web Services end points are to be retrieved from UDDI artifacts.

1 **4.5 UDDI Version Considerations**

2 We base our recommendation on version 2 of the UDDI specifications; however the
3 basic model is independent of UDDI API version and applies to V2 and V3 UDDI.
4 The main difference in V3 is that UDDI entities will have V3 keys, the accessPoint
5 has a useType attribute rather than an URLType attribute and entities can have
6 publisher-assigned keys.

5 Publishing WSRP Services to UDDI

The WSRP Publish Find Bind Abstract Model [10] provides guidelines for publishing WSRP Producers and Portlets as services in registries. This technical note adheres to the guidelines and maps the abstract model to UDDI specific schemes and data structures.

Compared to many Web Services scenarios, WSRP services prove more complex. Firstly, the WSRP Producer can be considered as a Web Service on its own, exposing multiple Bindings and PortTypes. One can view the WSRP Producer as the actual Web Service described through the WSRP WSDLs.

Secondly, Portlets can also be understood to be services. In contrast to Producers, Portlets are not full services in a Web Service sense. They do not explicitly expose PortTypes, bindings or access points. Rather, a Portlet is exposed by its Producer. The Consumer interacts indirectly with Portlets through the Producer's infrastructure. The WSRP Portlet is addressed by a Portlet Handle defined in the Producer's scope.

In addition to the WSDL interface specification, WSRP services carry metadata which describes both the Producer and its Portlets. Prior to using a Producer or its Portlets this metadata has to be obtained.

The WSRP PFB abstract model mandates that the Producer's Service WSDL is the authoritative source to obtain information about the service's actual end-points. Also replication of meta-data should be minimized to a practical extent to protect systems against update inconsistencies.

The publishing scheme used in this document follows this guidance; however it does not rule out the application of the WSDL in UDDI technical notes ([2], [3]). For Producers – which actually can be considered to be straight-forward Web Services – we provide a means to simply publish the Service WSDL document as the authoritative source as well as the metadata required for WSRP use. Services which require the additional capabilities provided by the UDDI technical notes can refer to these.

The goals for this tech note are:

1. Enable the automatic publishing of WSRP Producers and Portlets to UDDI registries using tooling support.
2. Enable manual publishing of WSRP Producers and optionally Portlets to UDDI registries.
3. Keep the approach simple so as to set a low bar for entry for publish / find / bind.
4. Provide a means to publish the Producer Service WSDL document as the authoritative source.
5. Avoid replication of meta-data which is obtainable via the Service Description PortType/binding unless it is useful for query use cases identified by the WSRP PFB Abstract Model.
6. Enable WSRP Service consumers to query UDDI registries for WSRP services according to the use cases identified by the WSRP PFB Abstract Model.
7. Provide a common model for both UDDI Version 2 and Version 3.
8. Allow the model to be extensible to and upwards compatible with the WSDL in UDDI technical notes.

5.1 Overview

A businessEntity structure represents all known information about a business or entity that publishes descriptive information about the entity as well as the services that it offers. The businessEntity is the top level data structure.

UDDI allows services to be published in the context of a business entity, as businessServices. In this model WSRP services, i.e. Producers and Portlets, are published as businessServices.

Since Portlets are not services that stand on their own, a reference is required to the hosting producer in order to allow service consumers to obtain all necessary data to access and address a Portlet.

In this model we do not rule out that Portlet services may be published under a different businessEntity then the hosting Producer.

In Figure 1: Publishing WSRP Services, two different businessEntities are shown representing two companies. Producer 1 is published as a businessService managed by Business A while Producer 2 is published in the domain of Business B. In this example the Producer 1 Service hosts 3 Portlets (1A-1C) while Producer 2 provides 1 Portlet (2A). Portlets 1A and 1B are logically published in the domain of Business A which is expected to be the usual case.

In contrast, Portlet 1C is published under Business B but is served by Producer 1. This model facilitates covering the “Portlet Service Provider” scenario, where a Producer is run by a service provider company, while another business is making use of the hosted Portlet services.

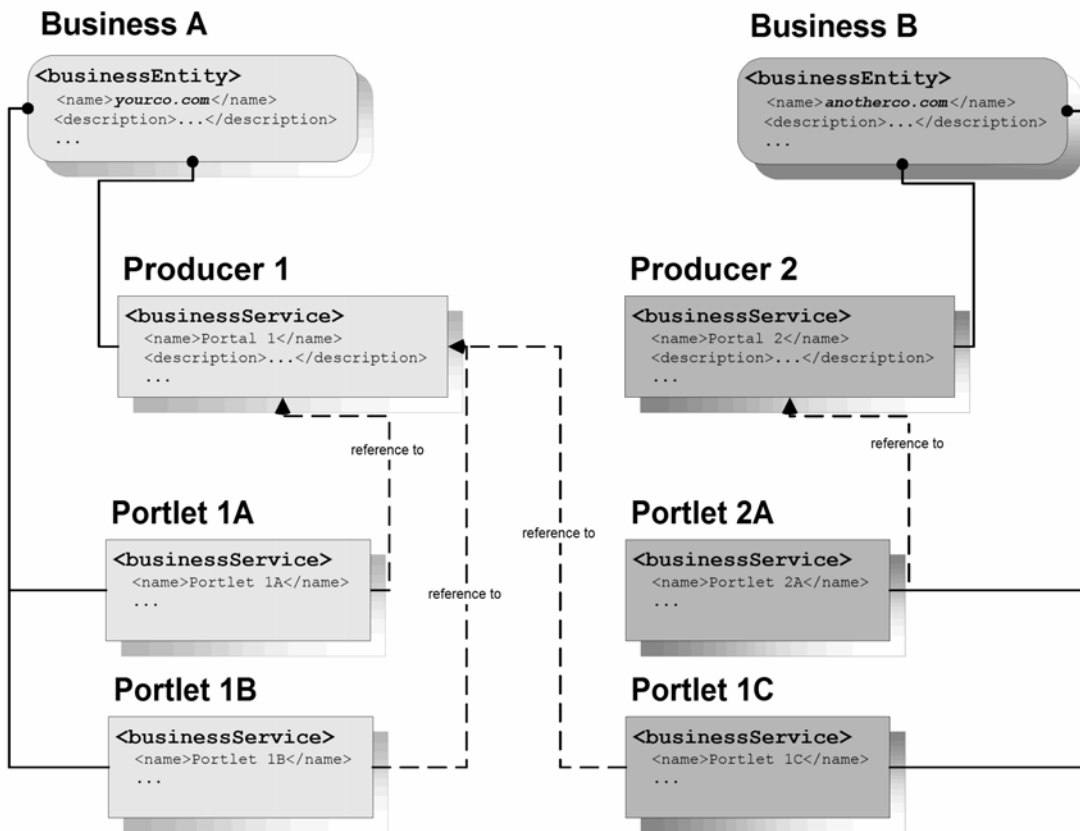


Figure 1: Publishing WSRP Services

5.2 Publishing Producers

In essence, WSRP Producers are Web Services. They expose PortTypes and Bindings a Consumer can interact with. These PortTypes and their Bindings are described in the WSRP WSDLs. Thus publishing a Producer basically corresponds to the publishing of the service WSDL along with some metadata.

Generally, to publish a Producer the following steps need to be taken:

1. Publish the WSRP v1 Bindings WSDL as a tModel. This tModel represents the technical fingerprint of the WSRP protocol.
2. Publish a “WSRP Service Type” tModel. This tModel allows categorizing businessServices as WSRP Producers to allow for easy searching within the registry independent of technical details like protocol versions or bindings supported.
3. Publish a businessService which may be categorized as WSRP “Producer”.
4. Publish the address of the Service Implementation WSDL as the authoritative source containing the actual service endpoints of the WSRP Producer service.

Note: Canonical tModels are published by the registry provider a priori. All canonical tModels defined by this technical note are already published into the UDDI Business Registry by the WSRP TC and do not need to be republished there.

However these tModels need to be published into local (“private”) registries by the registry provider and the resulting tModelKeys made known to the users of the registry.

Figure 2: Publishing Producers below shows the UDDI data structures used to publish WSRP Producers into a registry. Please note that, the figure shows only the relevant elements in the structures to visualize the scheme used. Also the businessEntity structure level is omitted here.

