

Evaluation of *Certified Open* software assessment framework

Draft 1.0

Open Middleware Infrastructure Institute (OMII)

13th May 2008

Executive summary

This draft report describes the outcome of applying the “Certified Open” evaluation framework to software products provided by OMII-UK. For the evaluation two well established and widely accepted products have been selected since they both represent the class of software products supported by OMII-UK.

The evaluation process has been based on the information provided in the following documents: “*Certified Open – Product and Services Framework*” and “*Certified Open – Operating Principles*”, “*Memorandum of Understanding*”, “*Terms and Conditions*”, “*Code of Conduct*”. These documents can be found on website:

<http://www.certifiedopen.com>.

1.Evaluation of OMII-UK software

In this section we provide a detailed account of questions and answers of the online questionnaire. For the initial assessment two representative OMII-UK software products have been selected. These products are GridSAM and Grimoires, they represent two important building blocks of Service Oriented Architectures. Both products run on standard desktop or server equipment, therefore the hardware related aspects in this assessment are only marginally relevant.

1.1.GridSAM

GridSAM is an implementation of OGF standards for a Basic Execution Service (OGSA BES) and the Job Submission Description Language (JSDL). GridSAM has been deployed on the National Grid Service (NGS).

Product Name

GridSAM

Product Description

GridSAM is an implementation of OGF standards for a Basic Execution Service (OGSA BES) and the Job Submission Description Language (JSDL).

Product Release

v2.0.1

Product Weblink

<http://www.omii.ac.uk>

Contact email

ph@ecs.soton.ac.uk

Industries

Public Administration

Solutions

IT Infrastructure

CLIENT VIEW

Q01 Is the user able to substitute the product?

- a) Fully substitutable (score 25)
- b) Limited substitutability (score 15)
- c) Not substitutable (score 0)

Please justify your selection

Any other software that implements these standards can fully replace GridSAM.

Q02 Does the product offer its full user functionality while conforming only to open standards with no restrictions or extensions?

- a) Fully conforms (score 25)
- b) Mixes open and closed standards (score 15)
- c) Does not meet open standards (score 0)

Please justify your selection

All standards used in this product are open.

Q03 Does the product conform to accessibility guidelines?

- a) Fully conforms (score 25)
- b) Can be extended to conform (score 15)
- c) Does not conform (score 0)

Please justify your selection

At present just the English language is supported. The product can be extended to provide support for other languages as well.

Q04 Where there is a user interface is it restricted by patents or other methods?

- a) There are no restrictions (score 25)
- b) There are restrictions covered by a royalty-free non-revocable general licence (score 15)
- c) There are licence or patent restrictions that require fees or other costs (score 0)

Please justify your selection

There are no patent restrictions on user interface. The product requires no special computer equipment or device.

SOFTWARE VIEW

Q05 Does the product depend on other components?

- X** a) The product does not depend on components or the components are substitutable (score 20)
b) It depends on components which have limited substitutability (score 10)
c) It depends on components which are not substitutable (score 0)

Please justify your selection

All components of GridSAM are open source implementations of standards.

Q06 Does the product use or provide extensions to existing applicable standards?

- X** a) It neither provides nor uses extensions (score 20)
b) It uses extensions but works without the extensions (score 15)
c) It uses extensions that are fully documented (score 10)
d) It uses extensions that are partially documented (score 5)
e) It uses extensions that are undocumented (score 0)

Please justify your selection

The functionality provided by GridSAM covers the requirements of two OGF standards. There is no extra functionality provided.

Q07 Is the product substitutable?

- X** a) Fully substitutable (score 20)
b) Partially substitutable (score 10)
c) Not substitutable (score 0)

Please justify your selection

Any product that implements the above mentioned OGF standards can replace GridSAM.

Q08 Can the product be extended by the user?

- X** a) Fully extendible with minimal costs (score 20)
b) Fully extendible with some costs (score 15)
c) Partially extendible with minimal costs (score 10)
d) Partially extendible with some costs (score 5)
e) Not extendible (score 0)

Please justify your selection

The product can be extended by adding new methods to interfaces of BES and JSDL.

