Semantic Interoperability Centre Europe

Licensing Framework for Interoperability Assets

This document has been prepared by

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PREFACE

About SEMIC.EU

SEMIC.EU (Semantic Interoperability Centre Europe) is an EU-Project to support the data exchange for pan-European e-Government services. Its goal is to create a repository for interoperability assets that can be used by e-Government projects and their stakeholders. SEMIC.EU is offering the following services for the public sector in Europe:

- SEMIC.EU will provide access to interoperability assets which have been developed in previous governmental projects.
- A clearing process will safeguard certain rules and standards to assure the quality of published assets.
- Community features will be available on the platform, e. g. a forum to discuss best practices for the use of assets.
- SEMIC.EU will invite to seminars and workshops that are related to its activities.
- SEMIC.EU offers coaching services for the creation and/or reuse of interoperability assets.

More information on SEMIC.EU can be found at: http://www.semic.eu.

SEMIC.EU is an action of IDABC. Contracted technical service providers for the project are:]init[(main contractor), Fraunhofer ISST, GEFEG, and France Telecom R&D.

About IDABC

IDABC stands for Interoperable Delivery of European e-Government Services to public Administrations, Business and Citizens. It takes advantage of the opportunities offered by information and communication technologies to encourage and support the delivery of cross-border public sector services to citizens and enterprises in Europe and to improve efficiency and collaboration between European public administrations.

The programme also provides financing to projects addressing European policy requirements, thus improving cooperation between administrations across Europe. National public sector policy-makers are represented in the IDABC programme's management committee and in many expert groups. This makes of the programme a unique forum for the coordination of national e-Government policies.

http://ec.europa.eu/idabc

Typographical Conventions

The type styles shown below are used in this document to emphasize parts of the text.

Times New Roman – 11 pt.: Standard body text

Times New Roman – 11 pt. Italic: Citations

The requirements level indicators are fully aligned to "*RFC2119 - Key words for use in RFCs to Indicate Requirement Levels*" and are used as follows:

MUST	means, that this policy element or requirement is to be fulfilled unexceptionally.
SHOULD	indicates an optional policy element / requirement which may be fulfilled if desired.

MANAGEMENT SUMMARY

The licensing framework of the SEMIC.EU platform outlines the legal environment for licensing aspects in the SEMIC.EU context.

The licensing framework is intended to present to the platform users, what kind of properties (so called "interoperability assets") exist in a legal perspective, who owns those properties (including any related rights), and how interoperability assets could be licensed by asset owners to asset end-users in order to facilitate a smooth and cooperative platform operation.

Physically an interoperability asset is a container structure, which contains a set of documents called artefacts which – in combination with each other as a whole – form the technical specification. From a legal point of view an asset and its containing artefacts are considered to be software (computer programs).

Summarising, the fundamental objectives of this framework are:

- to provide solid legal foundation and an adequate level of legal safety
- to initiate a common, stable, and transparent licensing methodology
- to preserve the intellectual property rights of the asset owners
- to fully inform potential asset providers, developers and users about the legal framework
- to impose minimal restrictions on the reuse of assets on a European level

The resulting licensing framework provides the principles and guidance which generally permit a lawful licensing environment for the SEMIC.EU platform. Furthermore, existing, widely used and real-world proven licences are categorised into four distinctive licence classes in order to highlight compatible licences and to guide the users through the various specialties of the licences. This grouping assists users to avoid conflicting licence selections and helps to make the overall process less difficult and more foreseeable.

However, since the licensing aspect of the assets on the SEMIC.EU platform is of a mostly legal nature, a certain set of platform rules applies. Those rules are set in order to make the licensing operations transparent, easy to understand, and referable for the users. The main aspects are:

- Licences are assigned to artefacts, licence classes are assigned to assets.
- Each artefact must have an assigned licence and each asset must have an assigned licence class.
- Each licence used within SEMIC.EU must belong to one specific licence class.
- The application of software patents must be indicated clearly and prominently.
- SEMIC.EU compiles and provides a list of preferred, recommended licences and encourages their application.

Apart from stating the explicit licensing framework and licensing rules, this document also introduces the Intellectual Property Rights (IPR), and finally compiles a short guideline on why and how assets or artefacts may be licensed. Based on the study "Vision of the Clearing Process[1]", it additionally clarifies, what roles are applicable in the SEMIC.EU platform, what properties and rights are assigned to those roles and how those may be combined in a lawful way.