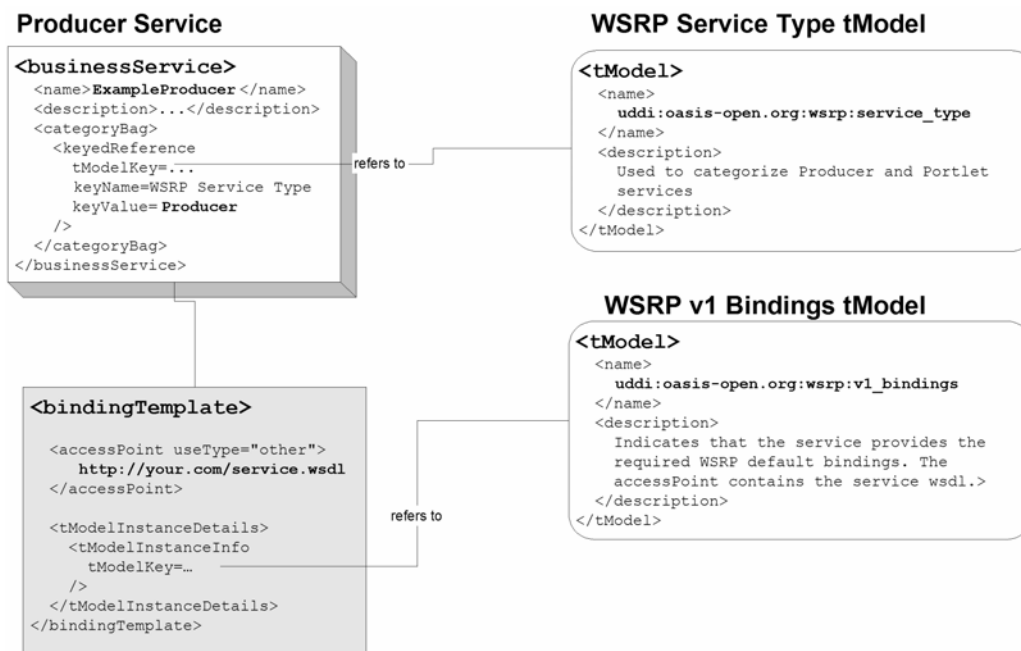


Figure 2: Publishing Producers

1
2 Basically, Producers are published as businessServices below the businessEntity
3 structure level (not shown here). The businessService structure uses a
4 bindingTemplate to provide the required WSDL information. The access point
5 element of the Producer bindingTemplate points to the URL of the Service
6 Implementation WSDL providing the actual service endpoints (as WSDL is the
7 authoritative source).

8 The bindingTemplate refers to the WSRP v1 Bindings tModel. This tModel is
9 indicating that the Producer implements at least the mandatory WSRP v1 PortTypes
10 (it may implement other portTypes as well) and provides the mandatory WSRP v1
11 Bindings.

12 The Producer businessService structure optionally contains a categoryBag which
13 references the WSRP Service Type tModel (see section 6.1). The keyValue of the
14 keyed reference holds the string "Producer". This way the businessService is tagged
15 as a WSRP Producer, independent of WSRP specification version.
16

17 5.2.1 Producer businessService

18 A WSRP Producer MUST be published using a UDDI businessService structure.
19 Since there is no name or description of a Producer carried in its metadata, no further
20 explicit mapping between WSRP and UDDI needs to take place.
21

```

22 <businessService
23   serviceKey="{SERVICEKEY_THIS_PRODUCER}"
24   businessKey="{BUSINESSKEY_THIS_SERVICE_BELONGS_TO}">
25
26   <name xml:lang="en">YourCo Producer</name>
27
28   <description xml:lang="en">
29     This is the WSRP Producer hosted by YourCo. This Producer
30     offers some cool WSRP demo Portlets.
31   </description>
32
33   <categoryBag>
34     <keyedReference
35       tModelKey="{TMODELKEY_WSRP_SERVICE_TYPE}"
36       keyName="WSRP Service Type"
37       keyValue="Producer"
38     />
39   </categoryBag>
40
41   <bindingTemplates>
42     ...
43   </bindingTemplates>
44
45 </businessService>

```

46
47 Fields:

- 48 • `serviceKey`: The key value identifying this businessService entity.
- 49 • `businessKey`: The key of the business entity that is the parent of this
50 businessService.
- 51 • `name`: A human readable name of the Producer accompanied by a unique
52 `xml:lang` value. At least one localized name element SHOULD be provided.

- 1 • **description:** A language locale qualified text describing the Producer.
2 This field is optional.
- 3 • **categoryBag:** The field SHOULD contain a keyedReference referring to
4 the WSRP Service Type tModel (see section 6.1). The keyValue MUST hold
5 the string "Producer". The keyName SHOULD contain the string "WSRP
6 Service Type". The categoryBag MAY contain other keyedReferences.
- 7 • **bindingTemplates:** For WSRP version 1 Producers, this field MUST
8 contain a bindingTemplate structure as defined in section 5.2.2. It MAY
9 contain further bindingTemplates relevant to this Producer. The next section
10 describes this structure in detail.

11 5.2.2 Producer WSDL address bindingTemplate

12 The Producer service's bindingTemplate is used to provide the URL of the Service
13 Implementation WSDL holding the actual access points of the Producer. It refers to
14 the WSRP v1 Bindings tModel which indicates that the published businessService is a
15 WSRP v1 Producer implementing the mandatory PortTypes and providing the
16 mandatory Bindings.

```
18 <bindingTemplate
19   bindingKey="{[BINDINGKEY_OF_THIS_BINDINGTEMPLATE]}"
20   serviceKey="{[SERVICEKEY_OF_THIS_PRODUCER]}">
21
22   <description xml:lang="en">
23     Provides the Address of the Service Impl. WSDL
24   </description>
25
26   <accessPoint useType="other">
27     http://yourco.com/producer/sevice.wsdl
28   </accessPoint>
29
30   <tModelInstanceDetails>
31     <tModelInstanceInfo
32       tModelKey="{[TMODELKEY_WSRP_V1_BINDINGS]}"
33     />
34   </tModelInstanceDetails>
35
36 </bindingTemplate>
```

37
38 Fields:

- 39 • **bindingKey:** Key value identifying this bindingTemplate.
- 40 • **serviceKey:** The key of the businessService that contains this
41 bindingTemplate.
- 42 • **description:** A language locale qualified text describing the usage of this
43 bindingTemplate. This field is optional.
- 44 • **accessPoint:** The bindingTemplate MUST contain this field. The accessPoint
45 MUST hold the URL of the http(s) resource providing the authoritative
46 Service Implementation WSDL of the Producer. The value of the useType
47 attribute MUST be "other". The wsdl:service MUST contain port definitions
48 for the mandatory WSRP V1 PortTypes and Bindings.
- 49 • **tModelInstanceDetails:** This container MUST contain a tModelInstanceInfo
50 structure referring to the WSRP_v1_Bindings tModel defined in section 6.2.

1 **5.2.3 Producer's Metadata**

2 Producer metadata is not directly published to UDDI. The metadata must be retrieved
3 using the ServiceDescription PortType published by the Producer.

4 Currently there is no desire to duplicate this metadata by also publishing it to
5 registries. However, in future, use-cases might come up which wish to search for
6 Producers defining certain metadata values in UDDI and which would require
7 publishing Producer metadata to UDDI.

8 Such considerations are deferred to later versions of this document.

9 **5.3 Publishing Portlets**

10 By publishing Producers there is already a means for Consumers to discover the
11 Portlets a Producer offers outside UDDI, by using the Producer's Service Description
12 PortType. However, to enhance the end-user experience and allow a direct search for
13 Portlets in registries the publisher MAY additionally publish one or more Portlets. We
14 recommend that all "Producer Offered Portlets" exposed in the Producer's service
15 description are also published to the UDDI registry.

16
17 Portlets are different from Producer services. They don't expose interfaces, access
18 points or bindings directly. A Consumer interacts with Portlets indirectly via the
19 Producer, addressing them by their Portlet Handles. Therefore Portlets are not
20 published as Web Services by re-exposing the Producer's access point and bindings.
21 Instead Portlets are published as resources accompanied by their metadata and
22 reference the Producer that manages them.

23 The following sections describe how the UDDI data structures are utilized to publish
24 Portlets.

25
26 Basically the following steps need to be taken to publish a Portlet:

- 27 1. Publish the "WSRP Service Type" tModel. This tModel allows categorizing
28 businessServices as WSRP "Portlets" to allow for easy searching within the
29 registry.
- 30 2. Publish a "WSRP Producer Service Reference" tModel. This categorization
31 tModel can be used as a means to model the relationship between Portlets and
32 hosting Producers within the same registry.
- 33 3. Publish the "WSRP Portlet Handle tModel" to the registry. This tModel
34 provides a means to publish the Portlet Handle into UDDI registries.
- 35 4. Publish a businessService representing the Portlet and providing its metadata.