Q09 Can the product be modified by the user?

- X** a) Fully modifiable with minimal costs (score 20)
b) Fully modifiable with some costs (score 15)
c) Partially modifiable with minimal costs (score 10)
d) Partially modifiable with some costs (score 5)
e) Not modifiable (score 0)

Please justify your selection

Open source software.

HARDWARE VIEW

Q10 Are hardware interfaces documented?

- X** a) Fully and accurately documented with no restrictions (score 20)
b) Fully and accurately documented with restrictions (score 15)
c) Partially documented with no restrictions (score 10)
d) Partially documented with restrictions (score 5)
e) Not documented (score 0)

Please justify your selection

Standard desktop platform is assumed.

Q11 Is the firmware distributable?

- X** a) Fully distributable with no restrictions (score 20)
b) Fully distributable with restrictions (score 15)
c) Partially distributable with no restrictions (score 10)
d) Partially distributable with restrictions (score 5)
e) Not distributable (score 0)

Please justify your selection

No firmware required.

Q12 Is the product substitutable?

- X** a) Fully substitutable (score 20)
b) Partially substitutable (score 10)
c) Not substitutable (score 0)

Please justify your selection

Computer can be replaced.

Q13 Can the product be extended by the user?

- X** a) Fully extendible with minimal costs (score 20)
b) Fully extendible with some costs (score 15)
c) Partially extendible with minimal costs (score 10)
d) Partially extendible with some costs (score 5)
e) Not extendible (score 0)

Please justify your selection

The software product requires only a standard desktop platform.

Q14 Can the product be modified by the user?

- X** a) Fully modifiable with minimal costs (score 20)
b) Fully modifiable with some costs (score 15)
c) Partially modifiable with minimal costs (score 10)
d) Partially modifiable with some costs (score 5)
e) Not modifiable (score 0)

Please justify your selection

No product specific hardware required.

DATA VIEW

Q15 Does the product offer full functionality while making the data accessible via an open standard?

- X** a) Fully accessible with no restrictions (score 50)
b) Fully accessible with restrictions (score 30)
c) Partially accessible with restrictions (score 10)
d) Limited accessibility with severe restrictions (score 0)

Please justify your selection

Both JSDL and XML that are used in GridSAM are open standards.

Q16 Is the data structure substitutable via an open standard?

- X** a) Fully substitutable with no restrictions (score 50)
b) Fully substitutable with restrictions (score 30)
c) Partially substitutable with restrictions (score 10)
d) Limited substitutability with severe restrictions (score 0)

Please justify your selection

JSDL represents a data structure expressed by XML syntax. JSDL describes the configuration and parameters of individual jobs.

BUSINESS VIEW

Q17 Is a recognisable commercial support framework in place for this product?

- a) There are multiple top-tier support routes (score 50)
b) There is a single top-tier support route with no barriers to the formation of alternative support routes (score 30)
c) There is a single top-tier support route with barriers to the formation of alternative support routes (score 10)
X d) There is no commercial support framework (score 0)

Please justify your selection

OMII is a non-commercial organisation.

Q18 Is a recognisable community support framework in place for this product?

- a) There is formally constituted user group with regular meetings (score 50)
X b) Extensive on-line and other community support can be demonstrated (score 30)
c) There is no recognised community support framework (score 0)

Please justify your selection

e-Science community in the UK and worldwide.

Q19 Are there any licences, contracts or agreements that would limit use or substitutability?

- X** a) There are no limits to use or substitutability (score 50)
b) There are few limits to use or substitutability (score 30)
c) There is strict limit to use or substitutability (score 0)

Please justify your selection

All licences are royalty free and the implementation is open source.

Q20 Are there licence or patent restrictions on interoperating or sharing data with other systems?

- X**
- a) There are no restrictions (score 50)
 - b) There are restrictions covered by a royalty free non revocable general licence (score 30)
 - c) There are licence or patent restrictions that require fees or other costs (score 0)

Please justify your selection

All licences are royalty free and the implementation is open source.

