

# **Data Access Service Specification: *RDF(S) Ontology Access Straw man***

Access Services for RDF(S) Data Resources

*Miguel Esteban Gutiérrez  
Ontology Engineering Group  
Universidad Politécnica de Madrid*

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# Outline

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- Introduction
- Overview
- Current status
- Outstanding issues
- Future work
- Conclusions

# Outline



- Introduction
  - Scope
  - Goals & Objectives
- Overview
- Current status
- Outstanding issues
- Future work
- Conclusions

# Introduction

## Scope



- The WS-DAI-RDF(S) Ontology specification extends the interfaces defined in WS-DAI, to allow access to and provide descriptions of RDF(S) data resources.
- RDF(S) data resources are assumed to contain data defined using the RDF(S) model defined in [RDF Concepts, RDF Schema].
- This data is accessed using a set of ontology handling primitives based in the RDF(S) model.

# Introduction

## Goal & Objectives

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- Goal:

“To provide access to RDF(S) data sources in a grid fashion, *without constraining what the user could manually do* (specially when serializing a local RDF/XML file), and *facilitating common tasks*, providing a highly *flexible and adaptable* access mechanism that *hides technicalities of RDF(S)* to the user, whilst *transparently exploits its full semantics*”

- Objectives:

- Full RDF(S) coverage
- R+W capabilities
- Granular data access
- Separation of concerns

# Outline

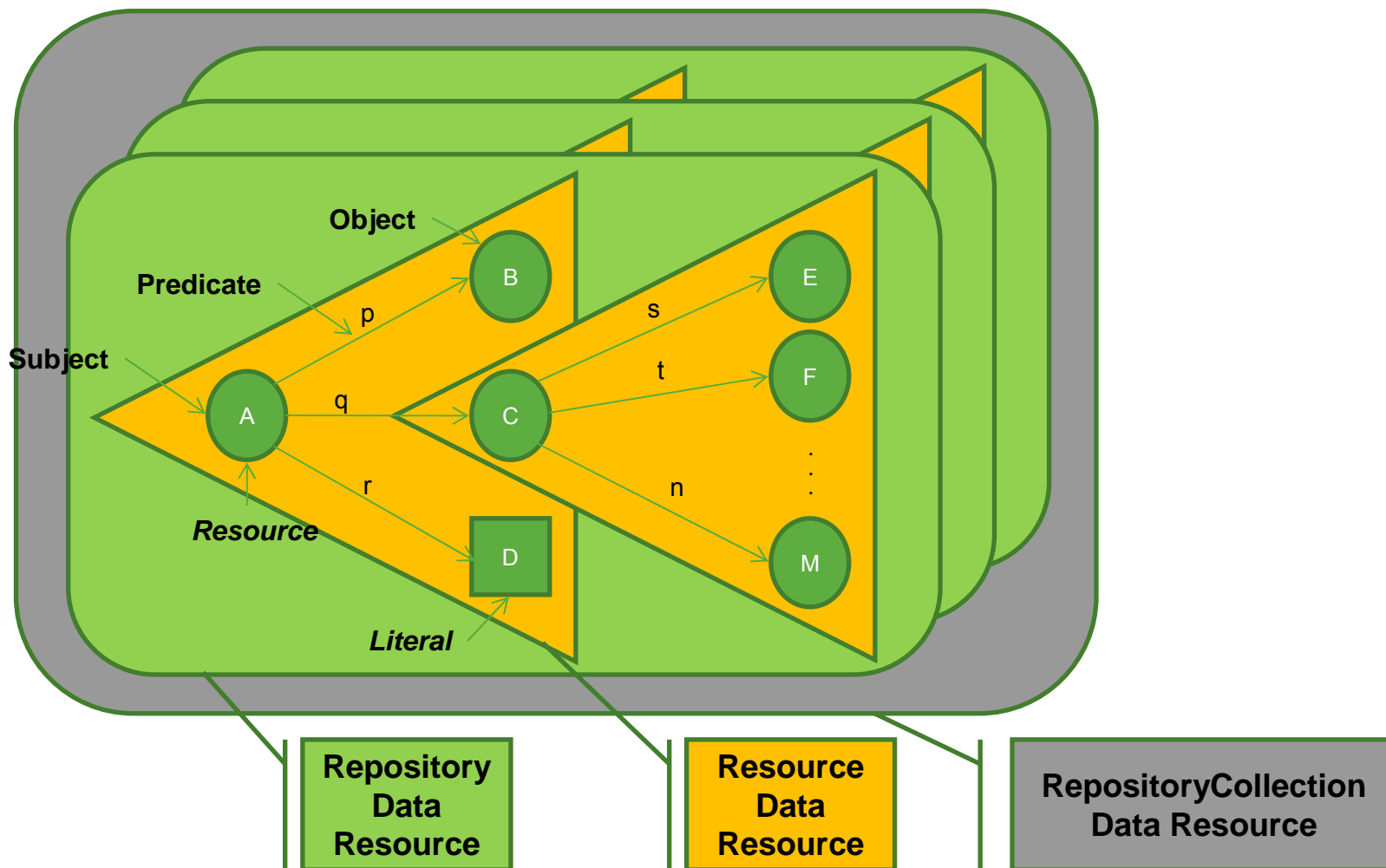


- Introduction
- Overview
  - Concepts
  - Data Resources
  - Interfaces
  - Profiles
- Current status
- Outstanding issues
- Future work
- Conclusions