Furthermore, a guideline is provided, which supports the asset provider to select a possible candidate licence for assets or artefacts. Additionally a list of preferred licences is compiled to enable the SEMIC.EU platform to operate more transparently and smoothly in reference to licensing aspects.

This licensing framework, however, may not in any way, neither expressed nor implied, be relied on as a substitute for specific legal advice of an authorised attorney.

[1] Vision of the Clearing Process: http://www.semic.eu/semic/view/documents/vision-of-the-clearing-process.pdf

1. INTRODUCTION

SEMIC.EU is targeted at providing the mediation and collaboration platform for Semantic Interoperability Assets at a pan-European level. Semantic Interoperability assets represent technical specifications and are the basis for cross-border e-Government services. More precisely, SEMIC.EU is supposed to promote the reuse of software like syntactic (e.g. XML schemas) and semantic assets (e.g. ontologies) needed for semantic interoperability. These assets[2] - and all artefacts the asset consists of - are invariably subject to the Intellectual Property Rights legal framework.

These property rights may differ from Member state to Member state not only in marginal details but also – in some cases – in fundamental principles. Furthermore special international norms exist which also add to the complexity of the aspect.

Asset owners who hold the intellectual property rights of an asset as a whole and all of its artefacts have to determine the rights, conditions and restrictions that they choose to impose on the reuse of the asset by other users. This is traditionally done by issuing licences, which clearly states the extent of the rights assigned to a potential user.

A special situation occurs when artefacts are based on patents. In this case, additional conditions have to be considered to ensure that the reuse of an asset is not infringing patents. In general though, whether patents are pending on any artefact of an asset has to be investigated.

1.1. The Purpose of this Document

The licensing framework for SEMIC.EU outlines the licensing principles and rules for the SEMIC.EU platform. Even though the use of the platform itself is of course voluntary, the user – once he decided to cooperate with SEMIC.EU - has to follow certain rules to ensure a reliable operation of the platform and a safe legal base for the use of assets.

Secondly, the framework also collects background information on intellectual property rights, general licensing issues and existing licences as well as guidance to interested users. IPR and licensing are of a very complex nature and are not always easy to predict in their consequences. However, since almost all of the potential platform users are affected by those legal implications, it is of imperative importance to inform and guide the users through this process.

A set of rules, designed for the SEMIC.EU platform, will avoid confusion and disputes by stating fundamental behavioural rules and by simply and safely explaining the “Do’s and Don’ts” of licensing.

1.2. Approach and Structure of the Document

The licensing framework of the SEMIC.EU platform has a threefold structure.

First, the document presents a licensing concept for the SEMIC.EU platform, which puts the project’s objectives of openness and transparency into effect. It also introduces the SEMIC.EU roles, which are important to understand in respect to the different properties assigned to different roles. The concept also includes a structure to group the numerous existing licences into SEMIC.EU licence classes.

Based on the licensing concept, rules are derived and presented in the second part. The document is intended to provide a reasonable balance between the two – sometimes competing – fundamental objectives: legal stability and lawful distribution of software on the one hand and as much flexibility as possible for developers and users on the other hand.

In the third section, a guideline was developed to assist the user in reflecting his properties on an interoperability asset and in choosing the appropriate licence.

[2] Please refer to the document “Vision of the Clearing Process” or the glossary for further details on assets

The SEMIC.EU licensing framework also assembles background information concerning intellectual property rights and information on Open Source principles and Open Source licences..

1.3. Audience

This document is primarily intended for:

- providers of assets
- asset users
- the Clearing Process Manager

This document focuses on the special issues regarding the licensing of interoperability assets on SEMIC.EU. It assumes that the reader has a basic understanding of legal issues. It is not a complete disquisition of all IPR and all related legal aspects.

1.4. Legal Notices

Legal advice usually must be provided by an authorised attorney in an attorney-client relationship. Furthermore, this relationship must reflect the particular aspects of a particular situation on a “per-case” foundation in the law of the applicable jurisdiction.

This document shall be seen as a general information for the licensing of interoperability assets as software, however, may not in any way, neither express nor implied, be relied on as a substitute for specific legal advice of an authorised attorney. If specific advice is required, any legal advice must be obtained from an authorised attorney.