36
37 Note: Canonical tModels are published by the registry provider a priori. All canonical
38 tModels defined by this technical note are already published into the UDDI Business
39 Registry by the WSRP TC and do not need to be republished there.

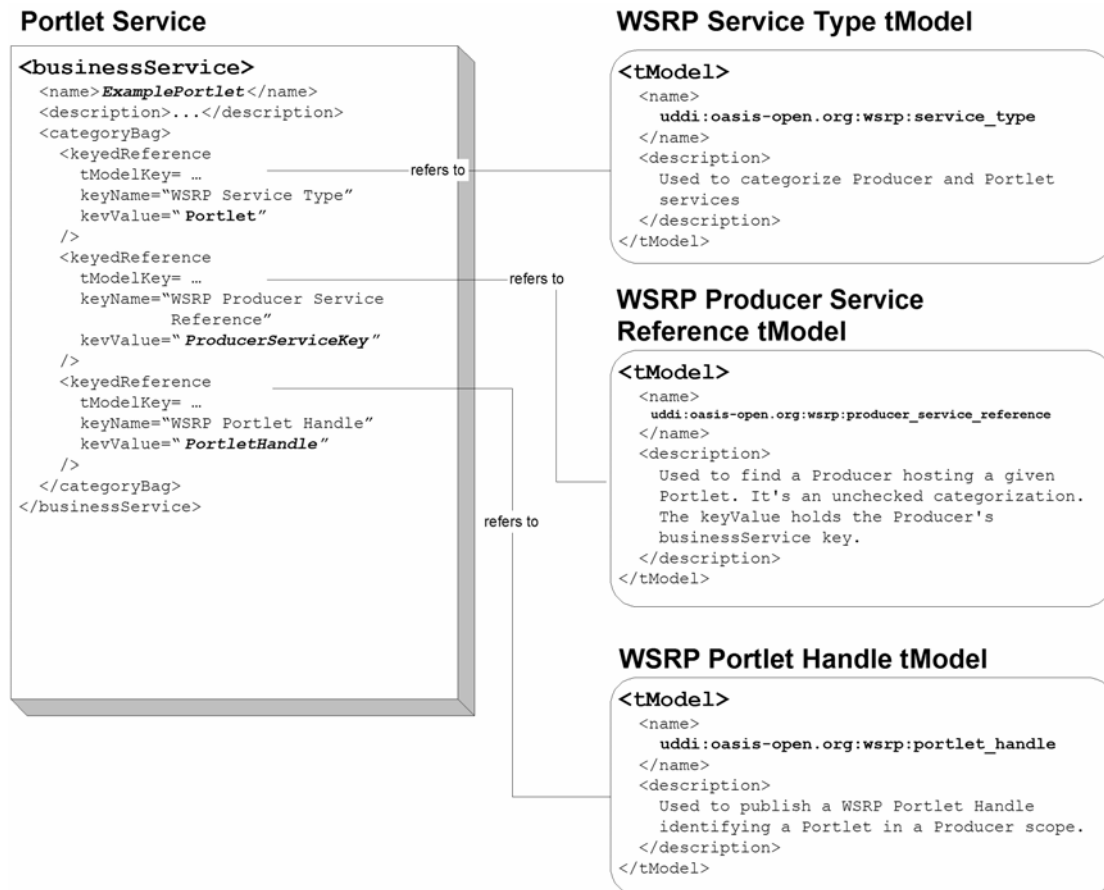
40 However these tModels need to be published into local ("private") registries by the
41 registry provider and the resulting tModelKeys made known to the users of the
42 registry.

43
44 Figure 3: Publishing Portlets below shows the UDDI data structures used to publish
45 WSRP Portlets to a registry. Please note that the figure shows only the relevant
46 elements in the structures to visualize the scheme used.

47 Basically, Portlets are published as businessServices below the businessEntity
48 structure level (not shown here). The relevant metadata is published using

1 categorization schemes. Firstly, the businessService is tagged as a Portlet. Secondly, a
 2 reference to the hosting Producer is provided. Thirdly, the Portlet handle is published.
 3 By resolving the reference to the Producer to a UDDI service, the access points of the
 4 Producer can be obtained. Together with the Portlet handle all required information is
 5 then available to the Consumer to address a specific Portlet.

6



7

8

Figure 3: Publishing Portlets

9 The use of both the WSRP Service Type tModel and the Portlet Handle tModel could
 10 be viewed as providing redundant information. Consumers could search for Portlets
 11 either by querying the registry for services categorized as WSRP Portlets or for
 12 services making use of the Portlet Handle tModel. However, wildcard searches on
 13 keyValues are supported in UDDI V3 only, thus searching for Portlets requires the
 14 Service Type tModel in UDDI V2 registries (see section 7.3).

15 Also this technical note provides a means to represent the intra-registry reference
 16 from a Portlet service to a Producer service using the WSRP Producer Service
 17 Reference tModel. We don't rule out other kinds of references, e.g. to reference a
 18 service in another registry. However, publishers using such other types of references
 19 need to be aware that Consumers might not know how to deal with such reference
 20 types and this lack of knowledge will reduce interoperability. Therefore this technical
 21 note recommends the intra registry approach for best interoperability.

22 5.3.1 Portlet businessService

23 A WSRP Portlet service MUST be published using a UDDI businessService structure.
 24 In order to retrieve the Producer that is hosting the Portlet, a reference to the Producer

1 service must be set up. The tModel “WSRP Producer Service Reference” provides a
 2 means to establish this reference. This technical note does not rule out other means to
 3 reference a Producer including inter-registry references. However, for interoperability
 4 reasons it is strongly recommended that the intra-registry method described here is
 5 used.

6
 7 Although the authoritative source of the Portlet metadata is the WSRP
 8 PortletDescription structure, which must be obtained through the Producer’s Service
 9 Description PortType, it is advantageous to map some of the fields from the WSRP
 10 PortletDescription structure to appropriate fields in the businessService structure for
 11 query/search based discovery.

```

13 <businessService
14   serviceKey="{SERVICEKEY_OF_THIS_PORTLET}"
15   businessKey="{BUSINESSKEY_THIS_SERVICE_BELONGS_TO}">
16
17   <name xml:lang="en">StockQuote Portlet</name>
18
19   <description xml:lang="en">
20     This Portlet is the best Portlet available for displaying stock quotes.
21   </description>
22
23   <categoryBag>
24     <keyedReference
25       tModelKey="{TMODELKEY_WSRP_SERVICE_TYPE}"
26       keyName="WSRP Service Type"
27       keyValue="Portlet"
28     />
29     <keyedReference
30       tModelKey="{TMODELKEY_WSRP_PRODUCER_SERVICE_REFERENCE}"
31       keyName="WSRP Producer Service Reference"
32       keyValue="{SERVICEKEY_PRODUCER}"
33     />
34     <keyedReference
35       tModelKey="{TMODELKEY_WSRP_PORTLET_HANDLE}"
36       keyName="WSRP Portlet Handle"
37       keyValue="ExamplePortlet-Handle"
38     />
39   </categoryBag>
40 </businessService>
  
```

42 Fields:

- 44 • `serviceKey`: The key value identifying this businessService entity.
- 45 • `businessKey`: The key of the business entity that contains this
 46 businessService.
- 47 • `name`: A human readable name of the Portlet accompanied by a non-
 48 duplicated `xml:lang` value. At least one name localized element **MUST** be
 49 provided. The name field with the correct localized language attribute
 50 **SHOULD** be mapped to the title field of the WSRP PortletDescription
 51 structure.
- 52 • `description`: A language qualified text describing the Portlet. This field is
 53 optional. The description element with the matching localized language
 54 attribute **SHOULD** be mapped to the description field of the WSRP
 55 PortletDescription structure.

- 1 • categoryBag: The categoryBag holds the following keyedReferences:
 - 2 1. Reference to the WSRP Service Type tModel (see section 6.1). The
 - 3 keyValue MUST contain the string “Portlet”. The keyName SHOULD
 - 4 contain the string “WSRP Service Type”. This keyedReference MUST
 - 5 be contained in the categoryBag.
 - 6 2. Reference to the WSRP Producer Service Reference tModel. The
 - 7 keyValue MUST contain the service key of the businessService entity
 - 8 in the same UDDI registry representing the Producer providing this
 - 9 Portlet. The keyName SHOULD contain the string “WSRP Producer
 - 10 Service Reference”. This keyedReference SHOULD be contained in
 - 11 the categoryBag. See section 5.3 for a discussion of the usage of other
 - 12 service references vs. interoperability.
 - 13 3. Reference to the WSRP Portlet Handle tModel. The keyValue MUST
 - 14 contain the Portlet handle. The keyName SHOULD contain the string
 - 15 “WSRP Portlet Handle”. This keyedReference MUST be contained in
 - 16 the categoryBag.
 - 17 4. Any other categorization scheme MAY be used additionally.