# Overview

## Concepts

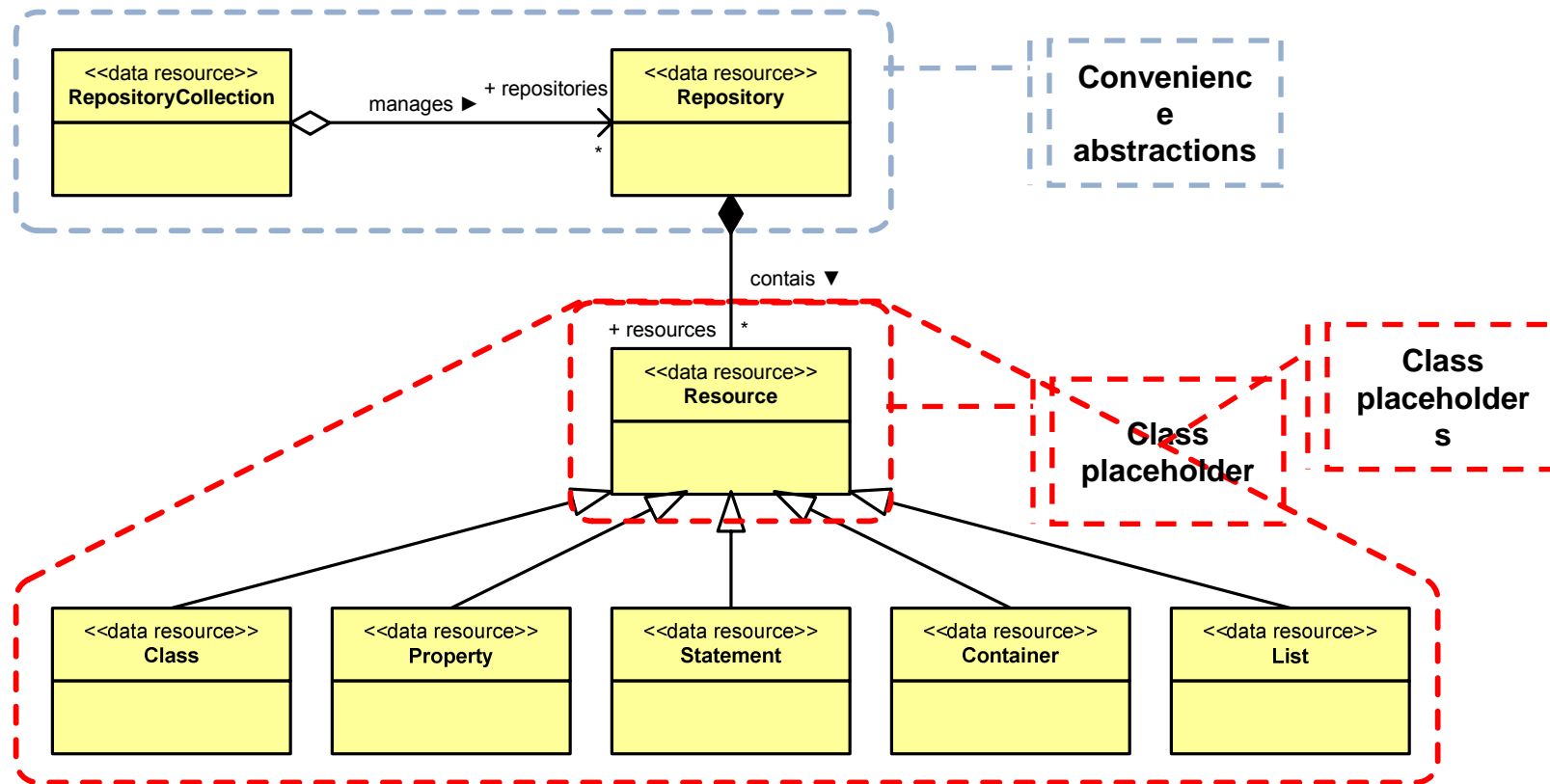
### Merging RDF(S) and WS-DAI Concepts



# Overview

## Data Resources

### Types & Organization



# Overview

## Concepts, revisited

### Resource lifecycle

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- **Creation:**
  - *Explicit:* a triple is created with the resource as subject.
  - *Implicit:* a triple is created with the resource as predicate or object.
- **(Property value) Attachment:**
  - *Explicit:* adding a new triple which uses an already existing resource as subject.
  - *Implicit:* adding a triple which uses an existing resource as predicate or object, and due to RDF(S) entailment rules, new property values are automatically attached.
- **(Property value) Detachment:**
  - *Explicit:* removing a triple which has the resource as subject.
  - *Implicit:* removing a triple that has the resource as predicate or object, and as a result inferred property values are lost (no longer explicit).
- **Removal:**
  - No triples using the resource exist.