2. SEMIC.EU LICENSING CONCEPT

2.1. SEMIC.EU Licensing Principles

The SEMIC.EU project is intended to enable interested users to publish and share interoperability assets in an open and cooperative way. In order to reflect this aspect appropriately in the licensing framework, SEMIC.EU provides an open, transparent and non-discriminatory process in order to publish and improve semantic interoperability assets.

This process is called "*Clearing Process*" and forms the heart of the SEMIC.EU platform. The clearing process guides the evolvement of an interoperability asset along its development stages and safeguards its compliance to certain rules and best practices. The clearing process is a community driven approach which enables and encourages cooperative and collaborative development and therefore leads to re-usability of software (assets in this case) for the public administration. For further details on the clearing process and the "*vision*" behind SEMIC.EU, please refer to the document "Vision of the Clearing Process".

The SEMIC.EU platform commits itself to pose as little restrictions and as much freedom as possible on its users. Openness, freedom, collaboration, and cooperation are primary targets of SEMIC.EU and those must be carefully considered in the design of all parts of SEMIC.EU.

The licensing framework is based on the following principles:

- embracing of Open Software / Open Source *FREEDOMS* (please refer to Appendix B)
- encouraging and fully supporting *COOPERATIVE AND COLLABORATIVE DEVELOPMENT* (as described in the document "Vision of the Clearing Process")
- preferring a certain set of *OPEN SOFTWARE LICENSES* for SEMIC.EU interoperability assets (as presented in Appendix C)
- allowing dual-/multiple licensing schemes only upon special request (conditions may apply, please refer to Appendix A.3 and to the "*Terms of Service / Terms of Use*" of the SEMIC.EU project)
- enforcing *FAIR, REASONABLE,* and *NON-DISCRIMINATORY LICENSING* terms (refer to Appendix B)

Details about the legal framework of the Intellectual Property Rights are provided in section Appendix A.

2.2. SEMIC.EU Roles

As every role in SEMIC.EU comprises a different set of rights and has to take this in consideration when dealing with licensing questions, an overview of the SEMIC roles and their specific rights is given in this section. This means in practice, that a certain role of SEMIC.EU (for example the asset owner) may execute a certain right granted by the Intellectual Property legal framework (such as publishing an asset on the platform). An overview of the Intellectual Property Rights and its specific regulations is provided in Appendix A.

Figure 1 illustrates the specific roles involved. This section includes various new terms and definitions and whenever any of those is used, a specific reference to its explanation is provided.

The roles specified in the document "Vision of the Clearing Process" are not only roles to reflect the business and development processes but also to address specific legal issues. Certain roles hold

specific legal permissions that are of vital importance in order to guarantee a platform operation that is in full compliance to the copyright and patent legal regulations.

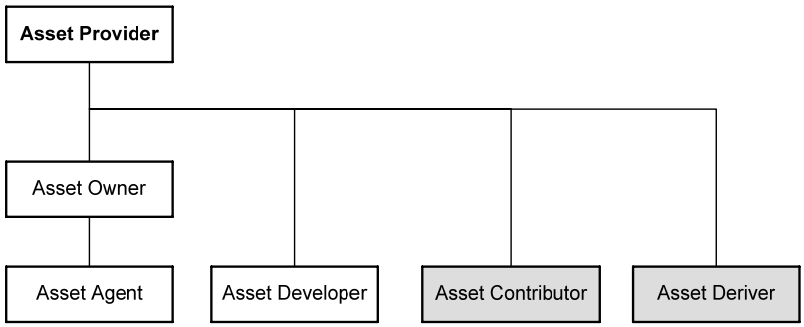

Figure 1: Dependencies between Roles[3]

The required roles are to be defined and distinguished in detail in this section.

Additionally the specific roles of the SEMIC.EU platform are to be connected with the specific platform properties: assets and artefacts. Those roles are described in great detail within the study "Vision of the Clearing Process", the relationship between roles, assets, artefacts, and licences is highlighted in this section as well. This is done, because the understanding of how those elements are related to each other is fundamental for an adequate licensing framework.

Generally said, an asset is a container for artefacts (see Figure 2). In reference to licensing, a container specifies the technical, legal, and organisational framework for the contained artefacts. The properties of an asset itself may only be set by an asset owner, whereas the individual properties for an artefact are to be specified by one or more asset developers. The concrete licences are quite obviously applied to the artefacts, whereas the asset merely specifies the class (see section 2.3) of compatible licences. This important aspect underlines the necessity of a clear understanding of all roles involved within the platform.