18 **5.3.2 Portlet’s Metadata**

19 Besides the Portlet Handle, the Portlet title and textual description, all further Portlet
20 metadata is not directly published to UDDI. All remaining metadata must be retrieved
21 using the ServiceDescription or PortletManagement PortType exposed by the
22 Producer.

23 Currently there is no need foreseen to require publishing this metadata. However, in
24 future, use-cases might arise which require searching for Portlets defining certain
25 metadata values in UDDI and thus need additional mapping to UDDI.

26 This will be deferred to later versions of this document.

6 Canonical tModels

This technical note introduces various canonical tModels used to represent the relationships and meta-data. This section describes these tModels.

6.1 WSRP Service Type tModel

6.1.1 Purpose

The WSRP Service Type tModel is used to categorize a businessService as a WSRP Producer or Portlet. Using this tagging, WSRP Producers or Portlets can more easily be found in registries, regardless of more detailed technical fingerprints like version, supported bindings, etc.

6.1.2 Definition

Name:	uddi:oasis-open.org:wsrp:service_type
Description:	Tags business services as WSRP Producer or Portlet
UDDI V3 key:	uddi:oasis-open.org:wsrp:service_type
UDDI V1, V2 key:	uuid:58a98609-c265-3c28-9079-85ea8b2521ef
Categorization:	categorization
Checked:	yes

6.1.2.1 UDDI V2 tModel Structure

```

<tModel tModelKey="{TMODELKEY_WSRP_SERVICE_TYPE}" >
  <name>
    uddi:oasis-open.org:wsrp:service_type
  </name>
  <overviewDoc>
    <overviewURL>
      http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp-
      pfb-uddi-tn-1.0.pdf
    </overviewURL>
  </overviewDoc>
  <categoryBag>
    <keyedReference
      tModelKey="uuid:c1acf26d-9672-4404-9d70-39b756e62ab4"
      keyValue="unchecked"
    />
    <keyedReference
      tModelKey="uuid:c1acf26d-9672-4404-9d70-39b756e62ab4"
      keyValue="categorization"
    />
  </categoryBag>
</tModel>

```

Fields:

- `tModelKey`: The key value identifying the tModel.
- `name`: The tModel name. Note that the name specification MUST NOT use the language attribute.
- `description`: A language locale qualified description of this tModel.

- 1 • overviewURL: The URL MUST hold the location of this note on the OASIS
2 web site ([http://www.oasis-](http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp-pfb-uddi-tn-1.0.pdf)
3 [open.org/committees/wsrp/specifications/version1/wsrp-pfb-uddi-tn-1.0.pdf](http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp-pfb-uddi-tn-1.0.pdf)).

4 6.1.3 Valid Values

5 The category system is unchecked. However, only two values are valid for use with
6 this category system.

7

Key Value	Description	UDDI Entity
Producer	Tags the businessService as a WSRP Producer	businessService
Portlet	Tags the businessService as a WSRP Portlet	businessService

8 6.2 WSRP v1 Bindings tModel

9 6.2.1 Purpose

10 This tModel is used to indicate conformance to the WSRP v1 specification. A
11 bindingTemplate that refers to this tModel states that the Web Service is
12 implementing at least the mandatory v1 WSRP PortTypes and provides the default
13 SOAP Bindings for these PortTypes. In addition the bindingTemplates accessPoint
14 points to the Service Implementation WSDL of the Producer.

15 6.2.2 Definition

16 Name: uddi:oasis-open.org:wsrp:v1_bindings
17 Description: Indicates WSRP v1 conformance
18 UDDI V3 key: uddi:oasis-open.org:wsrp:v1_bindings
19 UDDI V1,V2 key: uuid:83a39acf-5531-346d-ab89-3d2084319037
20 Categorization: none

6.2.2.1 UDDI V2 tModel Structure

```

1 <tModel tModelKey="{TMODELKEY_WSRP_V1_BINDINGS}">
2
3
4   <name>
5     uddi:oasis-open.org:wsrp:v1_bindings
6   </name>
7
8   <description xml:lang="en">
9     The purpose of this tModel is to indicate that a service conforms to the WSRP v1 specification
10    and that the accessPoint holds the URL of the authoritative Service Implementation WSDL.
11  </description>
12
13  <overviewDoc>
14    <overviewURL>
15      http://www.oasis-
16      open.org/committees/wsrp/specifications/version1/wsrp_v1_bindings.wsdl
17    </overviewURL>
18  </overviewDoc>
19
20
21  <categoryBag>
22    <keyedReference
23      tModelKey="uuid:C1ACF26D-9672-4404-9D70-39B756E62AB4"
24      keyName="uddi-org:types"
25      keyValue="specification"
26    />
27    <keyedReference
28      tModelKey="uuid:C1ACF26D-9672-4404-9D70-39B756E62AB4"
29      keyName="uddi-org:types"
30      keyValue="xmlSpec"
31    />
32    <keyedReference
33      tModelKey="uuid:C1ACF26D-9672-4404-9D70-39B756E62AB4"
34      keyName="uddi-org:types"
35      keyValue="soapSpec"
36    />
37    <keyedReference
38      tModelKey="uuid:C1ACF26D-9672-4404-9D70-39B756E62AB4"
39      keyName="uddi-org:types"
40      keyValue="wsdlSpec"
41    />
42  </categoryBag>
43
44 </tModel>

```

Fields:

- tModelKey: The key value identifying the tModel.
- name: The tModel name. Note that the name specification MUST NOT use the language attribute.
- description: A language qualified description of this tModel.
- overviewURL: The URL MUST hold the location of the WSRP v1 Bindings WSDL.
- categoryBag: The categoryBag SHOULD contain keyedReferences to the uddi-org:types taxonomy tModel and categorize the tModel accordingly as shown above.

6.3 WSRP Producer Service Reference tModel

6.3.1 Purpose

The WSRP Producer Service Reference tModel provides the means to express the relationship of a Portlet businessService to a Producer businessService in the same UDDI registry. Using this categorization scheme one can find a Producer businessService entry representing the Producer hosting this particular Portlet. When taken together with the published Portlet handle, all necessary data is available to address the Portlet.

6.3.2 Definition

Name: uddi:oasis-open.org:wsrp:producer_service_reference
 Description: The means to represent a reference to the Producer service.
 UDDI V3 key: uddi:oasis-open.org:wsrp:producer_service_reference
 UDDI V1, V2 key: uuid:7cf20608-fd2d-3d84-b382-5432ac6fe6ef
 Categorization: categorization
 Checked: yes

6.3.2.1 UDDI V2 tModel Structure

```

<tModel tModelKey="{TMODELKEY_WSRP_PRODUCER_SERVICE_REFERENCE}">
  <name>
    uddi:oasis-open.org:wsrp:producer_service_reference
  </name>

  <description xml:lang="eng">
    This tModel is a taxonomy tModel used to identify a relationship to a Producer's
    businessService entity.
  </description>

  <overviewDoc>
    <overviewURL>
      http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp-pfb-
      uddi-tn-1.0.pdf
    </overviewURL>
  </overviewDoc>

  <categoryBag>
    <keyedReference
      tModelKey="uuid:c1acf26d-9672-4404-9d70-39b756e62ab4"
      keyValue="unchecked"
    />
    <keyedReference
      tModelKey="uuid:c1acf26d-9672-4404-9d70-39b756e62ab4"
      keyValue="categorization"
    />
    <keyedReference
      tModelKey="{TMODELKEY_UDDI_ENTITY_KEY_VALUES}"
      keyName="entityKeyValues"
      keyValue="serviceKey"
    />
  </categoryBag>
</tModel>

```

1 Fields:

- 2 • `tModelKey`: The key value identifying the `tModel`.
- 3 • `name`: The `tModel` name. Note that the name specification **MUST NOT** use
- 4 the language attribute.
- 5 • `description`: A language locale qualified description of this `tModel`.
- 6 • `overviewURL`: The URL **MUST** hold the location of this note on the OASIS
- 7 web site ([http://www.oasis-](http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp-pfb-uddi-tn-1.0.pdf)
- 8 [open.org/committees/wsrp/specifications/version1/wsrp-pfb-uddi-tn-1.0.pdf](http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp-pfb-uddi-tn-1.0.pdf)).
- 9 • `categoryBag`: Note that the `categoryBag` contains a keyed reference to the
- 10 UDDI Entity Key Values category system (see [6], section 11.1.9). This
- 11 category system allows the registry to validate the `keyValues` used with this
- 12 `tModel` to be valid `serviceKeys` in the registry.