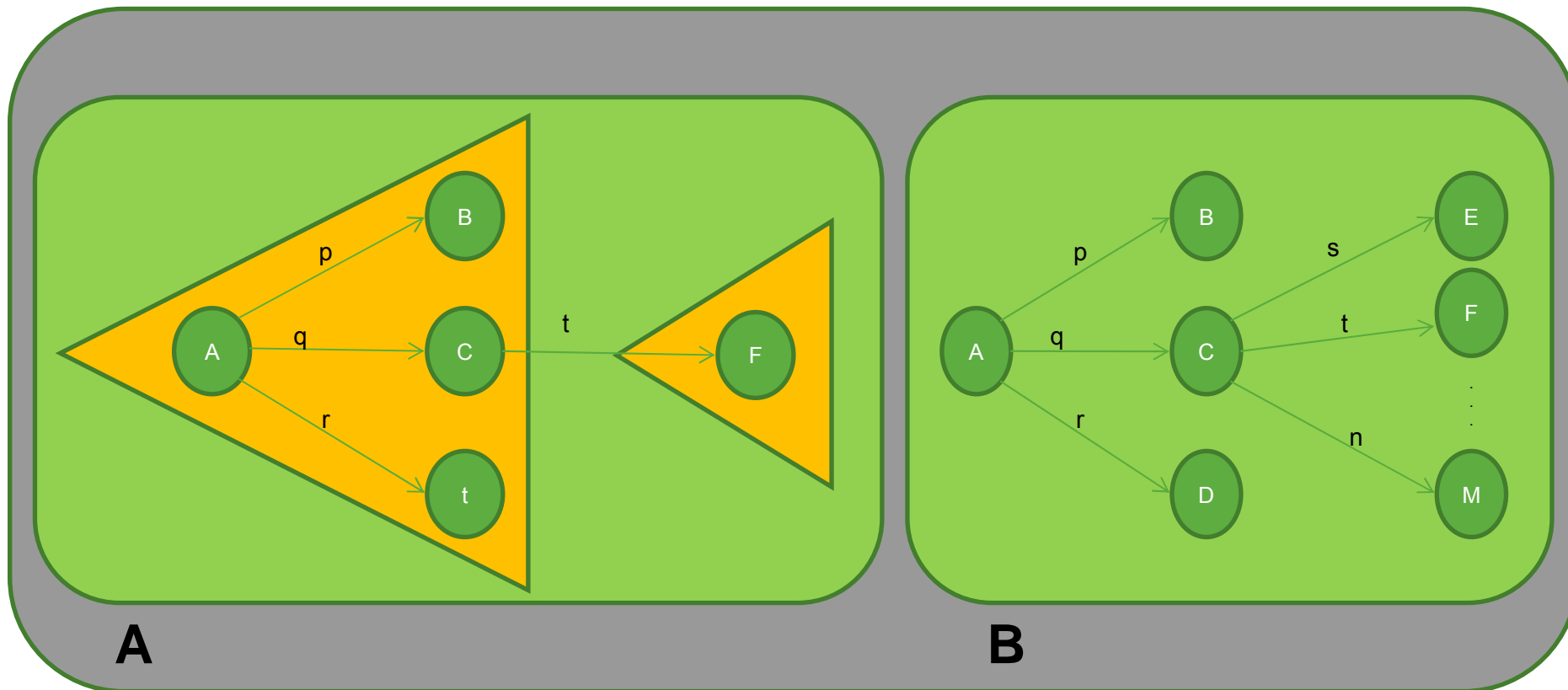
# Overview

## Data Resources

### Lifecycle example scenario



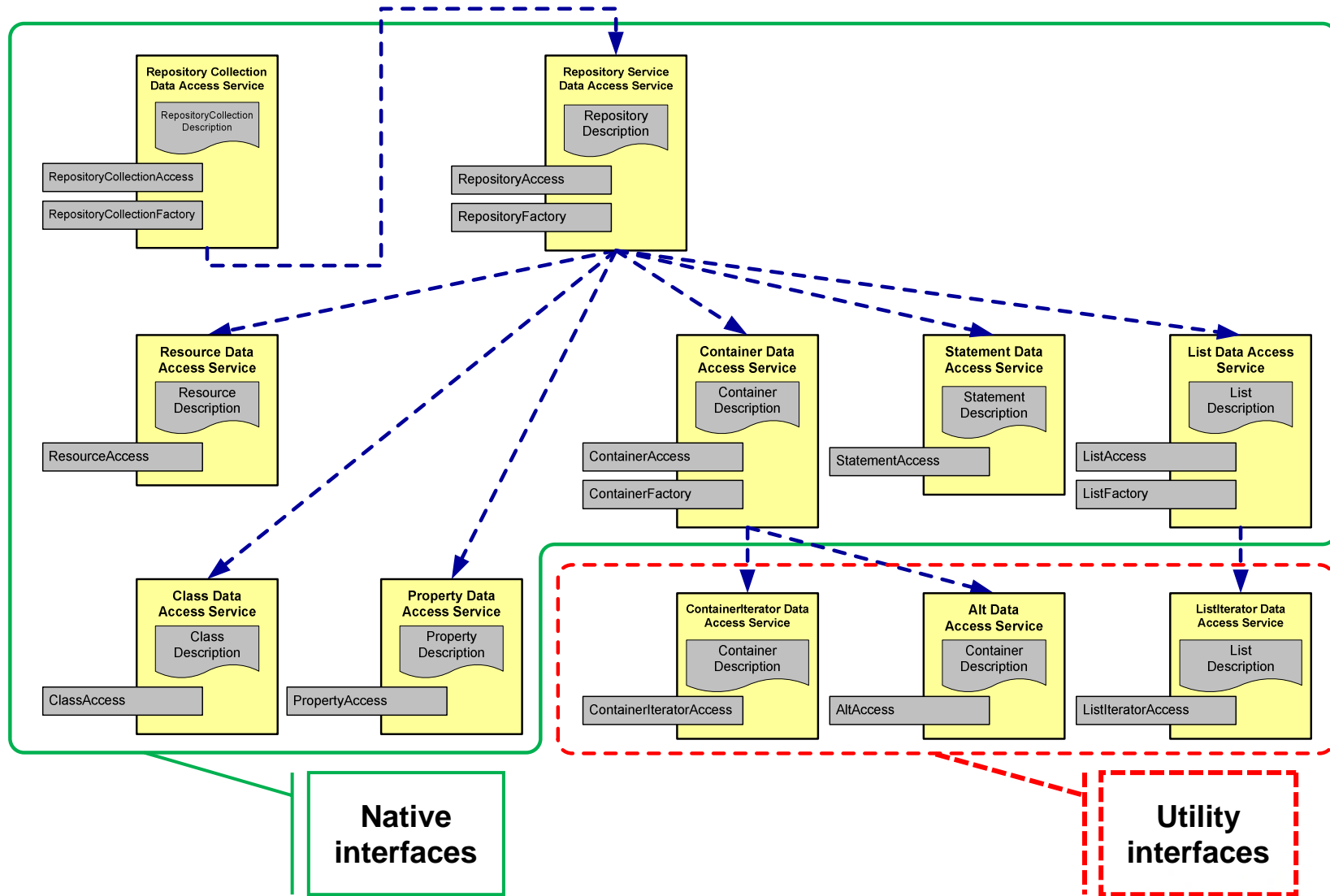
## “A”.remove (“C”, “t”, “F”)



# Overview

## Interfaces

### Organization



# Overview

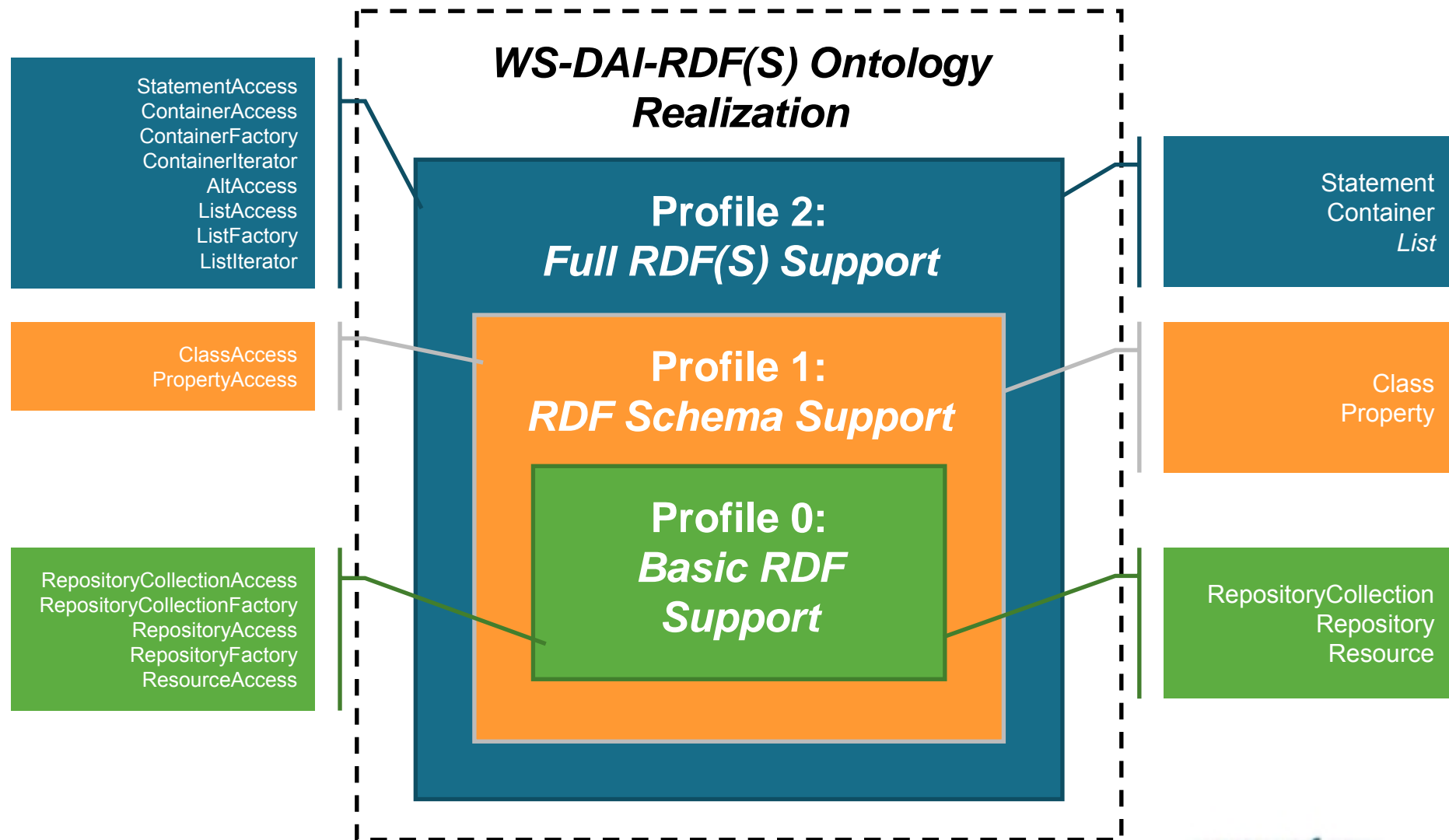
## Interfaces

### Summary



Data Resource	Interface Name	Category	Properties			Messages	
			<i>Static</i>	<i>Confi.</i>	<i>Total</i>	<i>Direct Access</i>	<i>Indirect Access</i>
RepositoryCollection	RepositoryCollectionDescription	Description	2	0	2	0	0
	RepositoryCollectionAccess	Access	0	0	0	4	0
	RepositoryCollectionFactory	Factory	0	0	0	0	1
Repository	RepositoryDescription	Description	1	0	1	0	0
	RepositoryAccess	Access	0	0	0	6	0
	RepositoryFactory	Factory	0	0	0	0	6
Resource	ResourceDescription	Description	2	0	2	0	0
	ResourceAccess	Access	0	0	0	13	0
Class	ClassDescription	Description	2	0	2	0	0
	ClassAccess	Access	0	0	0	8	0
Property	PropertyDescription	Description	2	0	2	0	0
	PropertyAccess	Access	0	0	0	13	0
Statement	StatementDescription	Description	2	0	2	0	0
	StatementAccess	Access	0	0	0	5	0
List	ListDescription	Description	2	0	2	0	0
	ListAccess	Access	0	0	0	9	0
	ListFactory	Factory	0	0	0	0	1
	ListIteratorAccess	Access	0	0	0	2	0
Container	ContainerDescription	Description	3	0	3	0	0
	ContainerAccess	Access	0	0	0	6	0
	ContainerFactory	Factory	0	0	0	0	2
	ContainerIteratorAccess	Access	0	0	0	2	0
	AltAccess	Access	0	0	0	8	0
TOTAL			16	0	16	76	10