1.2Grimoires

Grimoires is an implementation of the OASIS standard for Universal Description Discovery and Integration (UDDI). It has been developed by Southampton University (OMII) and deployed on the National Grid Service as a service registry. In the assessment of Grimoires the “*Hardware View*” has been deliberately disabled since this software requires only a standard desktop or server computer. Further reason was assess the impact of this change on the final score.

As a note perhaps we can mention that Grimoires enables the attachment of metadata to service description records. The format and content of this metadata is not captured by any standard and this might increase the level of “*lock-in*” for this product.

Product Name

Grimoires

Product Description

Grimoires is an implementation of the OASIS standard for Universal Description Discovery and Integration (UDDI).

Product Release

v1.2.3

Product Weblink

<http://www.omii.ac.uk>

Contact email

ph@ecs.soton.ac.uk

Industries

Public Administration

Solutions

IT Infrastructure

CLIENT VIEW

Q01 Is the user able to substitute the product?

- a) Fully substitutable (score 25)
- b) Limited substitutability (score 15)
- c) Not substitutable (score 0)

Please justify your selection

Any other software that implements the UDDI standard can fully replace Grimoires.

Q02 Does the product offer its full user functionality while conforming only to open standards with no restrictions or extensions?

- a) Fully conforms (score 25)
- b) Mixes open and closed standards (score 15)
- c) Does not meet open standards (score 0)

Please justify your selection

UDDI is an open standard.

Q03 Does the product conform to accessibility guidelines?

- a) Fully conforms (score 25)
- b) Can be extended to conform (score 15)
- c) Does not conform (score 0)

Please justify your selection

At present just the English language is supported. The product can be extended to provide support for other languages as well.

Q04 Where there is a user interface is it restricted by patents or other methods?

- a) There are no restrictions (score 25)
- b) There are restrictions covered by a royalty-free non-revocable general licence (score 15)
- c) There are licence or patent restrictions that require fees or other costs (score 0)

Please justify your selection

There are no patent restrictions on user interface.

SOFTWARE VIEW

Q05 Does the product depend on other components?

- a) The product does not depend on components or the components are substitutable (score 20)
- b) It depends on components which have limited substitutability (score 10)
- c) It depends on components which are not substitutable (score 0)

Please justify your selection

All components of Grimoires are open source implementations of public standards.

Q06 Does the product use or provide extensions to existing applicable standards?

- a) It neither provides nor uses extensions (score 20)

- b) It uses extensions but works without the extensions (score 15)
- c) It uses extensions that are fully documented (score 10)
- d) It uses extensions that are partially documented (score 5)
- e) It uses extensions that are undocumented (score 0)

Please justify your selection

Grimoires provides extensions to the UDDI standard by enabling metadata attachment to service description records and WSDL files. The extended functionality is fully documented.

Q07 Is the product substitutable?

- a) Fully substitutable (score 20)
- b) Partially substitutable (score 10)
- c) Not substitutable (score 0)

Please justify your selection

Grimoires provides additional functionality above the UDDI standard, therefore it can be only partially substituted. However on the level of UDDI functionality, Grimoires is fully substitutable.

Q08 Can the product be extended by the user?

- a) Fully extendible with minimal costs (score 20)
- b) Fully extendible with some costs (score 15)
- c) Partially extendible with minimal costs (score 10)
- d) Partially extendible with some costs (score 5)
- e) Not extendible (score 0)

Please justify your selection

The product can be extended by adding new methods to the Grimoires interface.

Q09 Can the product be modified by the user?

- a) Fully modifiable with minimal costs (score 20)
- b) Fully modifiable with some costs (score 15)
- c) Partially modifiable with minimal costs (score 10)
- d) Partially modifiable with some costs (score 5)
- e) Not modifiable (score 0)

Please justify your selection

Grimoires is an open source software.

HARDWARE VIEW

There are no hardware relevant issues associated with Grimoires.