13 6.3.3 Valid Values

14 The valid values for this categorization system are UDDI `serviceKeys`. The

15 `serviceKey` **MUST** be the key of the `businessService` structure within the registry

16 representing the Producer hosting that particular Portlet (see section 5.2.1).

17 6.4 WSRP Portlet Handle `tModel`

18 6.4.1 Purpose

19 The WSRP Portlet Handle `tModel` provides the means publish the Portlet handle into

20 the registry. Together with the published producer service reference, all necessary

21 data is available to address the Portlet.

22 6.4.2 Definition

23 Name:	<code>uddi:oasis-open.org:wsrp:portlet_handle</code>
24 Description:	The means to publish a WSRP Portlet handle
25 UDDI V3 key:	<code>uddi:oasis-open.org:wsrp:portlet_handle</code>
26 UDDI V1, V2 key:	<code>uuid:ced0f0d1-0d35-345a-9a3a-13e8a0dcc47f</code>
27 Categorization:	<code>categorization</code>
28 Checked:	<code>no</code>

29 6.4.2.1 UDDI V2 `tModel` Structure

```

30 <tModel tModelKey="{TMODELKEY_WSRP_PORTLET_HANDLE}" >
31
32   <name>
33     uddi:oasis-open.org:wsrp:portlet_handle
34   </name>
35
36   <description xml:lang="eng"
37     This tModel provides a means to publish a WSRP Portlet handle.
38   </description>
39
40   <overviewDoc>
41     <overviewURL>
42       http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp-pfb-
43       uddi-tn-1.0.pdf.
44     </overviewURL>
45   </overviewDoc>
46

```

```
1 <categoryBag>
2   <keyedReference
3     tModelKey="uuid:c1acf26d-9672-4404-9d70-39b756e62ab4"
4     keyValue="unchecked"
5   />
6   <keyedReference
7     tModelKey="uuid:c1acf26d-9672-4404-9d70-39b756e62ab4"
8     keyValue="categorization"
9   />
10 </categoryBag>
11
12 </tModel>
```

Fields:

- tModelKey: The key value identifying the tModel.
- name: The tModel name. Note that the name specification MUST NOT use the language attribute.
- description: A language locale qualified description of this tModel.
- overviewURL: The URL MUST hold the location of this note on the OASIS web site (<http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp-pfb-uddi-tn-1.0.pdf>).

6.4.3 Valid Values

The valid values for this categorization system are the valid portlet handles. Please refer to the WSRP 1.0 specification [1], section 5.1.2 Handle Type for the definition of valid handles.

1 **7 Sample Queries**

2 This section describes how to perform UDDI Version 2 API queries based on this
3 model.

4 **7.1 Find WSRP Producers**

5 There are two ways to find Producers within the registry. The first type of query
6 allows finding Producers in a WSRP version agnostic way, the second allows to
7 search for Producers explicitly supporting WSRP Version 1.

8 **7.1.1 Find WSRP Producers Independent of the Version 9 Supported**

10 Search for businessServices categorized as WSRP Producer. Additionally the search
11 can be limited to businessServices contained in a certain businessEntity or to
12 businessService names matching a pattern.

13

```
14 <find_service generic="2.0"  
15     xmlns="urn:uddi-org:api_v2">  
16  
17     <categoryBag>  
18         <keyedReference  
19             tModelKey="{TMODELKEY_WSRP_SERVICE_TYPE}"  
20             keyName="WSRP Service Type"  
21             keyValue="Producer"  
22         />  
23     </categoryBag>  
24  
25 </find_service>
```

26

27 The query should return a list of businessServices categorized as WSRP Producers.
28 From this list a particular businessService, i.e. its key, can be chosen and used for
29 further queries (see 7.2).

30 **7.1.2 Find WSRP Producers Supporting Version 1**

31 Search for businessServices whose bindingTemplates refer to the WSRP v1 Bindings
32 tModel. Additionally the search can be limited to businessServices contained in a
33 certain businessEntity or to businessService names matching a pattern.

34

```
35 <find_service generic="2.0"  
36     xmlns="urn:uddi-org:api_v2">  
37  
38     <tModelBag>  
39         <tModelKey>{TMODELKEY_WSRP_V1_BINDINGS}</tModelKey>  
40     </tModelBag>  
41  
42 </find_service>
```

43

44 The query should return a list of businessServices whose bindingTemplates indicate
45 that the service implements the WSRP v1 bindings. From this list a particular
46 businessService, i.e. its key, can be chosen and used for further queries (see 7.2).

1 We expect this to be the most frequently used way to publish and discover producers
 2 as it is the most light-weight and direct (i.e. as it provides the producer's service
 3 WSDL).

4 **7.2 Get WSRP Producer Service WSDL URL**

5 Search for bindingTemplates of a particular businessService referring to the WSRP v1
 6 Bindings tModel.

7

```
8 <find_binding serviceKey="{SERVICEKEY_PRODUCER}"
9 generic="2.0"
10 xmlns="urn:uddi-org:api_v2">
11
12 <tModelBag>
13 <tModelKey>{TMODELKEY_WSRP_V1_BINDINGS}</tModelKey>
14 </tModelBag>
15
16 </find_binding>
```

17

18 This query should return the binding details containing the WSDL URL.

19 **7.3 Find WSRP Portlets**

20 Searching for Portlets is similar to search for Producers. Basically it is a query for
 21 businessServices categorized as WSRP Portlets. Additionally the search can be
 22 limited to businessServices contained in a certain businessEntity or to businessService
 23 names matching a pattern.

24

```
25 <find_service generic="2.0"
26 xmlns="urn:uddi-org:api_v2">
27
28 <categoryBag>
29 <keyedReference
30 tModelKey="{TMODELKEY_WSRP_SERVICE_TYPE}"
31 keyName="WSRP Service Type"
32 keyValue="Portlet"
33 />
34 </categoryBag>
35
36 </find_service>
```

37

38 The query should return a list of businessServices categorized as WSRP Portlets.
 39 From this list, a particular businessService, i.e. its key, can be chosen and used for
 40 further queries (see 7.5).

41 Note that, in principle, the Portlet Handle tModel and the Service Type tModel can be
 42 viewed as redundant information. Portlets could be found in the registry by searching
 43 either for a service referring to the Service Type tModel or for a service making use of
 44 the Portlet Handle tModel. The second method can be exploited in UDDI V3 queries
 45 only since this API allows wildcard searches of keyValues. The following is an
 46 example of such an UDDI V3 API query.

47 This is a search for businessServices using the WSRP Portlet Handle canonical
 48 tModel to provide the portlet handle. In order to find all businessServices, a wildcard
 49 search is used for the keyValue of the WSRP Portlet Handle categorization scheme.

```

1
2 <find_service xmlns="urn:uddi-org:api_v3">
3
4   <find_qualifiers>
5     <find_qualifier>
6       uddi:uddi.org:findqualifier:approximateMatch
7     </find_qualifier>
8   </find_qualifiers>
9
10  <categoryBag>
11    <keyedReference
12      tModelKey="{TMODELKEY_WSRP_PORTLET_HANDLE}"
13      keyName="WSRP Portlet Handle"
14      keyValue="*"
15    />
16  </categoryBag>
17
18 </find_service>

```

19
20 The query should return a list of businessServices using the WSRP Portlet Handle
21 tModel. From this list, a particular businessService, i.e. its key, can be chosen and
22 used for further queries (see 7.5).

24 7.4 Find WSRP Portlets Hosted by a Particular 25 Producer

26 It can be convenient to find all Portlets within the registry that are hosted by a
27 particular Producer. This query is a search for businessServices having a Producer
28 service reference in their category bag pointing to the hosting Producer service.

```

30 <find_service generic="2.0"
31   xmlns="urn:uddi-org:api_v2">
32
33   <categoryBag>
34     <keyedReference
35       tModelKey="{TMODELKEY_WSRP_PRODUCER_SERVICE_REFERENCE}"
36       keyName="WSRP Producer Service Reference"
37       keyValue="{SERVICEKEY_PRODUCER}"
38     />
39   </categoryBag>
40
41 </find_service>

```

42
43 This query should return a list of businessServices representing Portlets hosted by the
44 specified Producer service. From this list, a particular businessService, i.e. its key, can
45 be chosen and used for further queries (see section 7.6).

