OGC Testbed-14:

Table of Contents

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Chapter 1. Summary

A The following is, as all texts in double square brackets, a helper text. Please remove this and all other helper texts once done.

The Summary clause shall define without ambiguity the subject of this document and the aspect(s) covered. It shall be succinct so that it can be used as a text for bibliographic purposes. Briefly, it shall contain the key results of the work described in the ER.

The summary shall further contain a business value statement that should describe the value of this Engineering Report to improve interoperability, advance location-based technologies or realize innovations.

1.1. Requirements & Research Motivation

A precise descriptions of the requirements that have been addressed by the work documented in this Engineering Report; together with the research motivation that answers the fundamental question: What motivated us to address this topic in this report?

1.2. Prior-After Comparison

This section shall provide a prior-after comparison. It describes the situation/status of discussion in the OGC working groups being most relevant for the addressed topic. This part is reviewed in close detail by the appropriate SWG/DWG to ensure that the latest developments have been considered. The section will be complemented at the end of the initiative by comparing the results documented in the ER with the original situation.

1.3. Future Recommendations

This section should answer the question: What does this ER mean for the Working Group and OGC in general? What aspects shall be addressed? In any specific order? What actions are necessary?

This is a write up for why this ER should be important to the working group and OGC. This paragraph provides recommendations on how to further proceed with the achievements documented in this ER.

1.4. Document contributor contact points

All questions regarding this document should be directed to the editor or the contributors:

Name	Organization
editor	from org
contributor	from org

Table 1. Contacts

1.5. Foreword

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The Open Geospatial Consortium shall not be held responsible for identifying any or all such patent rights.

Recipients of this document are requested to submit, with their comments, notification of any relevant patent claims or other intellectual property rights of which they may be aware that might be infringed by any implementation of the standard set forth in this document, and to provide supporting documentation.

Chapter 2. References

The following normative documents are referenced in this document.

NOTE: Only normative standards are referenced here, e.g. OGC, ISO or other SDO standards. All other references are listed in the bibliography. Example:

- OGC 06-121r9, OGC® Web Services Common Standard [https://portal.opengeospatial.org/files/?artifact_id=38867&version=2]

Chapter 3. Terms and definitions

For the purposes of this report, the definitions specified in Clause 4 of the OWS Common Implementation Standard OGC 06-121r9 [https://portal.opengeospatial.org/files/?artifact_id=38867&version=2] shall apply. In addition, the following terms and definitions apply.

- term name

  ```
  text of the definition
  ```

- term name | synonym

  ```
  text of the definition
  ```

3.1. Abbreviated terms

NOTE: The abbreviated terms clause gives a list of the abbreviated terms and the symbols necessary for understanding this document. All symbols should be listed in alphabetical order.Some more frequently used abbreviated terms are provided below as examples.

- API Application Program Interface
- COM Component Object Model
- CORBA Common Object Request Broker Architecture
- COTS Commercial Off The Shelf
- DCE Distributed Computing Environment
- DCOM Distributed Component Object Model
- IDL Interface Definition Language

Chapter 4. Overview

Instructions

This 4-overview.adoc file helps the reader to better understand the various sections of the ER. It should be written like an extended table of contents.

NOTE

The following clauses (clause-requirements, clause-solutions, clauses 6-n and Annexes A-D of this template are general recommendations for Engineering Reports. As ERs can be of many different types and purposes, these clauses should be tailored to meet the needs of the report. However in most cases, clause-requirements and clause-solutions should be used.

Text goes here…

Chapter 5. Example Clause

Instructions

NOTE This section explains some concepts frequently required by Asciidoc novices. Please use this file as a template for your own clauses.

5.1. Headlines

All headlines are marked by "=" signs. The top level in each each file starts with level 2 ("=="). Important: For whatever strange reason, headings in annexes are marked differently.

5.2. Figures

If you want to reference a figure by using a figure number, it is important to use the following syntax. The figure identifier for Figure 1 is the first statement of the header. Please adapt the width as appropriate.