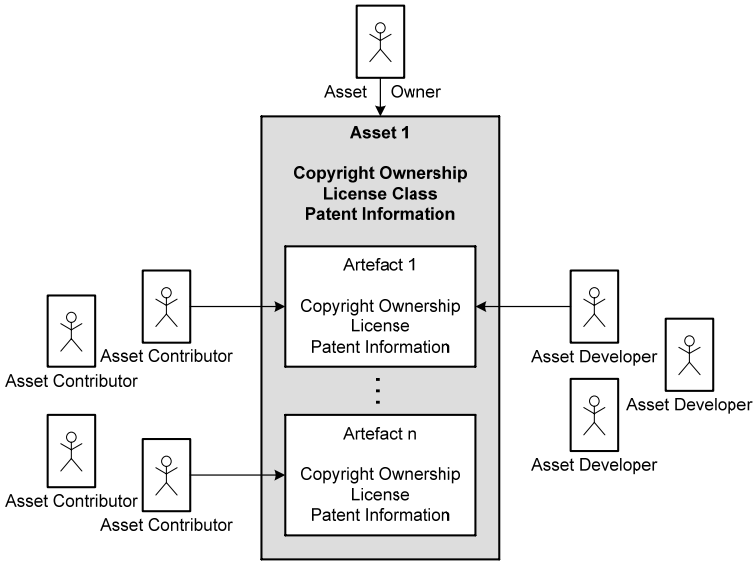

Figure 2: Relationship between properties and roles

[3] The asset deriver is a special role, which reflects a special legal circumstance. Within some very permissive licences it is possible for anyone to assume the ownership of an asset completely, without being the original copyright owner. In order to illustrate this legally possible action appropriately within the platform, this role is introduced. This role is also applied when a platform user forks an originally open source asset into a proprietary piece of software.

2.2.1. Asset Provider

Anyone who provides anything in any form to an asset is considered to act as an *ASSET PROVIDER*. As illustrated in Figure 2, this includes all of the specific roles explained below.

2.2.2. Asset Owner

An asset owner literally owns the asset and, more importantly, holds the copyright ownership of an asset. Therefore the asset owner indisputably holds all rights to that specific asset, however he is not necessarily holding all right to a specific artefact.

The legal rights of an asset owner comprise:

- the right to fully execute the asset owners moral rights (see section A.1.3)
- the right to execute all applicable and granted exclusive rights onto the asset (see section A.1.3)
- the right to add or accept modifications to the asset
- the right to specifically exclude an artefact or a contribution from the asset
- the right to define the terms and conditions under which asset providers may add artefacts to the asset (this also includes patents, assignment of copyright ownership, granting of rights)
- the right to grant permissions for usage of pending patents (if the asset owner is the patent holder)
- the right to grant Contributor Licence Agreements (CLA) to asset contributors
- the right of being the administrative, organisational and technical contact of an asset
- the right to name an asset agent (see below)

The technical rights of an asset owner on the platform compromise:

- the right to specify an assets' licence class (see section 2.3 for reference)
- the right to register, publish, block, hide, and delete an asset from the platform
- the right to request initiation of maturity or conformity process (see document "Vision of the Clearing Process" for further reference)
- the right to change an assets' licence class (see section 2.3 for reference)

2.2.3. Asset Agent

The distinction between an asset owner and an asset agent is that the asset agent not necessarily holds the assets copyright ownership or all of the assets rights. The asset owner may, if required or otherwise beneficial or desired, appoint an asset agent in order to perform various tasks on the asset owner's behalf. The composition of what tasks the asset agent may perform on the asset owner's behalf is a free choice of the asset owner.

For example, an asset agent may hold the permission of the asset owner to publish or block assets however does not hold the right to change its licence terms or ownership.

2.2.4. Asset Developer

An asset developer is a person, who is fully integrated into the development of an asset. In contrast to the asset contributor he usually accompanies the evolution of an asset for a long period of time. Typically the asset developer works on behalf of an asset owner.

An asset developer usually is the - possibly fractional if an asset developer team is involved - copyright owner of one or more artefacts (see document "Vision of the Clearing Process" or SEMIC.EU glossary for further reference).