# Overview Profiles



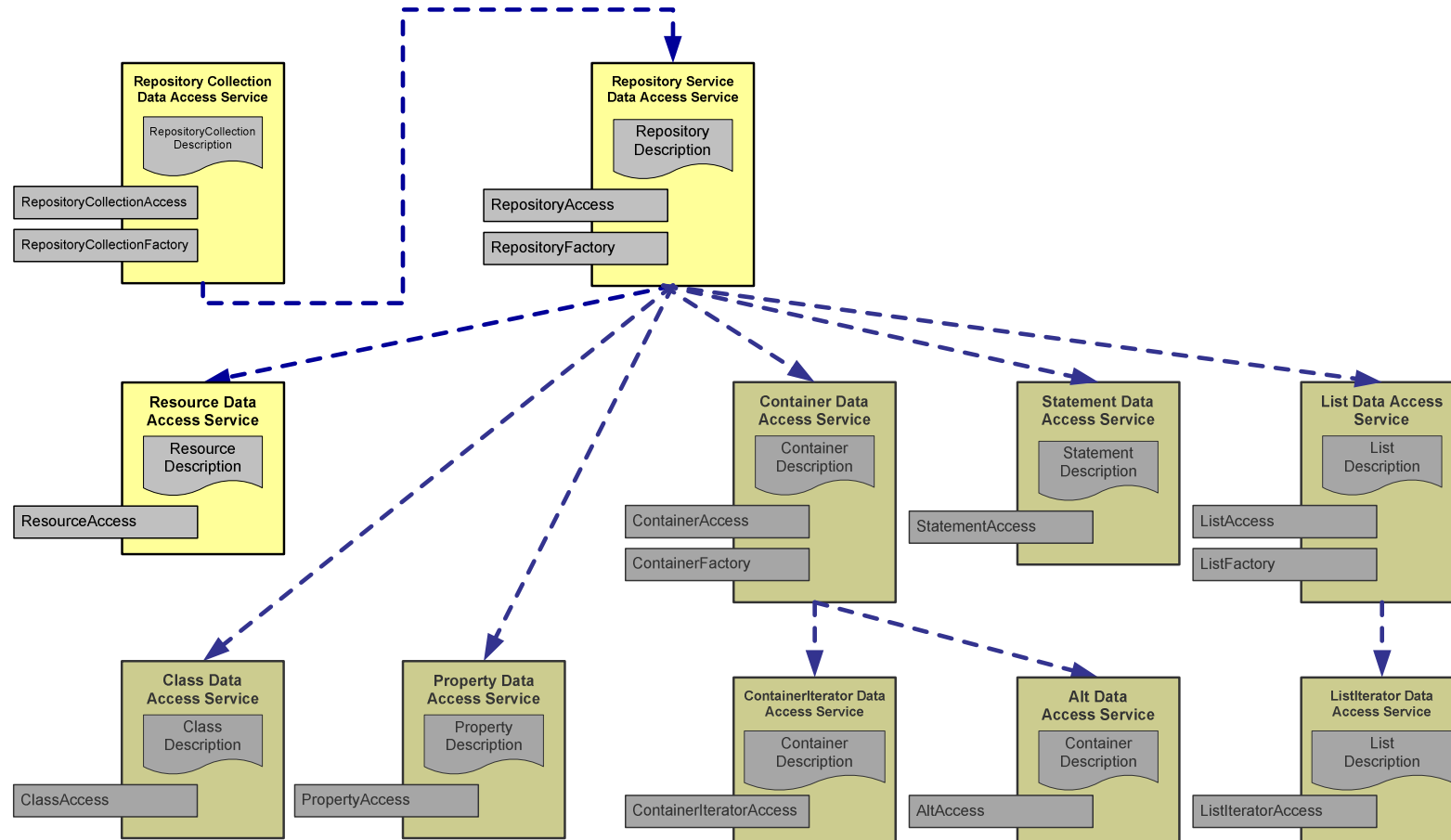
# Outline



- Introduction
- Overview
- Current status
  - Profile 0
  - Profile 1
  - Profile 2
- Outstanding issues
- Future work
- Conclusions

# Current Status

## Profile 0



# Current Status

## Profile 0

### RepositoryCollectionAccess



Definition

Imports: `..resources\spec\wsdai_core_porttypes.wsdl`

Types: <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services	Bindings	Port Types	Messages
		<ul style="list-style-type: none"><li>RepositoryCollectionAccessPT<ul style="list-style-type: none"><li>AddRepositories</li><li>GetRepositories</li><li>GetRepositoryCollectionPropertyDocument</li><li>RemoveRepositories</li></ul></li><li>RepositoryCollectionFactoryPT</li><li>CoreDataAccessPT</li><li>CoreResourceListPT</li></ul>	<ul style="list-style-type: none"><li>AddRepositoriesRequest</li><li>AddRepositoriesResponse</li><li>DataResourceUnavailableFault</li><li>DataResourceUnavailableFault</li><li>DestroyDataResourceRequest</li><li>DestroyDataResourceResponse</li><li>GenericQueryRequest</li><li>GenericQueryResponse</li><li>GetDataResourcePropertyDocumentRequest</li><li>GetDataResourcePropertyDocumentResponse</li><li>GetRepositoriesRequest</li><li>GetRepositoriesResponse</li><li>GetRepositoryCollectionPropertyDocumentRequest</li><li>GetRepositoryCollectionPropertyDocumentResponse</li><li>GetRepositoryFactoryRequest</li></ul>

# Current Status

## Profile 0

### RepositoryCollectionFactory



Definition

Imports: ..\resources\spec\wsdai\_core\_porttypes.wsdl

Types: <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services	Bindings	Port Types	Messages
		<ul style="list-style-type: none"><li>RepositoryCollectionAccessPT</li><li>RepositoryCollectionFactoryPT<ul style="list-style-type: none"><li>GetRepositoryFactory</li></ul></li><li>CoreDataAccessPT</li><li>CoreResourceListPT</li></ul>	<ul style="list-style-type: none"><li>AddRepositoriesRequest</li><li>AddRepositoriesResponse</li><li>DataResourceUnavailableFault</li><li>DataResourceUnavailableFault</li><li>DestroyDataResourceRequest</li><li>DestroyDataResourceResponse</li><li>GenericQueryRequest</li><li>GenericQueryResponse</li><li>GetDataResourcePropertyDocumentRequest</li><li>GetDataResourcePropertyDocumentResponse</li><li>GetRepositoriesRequest</li><li>GetRepositoriesResponse</li><li>GetRepositoryCollectionPropertyDocumentRequest</li><li>GetRepositoryCollectionPropertyDocumentResponse</li><li>GetRepositoryFactoryRequest</li></ul>

# Current Status

## Profile 0

### RepositoryAccess



Definition

Imports: ..\resources\spec\wsdai\_core\_porttypes.wsdl

Types: <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services: (empty)

Bindings: (empty)

Port Types:

- RepositoryAccessPT
  - AddResources
  - GetRepositoryPropertyDocument
  - GetResourceProperties
  - GetResources
  - RemoveResourceProperties
  - RemoveResources
- RepositoryFactoryPT
- CoreDataAccessPT
- CoreResourceListPT

Messages:

- AddResourcesRequest
- AddResourcesResponse
- DataResourceUnavailableFault
- DataResourceUnavailableFault
- DestroyDataResourceRequest
- DestroyDataResourceResponse
- GenericQueryRequest
- GenericQueryResponse
- GetClassFactoryRequest
- GetClassFactoryResponse
- GetContainerFactoryRequest
- GetContainerFactoryResponse
- GetDataResourcePropertyDocumentRequest
- GetDataResourcePropertyDocumentResponse
- GetListFactoryRequest

# Current Status

## Profile 0

### RepositoryFactory



Definition

Imports: ..\resources\spec\wsdai\_core\_porttypes.wsdl

Types: <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services	Bindings	Port Types	Messages
		<ul style="list-style-type: none"><li>RepositoryAccessPT</li><li>RepositoryFactoryPT</li><li>GetResourceFactory</li><li>CoreDataAccessPT</li><li>CoreResourceListPT</li></ul>	<ul style="list-style-type: none"><li>AddResourcesRequest</li><li>AddResourcesResponse</li><li>DataResourceUnavailableFault</li><li>DestroyDataResourceRequest</li><li>DestroyDataResourceResponse</li><li>GenericQueryRequest</li><li>GenericQueryResponse</li><li>GetDataResourcePropertyDocumentRequest</li><li>GetDataResourcePropertyDocumentResponse</li><li>GetRepositoryPropertyDocumentRequest</li><li>GetRepositoryPropertyDocumentResponse</li><li>GetResourceFactoryRequest</li><li>GetResourceFactoryResponse</li><li>GetResourceListRequest</li><li>GetResourceListResponse</li></ul>

# Current Status

## Profile 0

### ResourceAccess



Definition

Imports: ..\resources\spec\wsdai\_core\_porttypes.wsdl

Types: <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services: (empty)

Bindings: (empty)

Port Types:

- ResourceAccessPT
  - AddPropertyValues
  - AddResourceDescription
  - AddResourceTypes
  - ArePropertiesDefinable
  - ArePropertiesDefined
  - GetDefinableProperties
  - GetDefinedProperties
  - GetPropertyValues
  - GetResourceDescription
  - GetResourcePropertyDocument
  - GetResourceTypes
  - RemovePropertyValues
  - RemoveResourceTypes
- CoreDataAccessPT

Messages:

- AddPropertyValuesRequest
- AddPropertyValuesResponse
- AddResourceDescriptionRequest
- AddResourceDescriptionResponse
- AddResourceTypesRequest
- AddResourceTypesResponse
- ArePropertiesDefinableRequest
- ArePropertiesDefinableResponse
- ArePropertiesDefinedRequest
- ArePropertiesDefinedResponse
- DataResourceUnavailableFault
- DataResourceUnavailableFault
- DestroyDataResourceRequest
- DestroyDataResourceResponse
- GenericQueryRequest

# Current Status

## Profile 0

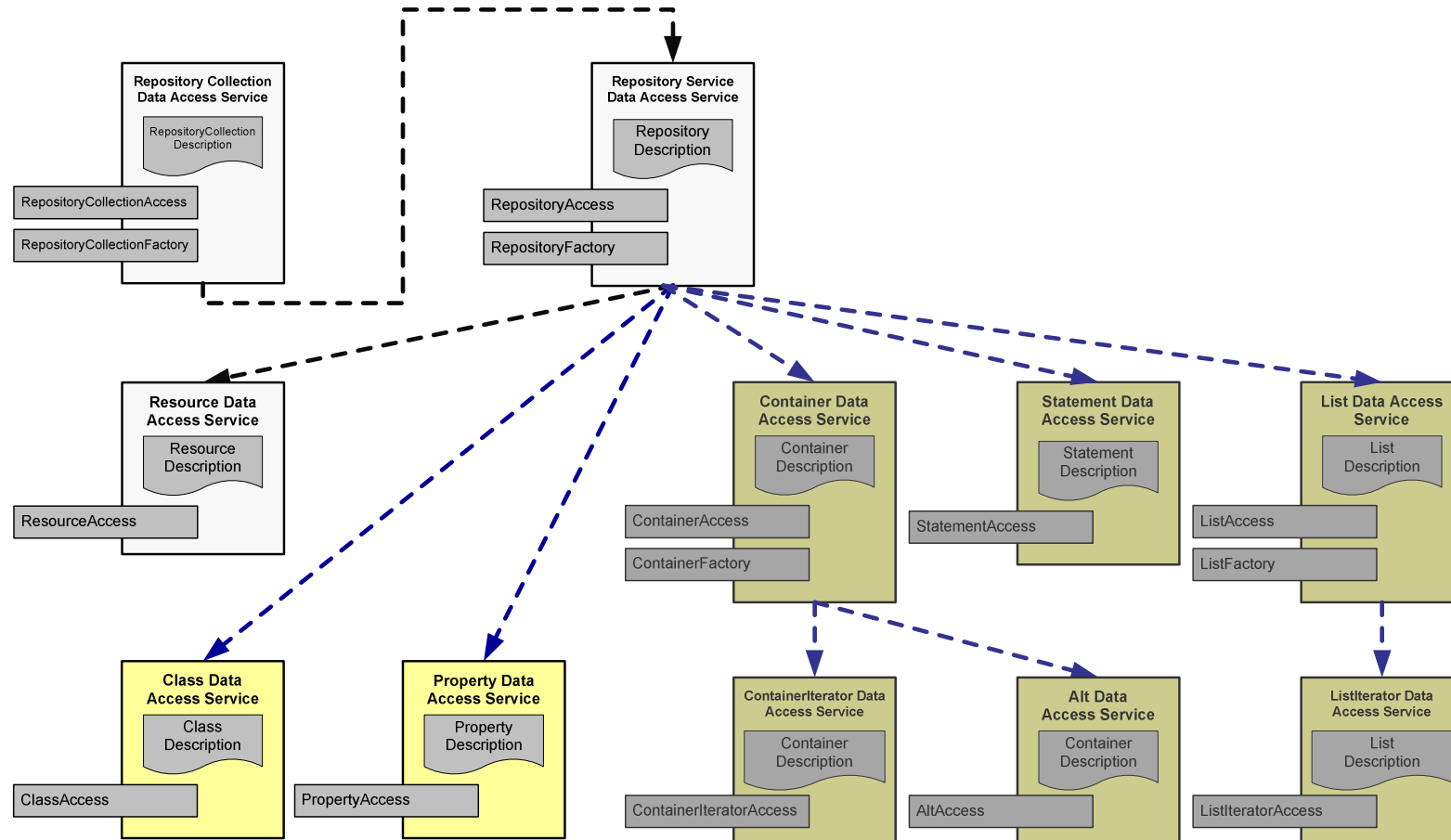
### Summary



Data Resource	Interface Name	Category	Properties			Messages	
			<i>Static</i>	<i>Conf.</i>	<i>Total</i>	<i>Direct Access</i>	<i>Indirect Access</i>
Repository Collection	RepositoryCollectionDescription	Description	2	0	2	0	0
	RepositoryCollectionAccess	Access	0	0	0	4	0
	RepositoryCollectionFactory	Factory	0	0	0	0	1
Repository	RepositoryDescription	Description	1	0	1	0	0
	RepositoryAccess	Access	0	0	0	6	0
	RepositoryFactory	Factory	0	0	0	0	1
Resource	ResourceDescription	Description	2	0	2	0	0
	ResourceAccess	Access	0	0	0	13	0
TOTAL			5	0	5	23	2