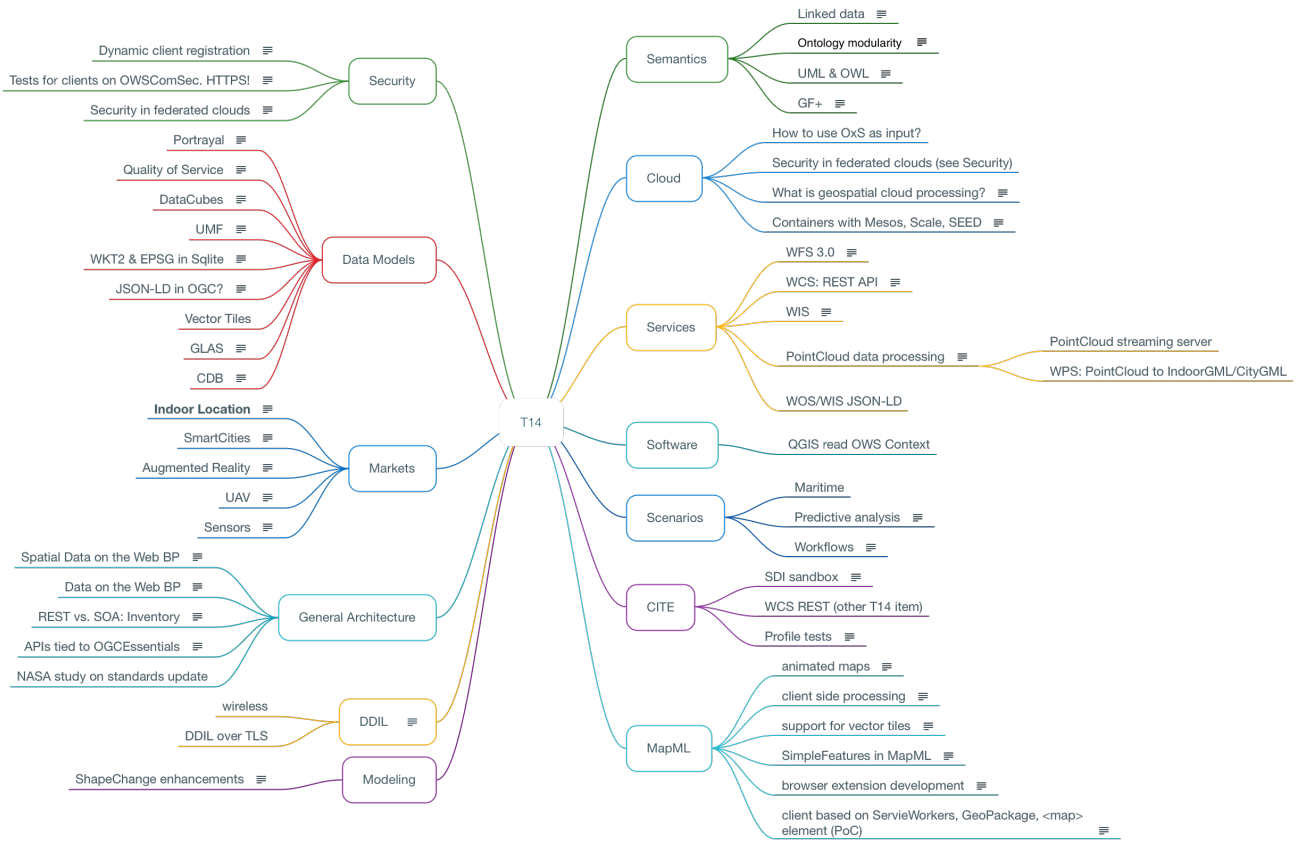

Figure 1. High-Level Mind Map of Testbed-14

It is important that you use the same syntax for all images, otherwise the automatic numbering is corrupted!

5.3. Recommended Asciidoc Environment

We recommend to use asciidoctor [http://asciidoctor.org] and asciidoctor-pdf [http://asciidoctor.org/docs/convert-asciidoc-to-pdf/] in combination with the Atom [https://atom.io] editor.

In Atom, you should install the following packages:

- asciidoc-preview
- autocomplete-asciidoc
- language-asciidoc
- markdown-writer
- platformio-IDE-terminal

This environment allows you to use keyboard shortcuts, autocomplete, syntax highlighting and a rendered preview for asciidoc; and provides you an terminal window within the editor to convert your asciidoc to html and pdf.

5.4. Asciidoc Conversion

In order to achieve a uniform look-and-feel of all ERs in both HTML and PDF, we have provided a css and theme file. The following commands can be used to convert the ER:

- asciidoctor er.adoc for HTML
- asciidoctor-pdf -a pdf-stylesdir=resources -a pdf-style=ogc -a pdf-fontsdir=resources/fonts cfp.adoc

5.5. Asciidoc(tor) Syntax Help

Is available e.g. here: http://asciidoctor.org/docs/

5.6. Citations

Please use the following syntax to insert citiations:

cite:[VanZyl2009]

Then you need to provide all citation information in the file resources/bibtex-file.bib. Everything else is done automatically.

For further information, please consult https://github.com/asciidoctor/asciidoctor-bibtex.

Appendix A: Abstract Test Suite

An Abstract Test Suite may be relevant to an Engineering Report.

An Abstract Test Suite is specified in Clause 9 and Annex A of ISO 19105. That Clause and Annex specify the ISO/TC 211 requirements for Abstract Test Suites. Examples of Abstract Test Suites are available in an annex of most ISO 191XX documents, one of the more useful is in ISO 19136. Note that this guidance may be more abstract than needed in an OGC® Implementation Standard.