The legal rights of an asset developer comprise:

- the right to execute all applicable and granted exclusive rights onto the artefact

- the right to fully execute the asset developers moral rights
- the right to be fully acknowledged as legal copyright owner of an artefact
- the right to use, modify, share, and communicate the artefact
- the right to grant specific permissions for the usage of pending patents of an artefact (if the asset developer is the patent holder)

The technical rights of an asset developer comprise:

- the right to contribute the artefact for usage within assets
- the right to – tightly depending on the special conditions of an asset's owner – block, exclude, hide, and delete an artefact

2.2.5. Asset Contributor

A Contributor is an external developer, who adds content of significant extent to an asset. The group of contributors is a variant of the asset developer group. Contributors do not accompany an asset through all processes but add little adjustments from time to time.

The legal rights of an asset contributor comprise:

- the right to fully execute the asset contributors moral rights
- the right to build, use, and offer a contribution
- the right to – tightly depending on the special conditions of the CLA – block, exclude, hide, and delete a contribution
- the right to accept or decline a Contributor Licence Agreement of an asset owner

2.2.6. Asset User

An asset user is the end user who incorporates a semantic interoperability asset in a software product. The asset user is legally required to comply fully with the licence terms of the assets and their containing artefacts.

Additionally, the asset user needs to be assured that the licence terms of works used remain stable. Therefore a safety mechanism needs to be installed that at least informs an asset user prior to a licence change of used assets/artefacts. If an asset user is not informed in time, the use of the asset/artefact may be considered illegal and may cause further legal issues.

The legal rights of an asset user comprise:

- the right to accept or decline a licensors licence for one or more assets
- the right to execute the rights to the extent granted by the asset owner
- the right to legally rely on the asset owners licence terms
- the right to accept a licensors claimed rights (that a licensor actually has the right to act as a lawfully licensor)
- the right to expect a stable and robust legal environment
- the right to claim a breach of statutory product liability laws if applicable, specifically including the right of not being harmed by wilful misconduct of the licensor
- the right to expect a licence of a licensor to fully comply to applicable non-discriminatory and fairness norms

2.2.7. Clearing Process Manager

The Clearing Process Manager, as described in the document "Vision of the Clearing Process" also is of fundamental importance for proper licensing. This role comprises a set of rights and duties, which need to be addressed and reflected accordingly within the platform processes.

Additional to the original duties and responsibilities, the clearing process manager comprises the following set of rights and duties:

- the right to accept new assets on the platform
- the right to accept the application of a pre-defined licence class to an asset
- the right to accept the application of the pre-defined licences to artefacts
- the right to accept a change of licence class or concrete licence
- the right to contact an asset owner or asset developer whenever a violation of copyright ownership or patent infringement is suspected
- the duty to check, that every artefact is submitted comprising a licence
- the duty to check external licences for formal validity
- the duty to block and hide assets, whenever a patent or copyright infringement is assumed
- the duty to act as a mediator between asset owner and/or asset developers
- the duty to support asset owners or asset developers with organisational advise (such as explaining the required processes) when a licence change or update is requested by those

2.3. How does SEMIC.EU Structure Licences

The different open source licences, which are provided in Appendix C, vary in the degree of restriction they impose on the usage of the licensed properties. Because of the number and the complexity of existing licences, it is rather hard to identify, which licences follow the same basic licensing principles and are therefore "*compatible*" and which licences conflict with each other and are therefore "not compatible".

The advantage of compatible licences is that the artefacts of one specific asset may be licensed using compatible but different open source licences without causing any problems for the asset and it's artefacts.

However, the degree of compatibility is not always easy to spot for a user. Therefore, the SEMIC.EU licensing framework provides the means, which categorises compatible licences for the user's convenience. This enables the user to:

- facilitate getting an overview about the different licences for the user
- quickly spot compatible licences
- choose what group of licences the user want to allow in the asset
- define their fundamental licensing commitment
- avoid incompatible licences in one asset

In SEMIC.EU, the resulting categories of licences are called "*Licence Classes*". In each of the licence classes, compatible licences are grouped together and described by a comprehensive class name in order to avoid unnecessary confusion. In reference to the concrete licences presented in Appendix C, four licence classes have been identified for the use within SEMIC.EU. The resulting four licence classes are illustrated in Table 1.