# Current Status

## Profile 1



# Current Status

## Profile 1

### RepositoryFactory update



Definition

Imports: `..{\resources\spec\wsdai_core_porttypes.wsdl}`

Types: <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services	Bindings	Port Types	Messages
		<ul style="list-style-type: none"><li>RepositoryAccessPT</li><li>RepositoryFactoryPT</li><li>GetClassFactory</li><li>GetPropertyFactory</li><li>GetResourceFactory</li><li>CoreDataAccessPT</li><li>CoreResourceListPT</li></ul>	<ul style="list-style-type: none"><li>AddResourcesRequest</li><li>AddResourcesResponse</li><li>DataResourceUnavailableFault</li><li>DestroyDataResourceRequest</li><li>DestroyDataResourceResponse</li><li>GenericQueryRequest</li><li>GenericQueryResponse</li><li>GetClassFactoryRequest</li><li>GetClassFactoryResponse</li><li>GetDataResourcePropertyDocumentRequest</li><li>GetDataResourcePropertyDocumentResponse</li><li>GetPropertyFactoryRequest</li><li>GetPropertyFactoryResponse</li><li>GetRepositoryPropertyDocumentRequest</li><li>GetRepositoryPropertyDocumentResponse</li></ul>

# Current Status

## Profile 1

### ClassAccess



Definition

Imports

← ..\resources\spec\wsdai\_core\_porttypes.wsdl

Types

→ <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services

Bindings

Port Types

- ClassAccessPT
  - AddRelatedClasses
  - AreClassesRelated
  - AreInstances
  - GetClassPropertyDocument
  - GetInstances
  - GetRelatedClasses
  - GetRelatedProperties
  - RemoveRelatedClasses
- CoreDataAccessPT
- CoreResourceListPT

Messages

- AddRelatedClassesRequest
- AddRelatedClassesResponse
- AreClassesRelatedRequest
- AreClassesRelatedResponse
- AreInstancesRequest
- AreInstancesResponse
- DataResourceUnavailableFault
- DataResourceUnavailableFault
- DestroyDataResourceRequest
- DestroyDataResourceResponse
- GenericQueryRequest
- GenericQueryResponse
- GetClassPropertyDocumentRequest
- GetClassPropertyDocumentResponse
- GetDataResourcePropertyDocumentRequest

# Current Status

## Profile 1

### PropertyAccess



Definition

Imports: ..\resources\spec\wsdai\_core\_porttypes.wsdl

Types: <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services: (empty)

Bindings: (empty)

Port Types:

- PropertyAccessPT
  - AddClassesToDomain
  - AddClassesToRange
  - AddRelatedProperties
  - AreClassesInDomain
  - AreClassesInRange
  - ArePropertiesRelated
  - GetDomainClasses
  - GetPropertyPropertyDocument
  - GetRangeClasses
  - GetRelatedProperties
  - RemoveClassesFromDomain
  - RemoveClassesFromRange
  - RemoveRelatedProperties
- CoreDataAccessPT

Messages:

- AddClassesToDomainRequest
- AddClassesToDomainResponse
- AddClassesToRangeRequest
- AddClassesToRangeResponse
- AddRelatedPropertiesRequest
- AddRelatedPropertiesResponse
- AreClassesInDomainRequest
- AreClassesInDomainResponse
- AreClassesInRangeRequest
- AreClassesInRangeResponse
- ArePropertiesRelatedRequest
- ArePropertiesRelatedResponse
- DataResourceUnavailableFault
- DataResourceUnavailableFault
- DestroyDataResourceRequest

# Current Status

## Profile 0

### Summary



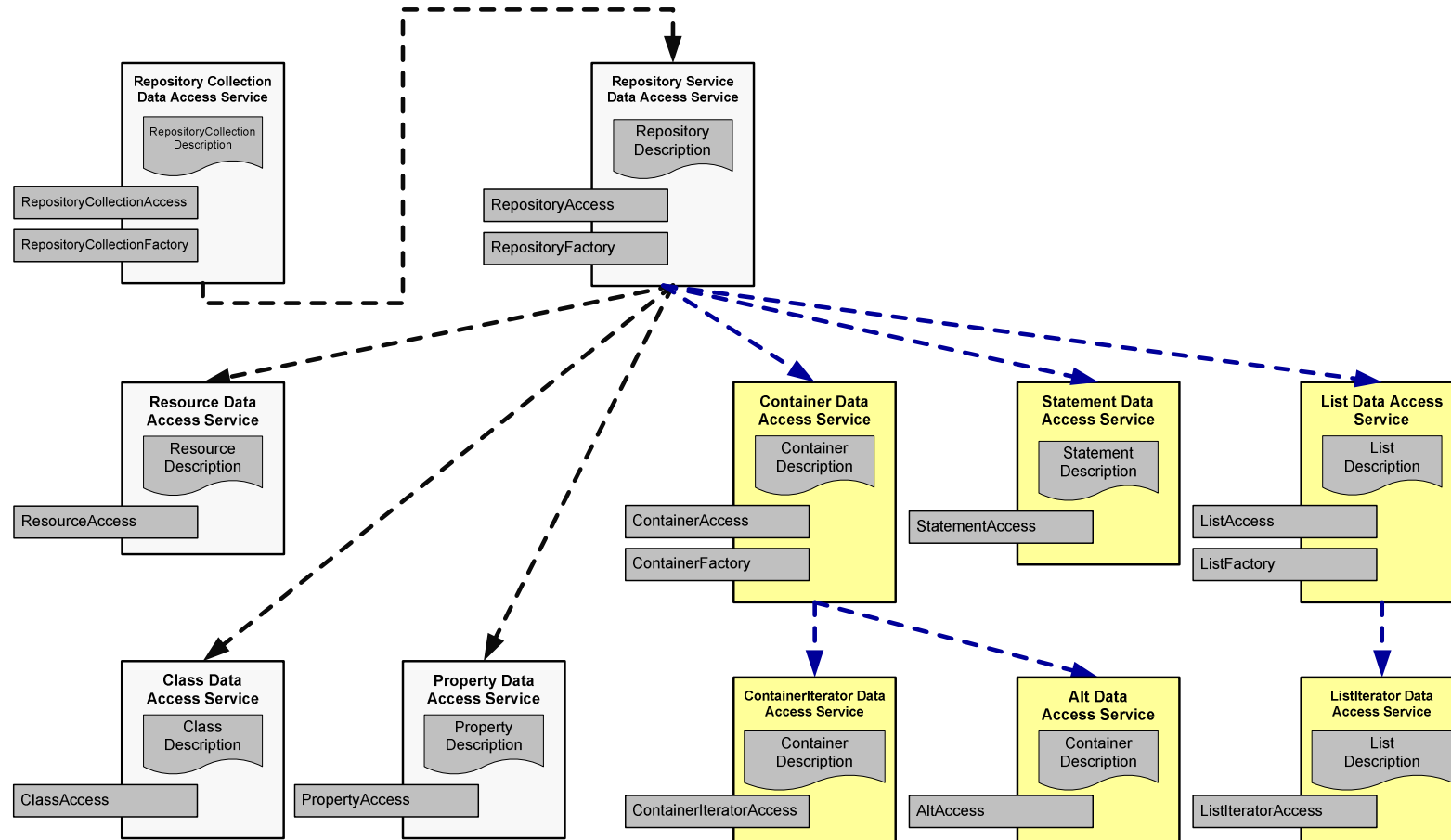
Data Resource	Interface Name	Category	Properties			Messages	
			Static	Confi.	Total	Direct Access	Indirect Access
Repository Collection	RepositoryCollectionDescription	Description	2	0	2	0	0
	RepositoryCollectionAccess	Access	0	0	0	4	0
	RepositoryCollectionFactory	Factory	0	0	0	0	1
Repository	RepositoryDescription	Description	1	0	1	0	0
	RepositoryAccess	Access	0	0	0	6	0
	RepositoryFactory	Factory	0	0	0	0	3
Resource	ResourceDescription	Description	2	0	2	0	0
	ResourceAccess	Access	0	0	0	13	0
Class	ClassDescription	Description	2	0	2	0	0
	ClassAccess	Access	0	0	0	8	0
Property	PropertyDescription	Description	2	0	2	0	0
	PropertyAccess	Access	0	0	0	13	0
TOTAL			9	0	9	44	4