Test identifier	/test/case/id
Test purpose:	Confirm that the IUT satisfies all applicable requirements for conformance level 1.
Test method:	Functional testing performed in an automated and/or manual manner. Verify the behaviour of the IUT for the following operations: * GetCapabilities (mandatory) * DescribeRecord (mandatory) * GetRecords (mandatory) * GetRecordById (mandatory) * GetRepositoryItem (mandatory) * GetDomain (optional)
Requirement:	OGC 07-110: cl. 2.2
Test type:	Capability

Table 2. A.1.1Conformance level 1

Test identifier	http://www.opengis.net/spec/xxx/conf/WRS.General-ValidResponse
Test purpose:	The XML response entity is valid.
Test method:	Validate content of response entity against corresponding element declaration.
Requirement:	OGC 07-006r1: cl. 10.2.5.1, p. 118
Test type:	Capability

Table 3. A.1.2Test case for validity of XML response entity

Test identifier	/test/case/id
Test purpose:	Confirm that the IUT satisfies all applicable requirements for conformance level 1.
Test method:	Functional testing performed in an automated and/or manual manner. Verify the behaviour of the IUT for the following operations: * GetCapabilities (mandatory) * DescribeRecord (mandatory) * GetRecords (mandatory) * GetRecordById (mandatory) * GetRepositoryItem (mandatory) * GetDomain (optional)
Requirement:	OGC 07-110: cl. 2.2
Test type:	Capability

Table 4. A.2.1Conformance level 2

Test identifier	http://www.opengis.net/spec/xxx/conf/WRS.General-ValidResponse
Test purpose:	The XML response entity is valid.
Test method:	Validate content of response entity against corresponding element declaration.
Requirement:	OGC 07-006r1: cl. 10.2.5.1, p. 118
Test type:	Capability

Table 5. A.2.2Test case for validity of XML response entity

Appendix B: XML Schema Documents

XML Schema Documents may be relevant to an Engineering Report.

The term “XML schema“ means all the XML schema parts having the same XML namespace, usually separated into multiple XML Schema Document files (with the file type “.xsd“. The XML schema parts in one XML namespace are usually separated into multiple XML Schema Documents to ease human understanding.

In addition to this document, this report includes several XML Schema Documents. These XML Schema Documents are bundled in a zip file with the present document.

The TBD abilities now specified in this document use TBD specified XML Schema Documents included in the zip file with this document. These XML Schema Documents combine the XML schema fragments listed in various subclauses of this document, eliminating duplications.

These XML Schema Documents roughly match the TBD UML packages described in Annex B, and are named:

```
TBD.xsd
TBD.xsd
```

These XML Schema Documents use and build on the OWS common XML Schema Documents specified [OGC 06-121r3], named:

```
ows19115subset.xsd
owsCommon.xsd
owsDataIdentification.xsd
owsExceptionReport.xsd
owsGetCapabilities.xsd
owsOperationsMetadata.xsd
owsServiceIdentification.xsd
owsServiceProvider.xsd
```

All these XML Schema Documents contain documentation of the meaning of each element and attribute, and this documentation shall be considered normative as specified in Subclause 11.6.3 of [OGC 06-121r9].

GetCapabilities.xsd

```
<ows:Operation name="GetCapabilities">
  <ows:DCP>
    <ows:HTTP>
      <ows:Post xlink:href="http://www.opengis.net/?">
        <ows:Constraint name="PostEncoding">
          <allowedValues>
            <ows:Value>SOAP</ows:Value>
          </ows:AllowedValues>
        </ows:Constraint>
      </ows:Post>
    </ows:HTTP>
  </ows:DCP>
</ows:Operation>
<ows:Operation name="GetTile">
  <ows:DCP>
    <ows:HTTP>
      <ows:Post xlink:href="http://www.opengis.net/?">
        <ows:Constraint name="PostEncoding">
          <ows:AllowedValues>
            <ows:Value>SOAP</ows:Value>
          </ows:AllowedValues>
        </ows:Constraint>
      </ows:Post>
    </ows:HTTP>
  </ows:DCP>
</ows:Operation>
```

Appendix C: UML model

A UML model may be relevant to an Engineering Report. This template thus includes this annex as the place for recording this UML model.

Instructions and guidelines on the usage of UML models are provided in OGC document OGC-121r9 [https://portal.opengeospatial.org/files/?artifact_id=38867].

Appendix D: Revision History

Example History (Delete this note).

NOTE replace below entries as needed

Date	Editor	Release	Primary clauses modified	Descriptions
June 15, 2016	I. Simonis	.1	all	initial version
July 22, 2016	I. Simonis	.9	all	comments integrate
September 7, 2016	S. Simmons	1.0	various	preparation for publication
March 23, 2017	I. Simonis	2.0	all	template simplified
January 18, 2018	S. Serich	2.1	all	additional guidance to Editors; clean up headings in appendices

Table 6. Revision History

Appendix E: Bibliography

bibliography::[]