7.5 Find WSRP Portlets by Portlet Handle

This query is a search for businessServices having WSRP Portlet Handle tModel in their category bag with a matching Portlet handle keyValue. For example, an administrator may wish to check availability of a particular “Producer Offered Portlet”.

```
<find_service generic="2.0"
  xmlns="urn:uddi-org:api_v2">
  <categoryBag>
    <keyedReference
      tModelKey="{TMODELKEY_WSRP_PORTLET_HANDLE}"
      keyName="WSRP Portlet Handle"
      keyValue="SampleHandle"
    >
  </categoryBag>
</find_service>
```

This query should return a businessServices representing the Portlet with the matching Portlet handle. This businessService, i.e. its key, can be used for further queries (see section 7.6).

7.6 Get WSRP Portlet Access Information

Once a businessService representing a Portlet is found, the necessary data to address the Portlet – the Portlet handle and the hosting Producer service – can be obtained by retrieving the service details.

```
<get_serviceDetail generic="2.0"
  xmlns="urn:uddi-org:api_v2">
  <serviceKey>${SERVICEKEY_PORTLET}</serviceKey>
</get_serviceDetail>
```

This query should return the service detail of the service requested. To obtain the Producer reference and the Portlet handle the returned businessService structure and the contained categoryBag need to be examined (see 5.3.1).

8 Private UDDI Registries Considerations

Note that UDDI V2 registries generate V2 keys when tModels are published. In contrast to V3 UDDI registries V2 registries do not allow publisher-assigned keys. Therefore the V2 tModel keys defined in this technical note may differ in local (private) V2 registries.

Consumers and Producers using private UDDI V2 registries must be prepared to handle V2 keys accordingly, i.e. implementations must provide a mapping of the herein defined tModels to valid V2 keys in local registries.

1 **A Additional tModels**

2 The tModels described here represent the WSRP portTypes and bindings and are
3 modeled according to the WSDL in UDDI 2.0 technical note [4]. They can be used if
4 the expanded modeling of this tech note is desired for to providing additional
5 flexibility and more detailed queries. For further details and usage of these tModels
6 please refer to the UDDI technical note.

7 Note: The canonical tModels are published by the registry provider a priori. All
8 canonical tModels defined by this technical note are already published into the UDDI
9 Business Registry by the WSRP TC and do not need to be republished there.

10 However these additional tModels should to be published into local (“private”)
11 registries by the registry provider and the resulting tModelKeys made known to the
12 users of the registry.

13 **A.1 WSRP v1 ServiceDescription PortType tModel**

14 **A.1.1 Purpose**

15 The WSRP v1 ServiceDescription PortType tModel is used to indicate that a Web
16 Service provides the WSRP Service Description Interface.

17 **A.1.1 Definition**

18 Name:	WSRP_v1_ServiceDescription_PortType
19 Description:	Representation of the ServiceDescription portType
20 UDDI V3 key:	uddi:oasis-open.org:wsrp:v1_service_description_porttype
21 UDDI V1,V2 key:	uuid:3786a28b-8d02-35da-bca9-04d4921b70f2
22 Categorization:	none
23 Checked:	no

1 A.1.1.1 UDDI V2 tModel Structure

```
2 <tModel tModelKey="{TMODELKEY_SERVICEDESCRIPTION_PORTTYPE}" >
3 <name>
4   WSRP_v1_ServiceDescription_PortType
5 </name>
6
7 <categoryBag>
8   <keyedReference
9     tModelKey="{TMODELKEY_UDDI_XML_NAMESPACE}"
10    keyName="portType namespace"
11    keyValue="urn:oasis:names:tc:wsrp:wsdl:v1:intf"
12  />
13   <keyedReference
14     tModelKey="{TMODELKEY_UDDI_WSDL_ENTITY_TYPE}"
15     keyName="WSDL type"
16     keyValue="portType"
17   />
18 </categoryBag>
19
20 <overviewDoc>
21   <overviewURL>
22     http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp\_v1\_interfaces.wsdl
23   </overviewURL>
24 </overviewDoc>
25
26 </tModel>
```

1 **A.2 WSRP v1 Markup PortType tModel**

2 **A.2.1 Purpose**

3 The WSRP v1 Markup PortType tModel is used to indicate that a Web Service
4 provides the WSRP Markup Interface.

5 **A.2.2 Definition**

6 Name: WSRP_v1_Markup_PortType
7 Description: Representation of the Markup portType
8 UDDI V3 key: uddi:oasis-open.org:wsrp:v1_markup_porttype
9 UDDI V1,V2 key: uuid:161fb2dd-6a94-3756-9455-8cc24f5cefe0
10 Categorization: none
11 Checked: no

12 **A.2.2.1 UDDI V2 tModel Structure**

```
13 <tModel tModelKey="{TMODELKEY_MARKUP_PORTTYPE}" >  
14 <name>  
15 WSRP_v1_Markup_PortType  
16 </name>  
17  
18 <categoryBag>  
19 <keyedReference  
20 tModelKey="{TMODELKEY_UDDI_XML_NAMESPACE}"  
21 keyName="portType namespace"  
22 keyValue="urn:oasis:names:tc:wsrp:wsdl:v1:intf"  
23 />  
24 <keyedReference  
25 tModelKey="{TMODELKEY_UDDI_WSDL_ENTITY_TYPE}"  
26 keyName="WSDL type"  
27 keyValue="portType"  
28 />  
29 </categoryBag>  
30  
31 <overviewDoc>  
32 <overviewURL>  
33 http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_interfaces.wsdl  
34 </overviewURL>  
35 </overviewDoc>  
36  
37 </tModel>
```

38

1 **A.3 WSRP v1 Registration PortType tModel**

2 **A.3.1 Purpose**

3 The WSRP v1 Registration PortType tModel is used to indicate that a Web Service
4 provides the WSRP Registration Interface.

5 **A.3.2 Definition**

6 Name: WSRP_v1_Registration_PortType
7 Description: Representation of the Registration portType
8 UDDI V3 key: uddi:oasis-open.org:wsrp:v1_registration_porttype
9 UDDI V1,V2 key: uuid:e6076806-005c-3c8a-b295-d84033788639
10 Categorization: none
11 Checked: no

12 **A.3.2.1 UDDI V2 tModel Structure**

```

13 <tModel tModelKey="{TMODELKEY_REGISTRATION_PORTTYPE}" >
14   <name>
15     WSRP_v1_Registration_PortType
16   </name>
17
18   <categoryBag>
19     <keyedReference
20       tModelKey="{TMODELKEY_UDDI_XML_NAMESPACE}"
21       keyName="portType namespace"
22       keyValue="urn:oasis:names:tc:wsrp:wsdl:v1:intf"
23     />
24     <keyedReference
25       tModelKey="{TMODELKEY_UDDI_WSDL_ENTITY_TYPE}"
26       keyName="WSDL type"
27       keyValue="portType"
28     />
29   </categoryBag>
30
31   <overviewDoc>
32     <overviewURL>
33       http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_interfaces.wsdl
34     </overviewURL>
35   </overviewDoc>
36
37 </tModel>

```


1 **A.4 WSRP v1 PortletManagement PortType tModel**

2 **A.4.1 Purpose**

3 The WSRP v1 PortletManagement PortType tModel is used to indicate that a Web
4 Service provides the WSRP Portlet Management Interface.

5 **A.4.2 Definition**

6	Name:	WSRP_v1_PortletManagement_PortType
7	Description:	Representation of the PortletManagement portType
8	UDDI V3 key:	uddi:oasis-open.org:wsrp:v1_portlet_management_porttype
9	UDDI V1,V2 key:	uuid:ecf92a86-dd5b-3e19-8dd4-f1efe669c692
10	Categorization:	none
11	Checked:	no

12 **A.4.2.1 UDDI V2 tModel Structure**

```

13 <tModel tModelKey="{TMODELKEY_PORTLETMANAGEMENT_PORTTYPE}" >
14   <name>
15     WSRP_v1_PortletManagement_PortType
16   </name>
17
18   <categoryBag>
19     <keyedReference
20       tModelKey="{TMODELKEY_UDDI_XML_NAMESPACE}"
21       keyName="portType namespace"
22       keyValue="urn:oasis:names:tc:wsrp:wsdl:v1:intf"
23     />
24     <keyedReference
25       tModelKey="{TMODELKEY_UDDI_WSDL_ENTITY_TYPE}"
26       keyName="WSDL type"
27       keyValue="portType"
28     />
29   </categoryBag>
30
31   <overviewDoc>
32     <overviewURL>
33       http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_interfaces.wsdl
34     </overviewURL>
35   </overviewDoc>
36
37 </tModel>

```

38 **A.5 WSRP v1 ServiceDescription SOAP Binding** 39 **tModel**

40 **A.5.1 Purpose**

41 The WSRP v1 ServiceDescription SOAP Binding tModel is used to indicate that a
42 Web Service provides the default SOAP over HTTP binding for the Service
43 Description Interface.