21

2

# Current Status

## Profile 1



# Current Status

## Profile 2

### RepositoryFactory update



Definition

Imports: ..\resources\spec\wsdai\_core\_porttypes.wsdl

Types: <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services	Bindings	Port Types	Messages
		<ul style="list-style-type: none"><li>RepositoryAccessPT</li><li>RepositoryFactoryPT</li><li>GetClassFactory</li><li>GetContainerFactory</li><li>GetListFactory</li><li>GetPropertyFactory</li><li>GetResourceFactory</li><li>GetStatementFactory</li><li>CoreDataAccessPT</li><li>CoreResourceListPT</li></ul>	<ul style="list-style-type: none"><li>AddResourcesRequest</li><li>AddResourcesResponse</li><li>DataResourceUnavailableFault</li><li>DataResourceUnavailableFault</li><li>DestroyDataResourceRequest</li><li>DestroyDataResourceResponse</li><li>GenericQueryRequest</li><li>GenericQueryResponse</li><li>GetClassFactoryRequest</li><li>GetClassFactoryResponse</li><li>GetContainerFactoryRequest</li><li>GetContainerFactoryResponse</li><li>GetDataResourcePropertyDocumentRequest</li><li>GetDataResourcePropertyDocumentResponse</li><li>GetListFactoryRequest</li></ul>

# Current Status

## Profile 2

### StatementAccess



Definition

<b>Imports</b> ← ..\resources\spec\wsdai_core_porttypes.wsdl	<b>Types</b> → <a href="http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology">http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology</a>		
<b>Services</b>	<b>Bindings</b>	<b>Port Types</b> <ul style="list-style-type: none"><li>StatementAccessPT<ul style="list-style-type: none"><li>AddComponents</li><li>AreComponents</li><li>GetComponents</li><li>GetStatementPropertyDocument</li><li>RemoveComponents</li></ul></li><li>CoreDataAccessPT</li><li>CoreResourceListPT</li></ul>	<b>Messages</b> <ul style="list-style-type: none"><li>AddComponentsRequest</li><li>AddComponentsResponse</li><li>AreComponentsRequest</li><li>AreComponentsResponse</li><li>DataResourceUnavailableFault</li><li>DataResourceUnavailableFault</li><li>DestroyDataResourceRequest</li><li>DestroyDataResourceResponse</li><li>GenericQueryRequest</li><li>GenericQueryResponse</li><li>GetComponentsRequest</li><li>GetComponentsResponse</li><li>GetDataResourcePropertyDocumentRequest</li><li>GetDataResourcePropertyDocumentResponse</li><li>GetResourceListRequest</li></ul>

# Current Status

## Profile 2

### ListAccess



Definition

Imports: [..\resources\spec\wsdai\\_core\\_porttypes.wsdl](#)

Types: <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services	Bindings	Port Types	Messages
		<ul style="list-style-type: none"><li>ListAccessPT</li><li>AddMembers</li><li>AddNodes</li><li>AreMembers</li><li>AreNodes</li><li>GetListPropertyDocument</li><li>GetMembers</li><li>GetNodes</li><li>RemoveMembers</li><li>RemoveNodes</li><li>ListFactoryPT</li><li>ListIteratorAccessPT</li><li>CoreDataAccessPT</li><li>CoreResourceListPT</li></ul>	<ul style="list-style-type: none"><li>AddMembersRequest</li><li>AddMembersResponse</li><li>AddNodesRequest</li><li>AddNodesResponse</li><li>AreMembersRequest</li><li>AreMembersResponse</li><li>AreNodesRequest</li><li>AreNodesResponse</li><li>DataResourceUnavailableFault</li><li>DataResourceUnavailableFault</li><li>DestroyDataResourceRequest</li><li>DestroyDataResourceResponse</li><li>GenericQueryRequest</li><li>GenericQueryResponse</li><li>GetDataResourcePropertyDocumentRequest</li></ul>

# Current Status

## Profile 2

### ListFactory



Definition

Imports: `← ..\resources\spec\wsdai_core_porttypes.wsdl`

Types: <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services	Bindings	Port Types	Messages
		<ul style="list-style-type: none"><li>ListAccessPT</li><li>ListFactoryPT</li><li>GetListIteratorFactory</li><li>ListIteratorAccessPT</li><li>CoreDataAccessPT</li><li>CoreResourceListPT</li></ul>	<ul style="list-style-type: none"><li>AddMembersRequest</li><li>AddMembersResponse</li><li>AddNodesRequest</li><li>AddNodesResponse</li><li>AreMembersRequest</li><li>AreMembersResponse</li><li>AreNodesRequest</li><li>AreNodesResponse</li><li>DataResourceUnavailableFault</li><li>DataResourceUnavailableFault</li><li>DestroyDataResourceRequest</li><li>DestroyDataResourceResponse</li><li>GenericQueryRequest</li><li>GenericQueryResponse</li><li>GetDataResourcePropertyDocumentRequest</li></ul>

# Current Status

## Profile 2

### ListIteratorAccess



Definition

Imports: `← ..\resources\spec\wsdai_core_porttypes.wsdl`

Types: <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services	Bindings	Port Types	Messages
		<ul style="list-style-type: none"><li>ListAccessPT</li><li>ListFactoryPT</li><li>ListIteratorAccessPT<ul style="list-style-type: none"><li>GetListPropertyDocument</li><li>GetNext</li><li>HasNext</li></ul></li><li>CoreDataAccessPT</li><li>CoreResourceListPT</li></ul>	<ul style="list-style-type: none"><li>AddMembersRequest</li><li>AddMembersResponse</li><li>AddNodesRequest</li><li>AddNodesResponse</li><li>AreMembersRequest</li><li>AreMembersResponse</li><li>AreNodesRequest</li><li>AreNodesResponse</li><li>DataResourceUnavailableFault</li><li>DataResourceUnavailableFault</li><li>DestroyDataResourceRequest</li><li>DestroyDataResourceResponse</li><li>GenericQueryRequest</li><li>GenericQueryResponse</li><li>GetDataResourcePropertyDocumentRequest</li></ul>

# Current Status

## Profile 2

### ContainerAccess



Definition

Imports

← ..\resources\spec\wsdai\_core\_porttypes.wsdl

Types

→ <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services

Bindings

Port Types

- ContainerAccessPT
  - AddMembers
  - AreMembers
  - GetContainerPropertyDocument
  - GetMembers
  - GetNumberOfMembers
  - RemoveMembers
- ContainerFactoryPT
- ContainerIteratorAccessPT
- AltAccessPT
- CoreDataAccessPT
- CoreResourceListPT

Messages

- AddAlternativeMembersRequest
- AddAlternativeMembersResponse
- AddDefaultMembersRequest
- AddDefaultMembersResponse
- AddMembersRequest
- AddMembersResponse
- AreAlternativeMembersRequest
- AreAlternativeMembersResponse
- AreDefaultMembersRequest
- AreDefaultMembersResponse
- AreMembersRequest
- AreMembersResponse
- DataResourceUnavailableFault
- DataResourceUnavailableFault
- DestroyDataResourceRequest