Licence Class
Free to use and share, even commercially
Free to use, share, and modify by Copyleft principle
Free to use, share, and modify by Non-Copyleft principle
Traditional Licence

Table 1: Licence Classes

To summarize, licence classes work in the following way: If licences belong to the same licence class – apart from "*Traditional Licence*" –, the rights and restrictions they impose do not conflict with each other, whereas two licences from different classes at least in one condition are contradictory.

The following subsections explain the different distinctive licence classes in detail.

2.3.1. Free to use and share, even commercially

This licence class addresses the requirement of certain users, to be able to:

- publish
- use
- exchange

interoperability assets; however, while explicitly prohibiting any changing of those assets. These conditions may apply for instance, when a government agency is publishing a fixed interface description to one of its services.

2.3.2. Free to use, share, and modify by Copyleft principle

This licence class includes all Free-Software licences incorporating the Copyleft principles. Actual examples, which have been investigated in this document (see Appendix C), are presented in Table 2.

Free to use, share, and modify by Copyleft principle Licence Class
CeCILL
Common Development and Distribution Licence
Common Public Licence
European Union Public Licence
GNU Public Licence
Open Software Licence

Table 2: Free to use, share, and modify Copyleft

2.3.3. Free to use, share, and modify by Non-Copyleft principle

This licence class contains all Free-Software licences that follow a Non-Copyleft principle. Actual examples, which have been investigated in this document (see Appendix C), are presented in Table 3

Free to use, share, and modify by Non-Copyleft principle Licence Class
Academic Free Licence
Apache Licence
MIT/X11 Licence
Modified BSD Licence

Table 3: Free to use, share, and modify Non-Copyleft

2.3.4. Traditional Licence

This licence class reflects certain requirements of asset owners. Under some circumstances it might be required to apply a traditional, proprietary licence. This licence obviously is not to be included into the preferred Free-Software licence classes and therefore forms its own group. These licences are also called "*proprietary licences*".

3. SEMIC.EU LICENSING RULES

SEMIC.EU defines a set of rules for the fundamental licensing aspect of the SEMIC.EU platform in accordance to the current legal environment. All requirements specified are not targeted to restrict the users in any way but to enable a smooth platform operation and to avoid confusion and disputes over licences.

The rules are obviously to be applied to the SEMIC.EU platform exclusively and do not affect other projects in any way. The concrete licence composition and its finalisation for SEMIC.EU are based on the analysis of the licences in Appendix C.

The legal environment and related aspects are presented in Appendix A. Interested readers may refer to that section in order to receive a general overview of the national and international regulations concerning Intellectual Property Rights (IPR).

This rule set is designed in order to provide a smooth, compliant, and fair service to all platform users. Although the usage of the SEMIC.EU platform is voluntarily, the compliance to the licensing rules is mandatory as soon as a user decides to participate on the SEMIC.EU platform.

Rules one to 14 highlight aspects, which are of legal importance and, therefore, should be carefully considered.

Rule 1 For each artefact the provision of at least one licence is mandatory.

Rule 2 Licences should be provided as source documents within the same release of an asset as the artefacts they are contributed to. The licences have to be checked for syntactical correctness by the clearing process manager.

Rule 3 Any non-English licence text of an artefact / asset should be also provided in a binding English translation.

Rule 4 The licence text must include a statement if this is an official version or an unofficial translation.

Rule 5 The Clearing Process Manager holds the right to permanently delete any content uploaded under an unacceptable licence.

Rule 6 If licences are modified or exchanged by the asset owner, the users of the asset must be informed about those changes. Any significant change of licences must be only performed at a major release. Non-significant licensing changes can be performed at any minor release.

Rule 7 The licence must feature reasonable and non-discriminatory licensing terms and must not discriminate against persons, groups or against fields of endeavour.

Rule 8 Patent utilisation must be clearly indicated prior to uploading / publishing:
- patents that are held by the asset owner
- patents are explicitly granted by the licence conditions
- royalty-free and free-to-use patents

Rule 9 Any provision to an asset / artefact of SEMIC.EU must be complete. It must be guaranteed by the provider, that no part of a contribution is protected by additional licensing methodologies, which may render the contribution practically unusable.

Rule 10 A valid licence within the SEMIC.EU platform must allow redistribution of the contributed parts. Additionally a contribution must allow passing on the granted rights to other users.