DATA VIEW

Q15 Does the product offer full functionality while making the data accessible via an open standard?

- a) Fully accessible with no restrictions (score 50)
- b) Fully accessible with restrictions (score 30)

- c) Partially accessible with restrictions (score 10)
- d) Limited accessibility with severe restrictions (score 0)

Please justify your selection

Grimoires uses the UDDI data structure that can be extended by metadata.

Q16 Is the data structure substitutable via an open standard?

- a) Fully substitutable with no restrictions (score 50)
- b) Fully substitutable with restrictions (score 30)
- c) Partially substitutable with restrictions (score 10)
- d) Limited substitutability with severe restrictions (score 0)

Please justify your selection

The data structure is an open standard.

BUSINESS VIEW

Q17 Is a recognisable commercial support framework in place for this product?

- a) There are multiple top-tier support routes (score 50)
- b) There is a single top-tier support route with no barriers to the formation of alternative support routes (score 30)
- c) There is a single top-tier support route with barriers to the formation of alternative support routes (score 10)
- d) There is no commercial support framework (score 0)

Please justify your selection

OMII is a non-commercial organisation.

Q18 Is a recognisable community support framework in place for this product?

- a) There is formally constituted user group with regular meetings (score 50)
- b) Extensive on-line and other community support can be demonstrated (score 30)
- c) There is no recognised community support framework (score 0)

Please justify your selection

e-Science community in the UK and worldwide.

Q19 Are there any licences, contracts or agreements that would limit use or substitutability?

- a) There are no limits to use or substitutability (score 50)
- b) There are few limits to use or substitutability (score 30)
- c) There is strict limit to use or substitutability (score 0)

Please justify your selection

All licences are royalty free and the implementation is open source.

Q20 Are there licence or patent restrictions on interoperating or sharing data with other systems?

- a) There are no restrictions (score 50)
- b) There are restrictions covered by a royalty free non revocable general licence (score 30)
- c) There are licence or patent restrictions that require fees or other costs (score 0)

Please justify your selection
All licences are royalty free and the implementation is open source.

2.Results

Your Products

product name ^	product release	product score	max score	product certification	actions
GridSAM	v2.0.1	520	580	SILVER	view/modify delete
Grimoires	v1.2.3	405	500	SILVER	view/modify delete

3. Comments

Many of these comments are minor irritations and are in this draft only for the record. They will be removed prior to publication.

1. An error occurred during the submission of the questionnaire. The error message appeared just for a second and it seems that the session time expired. This was after a period of inactivity.
2. In order to beat the short session time the we tried to enter in the information in parts by saving and modifying it. Unfortunately the “*view modify*” link is not working and an empty page comes up. The data cannot be modified; everything must be typed in again.
3. If no data is entered the product gets a GOLD certification.
4. Even with a detailed knowledge of OMII-UK software products the OMII employee carrying out the assessment found it difficult to answer some of the questions. The questions are open to various interpretations. Perhaps the answers should have been peer-reviewed (by OMII colleagues) in order to ensure correctness.
6. Certified Open focuses mainly on the assessment of the “lock-in” factor.
7. Certified Open is based on self-certifying principle, however the correctness of answers is not verified. Perhaps again peer review would enable a more objective assessment.
8. There are no references in the “*Certified Open Product and Services Framework*” document. The OMII staff member performing the assessment felt a short description of the evolution of the “Certified Open” idea would be beneficial for a better understanding of the assessment process.

9. We suggest that Certified Open should explain in more detail the motivation behind the “Certified Open” initiative by focusing on the benefits for software providers.

10. The OMII employee carrying out the assessment suggested that Certified Open extend the questionnaire by additional categories for assessing the cost of software development and quantifying the number of potential customers.

11. The evaluation of each component took a little longer than an hour. A significant benefit of the tool is that it encourages reflection on the aspects of the components that enable or damage openness.

12. The components that we chose were the most appropriate for this sort of evaluation, so our generally favorable assessment may be biased by that. Also, OMII has a mission to produce Open components. All our components are Open Source. This may also have biased our view.