# Current Status

## Profile 2

### ContainerFactory



Definition

Imports: `← ..\resources\spec\wsdai_core_porttypes.wsdl`

Types: `→ http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology`

Services	Bindings	Port Types	Messages
		<ul style="list-style-type: none"><li>ContainerAccessPT</li><li>ContainerFactoryPT<ul style="list-style-type: none"><li>GetAltFactory</li><li>GetContainerIteratorFactory</li></ul></li><li>ContainerIteratorAccessPT</li><li>AltAccessPT</li><li>CoreDataAccessPT</li><li>CoreResourceListPT</li></ul>	<ul style="list-style-type: none"><li>AddAlternativeMembersRequest</li><li>AddAlternativeMembersResponse</li><li>AddDefaultMembersRequest</li><li>AddDefaultMembersResponse</li><li>AddMembersRequest</li><li>AddMembersResponse</li><li>AreAlternativeMembersRequest</li><li>AreAlternativeMembersResponse</li><li>AreDefaultMembersRequest</li><li>AreDefaultMembersResponse</li><li>AreMembersRequest</li><li>AreMembersResponse</li><li>DataResourceUnavailableFault</li><li>DataResourceUnavailableFault</li><li>DestroyDataResourceRequest</li></ul>

# Current Status

## Profile 2

### ContainerIteratorAccess



Definition

Imports

← ..\resources\spec\wsdai\_core\_porttypes.wsdl

Types

→ <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services

Bindings

Port Types

- ContainerAccessPT
- ContainerFactoryPT
- ContainerIteratorAccessPT
  - GetContainerPropertyDocument
  - GetNext
  - HasNext
- AltAccessPT
- CoreDataAccessPT
- CoreResourceListPT

Messages

- AddAlternativeMembersRequest
- AddAlternativeMembersResponse
- AddDefaultMembersRequest
- AddDefaultMembersResponse
- AddMembersRequest
- AddMembersResponse
- AreAlternativeMembersRequest
- AreAlternativeMembersResponse
- AreDefaultMembersRequest
- AreDefaultMembersResponse
- AreMembersRequest
- AreMembersResponse
- DataResourceUnavailableFault
- DataResourceUnavailableFault
- DestroyDataResourceRequest

# Current Status

## Profile 2

### AltAccess



Definition

Imports: `← ..\resources\spec\wsdai_core_porttypes.wsdl`

Types: <http://www.ogf.org/dais/2008/02/ws-dai-rdfs/ontology>

Services	Bindings	Port Types	Messages
		<ul style="list-style-type: none"><li>ContainerAccessPT</li><li>ContainerFactoryPT</li><li>ContainerIteratorAccessPT</li><li>AltAccessPT<ul style="list-style-type: none"><li>AddAlternativeMembers</li><li>AddDefaultMembers</li><li>AreAlternativeMembers</li><li>AreDefaultMembers</li><li>GetAlternativeMembers</li><li>GetContainerPropertyDocument</li><li>GetDefaultMembers</li><li>RemoveAlternativeMembers</li><li>RemoveDefaultMembers</li></ul></li><li>CoreDataAccessPT</li><li>CoreResourceListPT</li></ul>	<ul style="list-style-type: none"><li>AddAlternativeMembersRequest</li><li>AddAlternativeMembersResponse</li><li>AddDefaultMembersRequest</li><li>AddDefaultMembersResponse</li><li>AddMembersRequest</li><li>AddMembersResponse</li><li>AreAlternativeMembersRequest</li><li>AreAlternativeMembersResponse</li><li>AreDefaultMembersRequest</li><li>AreDefaultMembersResponse</li><li>AreMembersRequest</li><li>AreMembersResponse</li><li>DataResourceUnavailableFault</li><li>DataResourceUnavailableFault</li><li>DestroyDataResourceRequest</li></ul>

# Current Status

## Profile 2

### Summary



Data Resource	Interface Name	Category	Properties			Messages	
			Static	Conf.	Total	Direct Access	Indirect Access
Repository Collection	RepositoryCollectionDescription	Description	2	0	2	0	0
	RepositoryCollectionAccess	Access	0	0	0	4	0
	RepositoryCollectionFactory	Factory	0	0	0	0	1
Repository	RepositoryDescription	Description	1	0	1	0	0
	RepositoryAccess	Access	0	0	0	6	0
	RepositoryFactory	Factory	0	0	0	0	6
Resource	ResourceDescription	Description	2	0	2	0	0
	ResourceAccess	Access	0	0	0	13	0
Class	ClassDescription	Description	2	0	2	0	0
	ClassAccess	Access	0	0	0	8	0
Property	PropertyDescription	Description	2	0	2	0	0
	PropertyAccess	Access	0	0	0	13	0
Statement	StatementDescription	Description	2	0	2	0	0
	StatementAccess	Access	0	0	0	5	0
List	ListDescription	Description	2	0	2	0	0
	ListAccess	Access	0	0	0	9	0
	ListFactory	Factory	0	0	0	0	1
	ListIteratorAccess	Access	0	0	0	2	0
Container	ContainerDescription	Description	3	0	3	0	0
	ContainerAccess	Access	0	0	0	6	0
	ContainerFactory	Factory	0	0	0	0	2
	ContainerIteratorAccess	Access	0	0	0	2	0
	AltAccess	Access	0	0	0	8	0
TOTAL			16	0	16	76	10

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# Outline



- Introduction
- Overview
- Current status
- **Outstanding issues**
  - WS-DAI related
  - WS-DAI-RDF(S) related
  - WS-DAI-RDF(S) Ontology specific
- Future work
- Conclusions

# Outstanding issues (I)



- WS-DAI related:
  - Messages too complex, because templates are complex.
    - WS-DAIX & WS-DAIR do not fully follow the templates
  - Some refactorings and changes could be done to the XSDs, but interoperability could be compromised...
    - Does it make sense?
    - Which is the most sensible mechanism for doing so?
  - No explicit relation between factory interfaces & access interfaces + data resources
  - Configurable properties describe data access service and data resource behaviours altogether, but realizations do not mandate how interfaces are composed into services. So what happens with:
    - Services implementing different interfaces, i.e. XQueryAccess & XPathAccess
    - Services using different data resources, i.e. factory operations
    - Different interfaces use the same data resource in different ways, i.e. XQueryAccess & XPathAccess
  - Don't know what to do with...
    - DatasetMap, ConfigurationMap, and LanguageMap

# Outstanding issues (II)

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- WS-DAI-RDF(S) related:
  - Not fully aligned with the glossary.
- WS-DAI-RDF(S) Ontology specific
  - List + Container serialization vs. abstract model modification paradox.
  - RDF(S) data resources lifecycle still obscure in the document.
  - Missing configurable properties.

# Outline

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- Introduction
- Overview
- Current status
- Outstanding issues
- **Future work**
- Conclusions

# Future work



- Include missing configurable properties.
- Make clear the data resources lifecycle:
  - Introduction.
  - Messages.
- Update the introduction of the document.
- Review the terminology used & align it with the glossary.

# Outline

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- Introduction
- Overview
- Current status
- Outstanding issues
- Future work
- **Conclusions**

# Conclusions



- Profile based approach followed to favour community adoption.
- Specification almost completed:
  - Interfaces cleaned
  - Messages normalized (inputs + outputs + faults)
- An stable version to release has been finally reached.



Thanks for your attention,  
questions?