Rule 11 Parts of artefacts/assets which prohibit any source code modification MUST be clearly indicated by selecting the licence class "*Free to use and share, even commercially*" for that asset / artefact. Please refer to section 2.3 for further details.

Rule 12 A potential asset user MUST state his / her undoubted agreement to the terms of the assets / artefacts licence, prior to the transfer of that artefact / asset.

Rule 13 (Suspected) Licensing breaches or violations must be addressed timely and appropriately by the Clearing Process manager. The Clearing Process Manager holds the right of blocking assets / artefacts which are in question until the issue is resolved. This aspect is specified in detail in the document "*Terms of Use / Terms of Service*" of the SEMIC.EU platform.

Rule 14 Alterations, modifications or adjustments on the unchanged, original licence text of the pre-defined licences by providers, developers, or users without appropriate indication MUST be avoided.

From this point, the rules provided are covering functionalities of SEMIC.EU and are designed to provide a convenient and fair service to all users; their primary target is to support and facilitate a smooth platform operation and avoidance of disputes caused by non-transparent licensing means.

Rule 15 In order to avoid clashes between different, incompatible licences and to provide an easy overview of what licences are compatible with each other, SEMIC.EU defines licence classes as described in section 2.3. Each asset should clearly indicate to which of the four licence classes it belongs. The Asset Owner or its asset Agent is responsible for specifying the concrete SEMIC.EU licence class.

Rule 16 Each licence belongs to one and only one of the predefined SEMIC.EU licence classes.

Rule 17 All licences of the artefacts in the same asset release should belong to the same licence class. This requirement does not apply to dual or multiple licensing.

Rule 18 The Clearing Process manager checks licences for syntactically correctness and declines an assets' / artefacts' publication when the licence provided does not entirely meets all SEMIC.EU licensing criteria.

Rule 19 The documentation of provided software or software parts must be licensed under a "*free-to-use*" principle.

Rule 20 Any development or contribution to any SEMIC.EU asset or artefact should be provided under an Open-Source licence.

Rule 21 Dual/Multiple licensing schemes should be avoided, if possible. When a situation occurs, where a dual-/multiple licensing schema is required, an exception may be granted upon special request.

Rule 22 Any licensor should seek legal advice prior to provide software or software parts to the SEMIC.EU platform in order to be able to fully protect his/her investment.

Rule 23 A mixture of different artefact licences belonging to the same class should be avoided (if possible) for the artefacts within the same asset.

Rule 24 In order to foster the reuse of assets, the licences contributed to the artefacts of an asset should be as weak –e. g. permissive - as possible.

Rule 25 Any information that qualifies as a trade secret should not be published, as the platform may not guarantee full confidentiality and/or closure.

4. LICENSING GUIDANCE

4.1. Guideline to choose a licence

The following part of the conclusion aims at giving hands-on advice on how to choose an adequate licence for interoperability assets. In order to choose the licence which fits best, a potential asset provider needs to decide, what aspects are of fundamental importance.

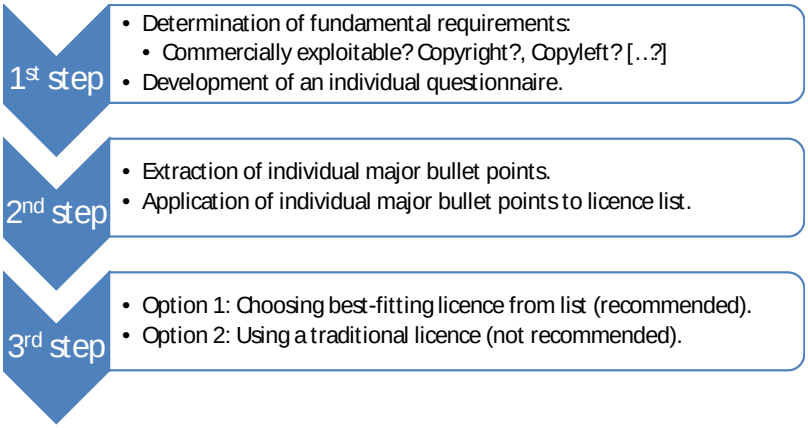

Figure 3: Guideline for choosing a licence

The better a licensor understands his specific needs and requirements concerning licences, the better an asset provider may select an adequate licence for the intended purpose. It is strongly advisable for any licensor to develop a personal questionnaire to determine important points, as illustrated in figure 3. Possible examples for elements of this questionnaire are:

- Do I want to others to modify my code?
- Do I want to licence all my work under a Copyleft licence, so that no one takes my work and converts it into a commercial product?
- Do I want to grant the maximal rights to a user, including converting or re-licensing my work?
- Do I want to limit the grants of my patents?
- How important is the reflection of a stable legal environment for me? Is it required to choose a licence specifically designed to provide strongest legal safety?