44 **A.5.2 Definition**

1 Name: WSRP_v1_ServiceDescription_Binding_SOAP
 2 Description: Representation of the ServiceDescription SOAP binding
 3 UDDI V3 key: uddi:oasis-open.org:wsrp:v1_service_description_binding_soap
 4 UDDI V1,V2 key: uuid:973f9d97-8314-3069-a8bc-fd2f8f9d9741
 5 Categorization: none
 6 Checked: no

7 A.5.2.1 UDDI V2 tModel Structure

```

8 <tModel tModelKey="{TMODELKEY_SERVICEDESCRIPTION_BINDING}" >
9 <name>
10 WSRP_v1_ServiceDescription_Binding_SOAP
11 </name>
12
13 <categoryBag>
14 <keyedReference
15 tModelKey="{TMODELKEY_UDDI_XML_NAMESPACE}"
16 keyName="binding namespace"
17 keyValue="urn:oasis:names:tc:wsrp:wsdl:v1:bind"
18 />
19 <keyedReference
20 tModelKey="{TMODELKEY_UDDI_WSDL_ENTITY_TYPE}"
21 keyName="WSDL type"
22 keyValue="binding"
23 />
24 <keyedReference
25 tModelKey="{TMODELKEY_UDDI_WSDL_PORTTYPE_REFERENCE}"
26 keyName="portType reference"
27 keyValue="{TMODELKEY_SERVICEDESCRIPTION_PORTTYPE}"
28 />
29 <keyedReference
30 tModelKey="uuid:c1acf26d-9672-4404-9d70-39b756e62ab4"
31 keyName="uddi-org:types"
32 keyValue="wsdlSpec"
33 />
34 <keyedReference
35 tModelKey="{TMODELKEY_UDDI_PROTOCOL_CATEGORIZATION}"
36 keyName="SOAP protocol"
37 keyValue="{TMODELKEY_UDDI_SOAP_PROTOCOL_TMODEL}"
38 />
39 <keyedReference
40 tModelKey="{TMODELKEY_UDDI_TRANSPORT_CATEGORIZATION}"
41 keyName="HTTP protocol"
42 keyValue="{TMODELKEY_UDDI_HTTP_PROTOCOL_TMODEL}"
43 />
44 </categoryBag>
45
46 <overviewDoc>
47 <overviewURL>
48 http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_bindings.wsdl
49 </overviewURL>
50 </overviewDoc>
51
52 </tModel>
  
```

1 **A.6 WSRP v1 Markup SOAP Binding tModel**

2 **A.6.1 Purpose**

3 The WSRP v1 Markup SOAP Binding tModel is used to indicate that a Web Service
4 provides the default SOAP over HTTP binding for the Markup Interface.

5 **A.6.2 Definition**

6 Name:	WSRP_v1_Markup_Binding_SOAP
7 Description:	Representation of the Markup SOAP binding
8 UDDI V3 key:	uddi:oasis-open.org:wsrp:v1_markup_binding_soap
9 UDDI V1,V2 key:	uuid:6a699c53-2b44-398b-9a1d-eca88585dd11
10 Categorization:	none
11 Checked:	no

1 A.6.2.1 UDDI V2 tModel Structure

```

2 <tModel tModelKey="{TMODELKEY_MARKUP_BINDING}" >
3 <name>
4   WSRP_v1_Markup_Binding_SOAP
5 </name>
6
7 <categoryBag>
8   <keyedReference
9     tModelKey="{TMODELKEY_UDDI_XML_NAMESPACE}"
10    keyName="binding namespace"
11    keyValue="urn:oasis:names:tc:wsrp:wSDL:v1:bind"
12  />
13   <keyedReference
14     tModelKey="{TMODELKEY_UDDI_WSDL_ENTITY_TYPE}"
15     keyName="WSDL type"
16     keyValue="binding"
17   />
18   <keyedReference
19     tModelKey="{TMODELKEY_UDDI_WSDL_PORTTYPE_REFERENCE}"
20     keyName="portType reference"
21     keyValue="{TMODELKEY_MARKUP_PORTTYPE}"
22   />
23   <keyedReference
24     tModelKey="uuid:c1acf26d-9672-4404-9d70-39b756e62ab4"
25     keyName="uddi-org:types"
26     keyValue="wSDLSpec"
27   />
28   <keyedReference
29     tModelKey="{TMODELKEY_UDDI_PROTOCOL_CATEGORIZATION}"
30     keyName="SOAP protocol"
31     keyValue="{TMODELKEY_UDDI_SOAP_PROTOCOL_TMODEL}"
32   />
33   <keyedReference
34     tModelKey="{TMODELKEY_UDDI_TRANSPORT_CATEGORIZATION}"
35     keyName="HTTP protocol"
36     keyValue="{TMODELKEY_UDDI_HTTP_PROTOCOL_TMODEL}"
37   />
38 </categoryBag>
39
40 <overviewDoc>
41   <overviewURL>
42     http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_bindings.wsdl
43   </overviewURL>
44 </overviewDoc>
45
46 </tModel>

```

47 A.7 WSRP v1 Registration SOAP Binding tModel

48 A.7.1 Purpose

49 The WSRP v1 Registration SOAP Binding tModel is used to indicate that a Web
50 Service provides the default SOAP over HTTP binding for the Registration Interface.

51 A.7.2 Definition

52 Name: WSRP_v1_Registration_Binding_SOAP
53 Description: Representation of the Registration SOAP binding

1 UDDI V3 key: uddi:oasis-open.org:wsrp:v1_registration_binding_soap
 2 UDDI V1,V2 key: uuid:40e2d30f-03fe-3cc3-b126-6b662d2eacb4
 3 Categorization: none
 4 Checked: no

5 **A.7.2.1 UDDI V2 tModel Structure**

```

6 <tModel tModelKey="{TMODELKEY_REGISTRATION_BINDING}" >
7   <name>
8     WSRP_v1_Registration_Binding_SOAP
9   </name>
10
11  <categoryBag>
12    <keyedReference
13      tModelKey="{TMODELKEY_UDDI_XML_NAMESPACE}"
14      keyName="binding namespace"
15      keyValue="urn:oasis:names:tc:wsrp:wsdl:v1:bind"
16    />
17    <keyedReference
18      tModelKey="{TMODELKEY_UDDI_WSDL_ENTITY_TYPE}"
19      keyName="WSDL type"
20      keyValue="binding"
21    />
22    <keyedReference
23      tModelKey="{TMODELKEY_UDDI_WSDL_PORTTYPE_REFERENCE}"
24      keyName="portType reference"
25      keyValue="{TMODELKEY_REGISTRATION_PORTTYPE}"
26    />
27    <keyedReference
28      tModelKey="uuid:c1acf26d-9672-4404-9d70-39b756e62ab4"
29      keyName="uddi-org:types"
30      keyValue="wsdlSpec"
31    />
32    <keyedReference
33      tModelKey="{TMODELKEY_UDDI_PROTOCOL_CATEGORIZATION}"
34      keyName="SOAP protocol"
35      keyValue="{TMODELKEY_UDDI_SOAP_PROTOCOL_TMODEL}"
36    />
37    <keyedReference
38      tModelKey="{TMODELKEY_UDDI_TRANSPORT_CATEGORIZATION}"
39      keyName="HTTP protocol"
40      keyValue="{TMODELKEY_UDDI_HTTP_PROTOCOL_TMODEL}"
41    />
42  </categoryBag>
43
44  <overviewDoc>
45    <overviewURL>
46      http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_bindings.wsdl
47    </overviewURL>
48  </overviewDoc>
49
50 </tModel>
  
```

1 **A.8 WSRP v1 PortletManagement SOAP Binding**

2 **tModel**

3 **A.8.1 Purpose**

4 The WSRP v1 PortletManagement SOAP Binding tModel is used to indicate that a
5 Web Service provides the default SOAP over HTTP binding for the Portlet
6 Management Interface.

7 **A.8.2 Definition**

8 Name:	WSRP_v1_PortletManagement_Binding_SOAP
9 Description:	Representation of the PortletManagement SOAP binding
10 UDDI V3 key:	uddi:oasis-open.org:wsrp:v1_portlet_management_binding_soap
11 UDDI V1,V2 key:	uuid:98e4dccb-2eb4-3c9c-8fcb-0b176c09a037
12 Categorization:	none
13 Checked:	no

1 A.8.2.1 UDDI V2 tModel Structure

```
2 <tModel tModelKey="{TMODELKEY_PORTLETMANAGEMENT_BINDING}" >
3 <name>
4   WSRP_v1_PortletManagement_Binding_SOAP
5 </name>
6
7 <categoryBag>
8   <keyedReference
9     tModelKey="{TMODELKEY_UDDI_XML_NAMESPACE}"
10    keyName="binding namespace"
11    keyValue="urn:oasis:names:tc:wsrp:wsdl:v1:bind"
12  />
13   <keyedReference
14     tModelKey="{TMODELKEY_UDDI_WSDL_ENTITY_TYPE}"
15     keyName="WSDL type"
16     keyValue="binding"
17   />
18   <keyedReference
19     tModelKey="{TMODELKEY_UDDI_WSDL_PORTTYPE_REFERENCE}"
20     keyName="portType reference"
21     keyValue="{TMODELKEY_PORTLETMANAGEMENT_PORTTYPE}"
22   />
23   <keyedReference
24     tModelKey="uuid:c1acf26d-9672-4404-9d70-39b756e62ab4"
25     keyName="uddi-org:types"
26     keyValue="wsdlSpec"
27   />
28   <keyedReference
29     tModelKey="{TMODELKEY_UDDI_PROTOCOL_CATEGORIZATION}"
30     keyName="SOAP protocol"
31     keyValue="{TMODELKEY_UDDI_SOAP_PROTOCOL_TMODEL}"
32   />
33   <keyedReference
34     tModelKey="{TMODELKEY_UDDI_TRANSPORT_CATEGORIZATION}"
35     keyName="HTTP protocol"
36     keyValue="{TMODELKEY_UDDI_HTTP_PROTOCOL_TMODEL}"
37   />
38 </categoryBag>
39
40 <overviewDoc>
41   <overviewURL>
42     http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_bindings.wsdl
43   </overviewURL>
44 </overviewDoc>
45
46 </tModel>
```

1 B References

2 B.1 Normative

- 3 **[RFC2119]** *S. Bradner, Key words for use in RFCs to Indicate Requirement*
4 *Levels, IETF RFC 2119, March 1997, available at:*
5 <http://www.ietf.org/rfc/rfc2119.txt>
- 6 **[1]** *WSRP specification, version 1.0. Available at:*
7 [http://www.oasis-open.org/committees/download.php/3343/oasis-200304-wsrp-](http://www.oasis-open.org/committees/download.php/3343/oasis-200304-wsrp-specification-1.0.pdf)
8 [specification-1.0.pdf](http://www.oasis-open.org/committees/download.php/3343/oasis-200304-wsrp-specification-1.0.pdf)
- 9 **[2]** *Using WSDL in a UDDI registry, Version 2.0 ,available at:*
10 <http://www.oasis-open.org/committees/uddi-spec/doc/tn/uddi-spec-tc-tn-wsdl-v200->
11 [20031104.pdf](http://www.oasis-open.org/committees/uddi-spec/doc/tn/uddi-spec-tc-tn-wsdl-v200-20031104.pdf)
- 12 **[3]** *Using WSDL in a UDDI Registry 1.08, available at:*
13 <http://uddi.org/pubs/wsdlbestpractices.pdf>
- 14 **[4]** *Web Services Description Language (WSDL) 1.1, March 15, 2001,*
15 *available at:*
16 <http://www.w3.org/TR/wsdl>
- 17 **[5]** *UDDI Version 2.03 Data Structure Reference, July 7, 2002,*
18 *available at:*
19 <http://uddi.org/pubs/DataStructure-V2.03-Published-20020719.pdf>.
- 20 **[6]** *UDDI Version 3.0 Published Specification, 19 July 2002, available*
21 *at:*
22 <http://www.uddi.org/pubs/uddi-v3.00-published-20020719.pdf>.
- 23 **[7]** *WSRP Version 1.0 types schema, available at:*
24 http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_types.xsd
- 25 **[8]** *WSRP Version 1.0 portTypes definitions, available at:*
26 [http://www.oasis-](http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_interfaces.wsdl)
27 [open.org/committees/wsrp/specifications/version1/wsrp_v1_interfaces.wsdl](http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_interfaces.wsdl)
- 28 **[9]** *WSRP Version 1.0 bindings definitions, available at:*
29 http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp_v1_bindings.wsdl
- 30 **[10]** *WSRP PFB Abstract Model, Version 1.0, available at:*
31 [http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp-pfb-abstract-](http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp-pfb-abstract-model-1_0.pdf)
32 [model-1_0.pdf](http://www.oasis-open.org/committees/wsrp/specifications/version1/wsrp-pfb-abstract-model-1_0.pdf)
- 33

1 C Revision History

Rev	Date	By Whom	What
draft-01	09/12/03	Richard Jacob	First draft
draft-02	09/18/03	Richard Jacob	Added publishing of Portlets
draft-03	01/16/04	Andre Kramer	Editorial suggestions, added Producer Service Reference Binding Template
draft-04	01/20/04	Richard Jacob	added figures and descriptions for Producer and Portlet publishing
draft-05	02/12/04	Andre Kramer, Richard Jacob	editorial changes, added line numbering
draft-06	06/08/04	Richard Jacob	Changes reflecting last F2F discussions, rearrangement of sections
Draft-07	06/29/04	Richard Jacob	Changed to optional Producer categorization, changed figures to current naming scheme, added UDDI version consideration, clarified relationship to WSDL in UDDI tech notes, added introductory figure, added sample queries
Draft-08	07/08/04	Richard Jacob	Version for 1 st TC review; added appendix A additional tModels, clarified redundancy of keys used for portlet publishing, added reference to UDDI: entityKeyValues tModel, editorial changes
Draft-09	08/16/04	Richard Jacob	Reflecting comments from review. Changed V3 keys, gen'd V2 keys
Draft-10	09/16/04	Richard Jacob	Reflected comments received
Draft-11	10/15/04	Richard Jacob	Final for publishing, F2F review, for TC approval
1.0	12/06/05	Richard Jacob	Published version, corrected WSDL URLs

2

1 **D Acknowledgements**

2 The following individuals were members of the WSRP Publish/Find/Bind SC during
3 development of this document:

4
5 Subbu Allamaraju (BEA)
6 Ross Fubini (Plumtree)
7 Scott Goldstein (Vignette)
8 Richard Jacob (IBM)
9 Andre Kramer (Citrix)
10 Alan Kropp (Vignette)
11 Farrukh Najmi (Sun)
12 Yossi Tamari (SAP)
13 Rich Thompson (IBM)

14
15 The following non WSRP TC members were additional reviewers of this document:

16
17 John Colgrave (IBM) (UDDI TC)
18 Matthew Dovey (Oxford University) (UDDI TC)
19 Claus von Riegen (SAP) (UDDI TC)
20
21

1 E Notices

2 OASIS takes no position regarding the validity or scope of any intellectual property or
3 other rights that might be claimed to pertain to the implementation or use of the
4 technology described in this document or the extent to which any license under such
5 rights might or might not be available; neither does it represent that it has made any
6 effort to identify any such rights. Information on OASIS's procedures with respect to
7 rights in OASIS specifications can be found at the OASIS website. Copies of claims
8 of rights made available for publication and any assurances of licenses to be made
9 available, or the result of an attempt made to obtain a general license or permission
10 for the use of such proprietary rights by implementors or users of this specification,
11 can be obtained from the OASIS Executive Director.

12 OASIS invites any interested party to bring to its attention any copyrights, patents or
13 patent applications, or other proprietary rights which may cover technology that may
14 be required to implement this specification. Please address the information to the
15 OASIS Executive Director.

16 **Copyright © OASIS Open 2004. All Rights Reserved.**

17 This document and translations of it may be copied and furnished to others, and
18 derivative works that comment on or otherwise explain it or assist in its
19 implementation may be prepared, copied, published and distributed, in whole or in
20 part, without restriction of any kind, provided that the above copyright notice and this
21 paragraph are included on all such copies and derivative works. However, this
22 document itself does not be modified in any way, such as by removing the copyright
23 notice or references to OASIS, except as needed for the purpose of developing OASIS
24 specifications, in which case the procedures for copyrights defined in the OASIS
25 Intellectual Property Rights document must be followed, or as required to translate it
26 into languages other than English.

27 The limited permissions granted above are perpetual and will not be revoked by
28 OASIS or its successors or assigns.

29 This document and the information contained herein is provided on an "AS IS" basis
30 and OASIS DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED,
31 INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF
32 THE INFORMATION HEREIN WILL NOT INFRINGE ANY RIGHTS OR ANY
33 IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A
34 PARTICULAR PURPOSE.