The answers to these questions lead the way to the best-fitting licence. The next step might be to choose the most suitable licence from the list of pre-defined licences provided. The SEMIC.EU project team highly advises the application of one of the preferred licences. The European Union Public Licence and the CeCILL licence are stable and safe choices and therefore recommended for users. This is, because licensing might cause a significant amount of irritation and confusion on the one hand and on the other hand the various preferred licences have already proven themselves as being applicable, useful, and robust in real-world projects.

The following table 4 contains the pre-defined licences for the SEMIC.EU platform and indicates the individual licences features. Therefore, table 4 may be a profound foundation for decision making.

	AFL	ASL	CeCILL	CDDL	CPL	EUPL	GPL	X11	MBSD	OSL
Free Software Licence - licence explicitly assures free and royalty-free use	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Copyleft Principle – original, parts and derivates must retain the original licence	✗	✗	✓	✓	✓	✓	✓	✗	✗	✓
Licensed software is commercial exploitable – e.g. software can be sold	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Licensed software or parts under licence may link to other software licences	✓	✓	✓	✓	✓	✗	✗	✓	✓	✗
All involved patents needed to operate the given software must be granted	✓	✓	✓	✓	✓	✓	✓	💣	💣	✓
All patents for the given software are granted for **all** Open Source developer	✓	✓	✓	✗	✓	✓	✓	💣	💣	✓
Software licence allows proprietary forking – e.g. proprietary transformation	✓	✓	✗	✓	✓	✗	✗	✓	✓	✗
Licence permits a licence change to another licence of another licence class	✓	✓	✗	✓	✓	✗	✗	✓	✓	✗
Licence specifically designed to form an international safe legal environment	✓	✗	✓	✗	✗	✓	✗	✗	✗	✗
Licence is widely used and has proven itself in international projects	-	✓	-	✓	-	-	✓	✓	✓	-
Legend: ✓ = yes ✗ = no - = not yet proven 💣 = careful consideration										

Table 4: Pre-Defined Licence Set with Licence Features

4.2. Preferred Licences for the SEMIC.EU Platform

As previously stated, a licensor is generally free to choose any licence. However, there is a set of four open source licences which usage seems to be highly advisable within the SEMIC.EU platform. All of those four open source licences are supposed to:

- be adequately simple to read and reasonable short in length
- reflect and encourage the principles of free software
- may be used free-of-charge (royalty-free)
- are generally applicable to any software
- rather flexible in its conditions

- address the software patent legal issue
- offer a extraordinary high legal security and legal stability
- have been provided by reputable and trustworthy parties
- are already used in real-world projects and initiatives

Those are the fundamental requirements for a licence to be specifically recommended for use within the SEMIC.EU platform. By analysing the potential licences shown in table 4, four licences are identified which clearly meet those requirements. In particular the criterion of high legal stability and safety is of great importance, alongside with a given licence's applicability to the full extent of the European legal system.

This criterion already qualifies the European Public Licence (EUPL) and the CeCILL licence. Both fully reflect the specialties of the pan-European environment because both of them have been specifically designed to be used in a pan-European legal environment. For instance, an exceptional if not unique, aspect is the fact, that the EUPL is available in 22 official European Union languages as an authoritative (official and legally binding) translation.

If an asset provider prefers Copyleft licences, which are of rather restrictive nature, the usage of the following licences is recommended, as presented in Table 5.

Number	Class 3: Free to use, share, and modify by Copyleft principle Licence
1.	European Union Public Licence
2.	CeCILL

Table 5: Recommended Class 3 Licences for SEMIC.EU

If an asset provider prefers Non-Copyleft licences, which are of rather permissive nature, the usage of the following licences is recommended, as shown in Table 6.

Number	Class 4: Free to use, share, and modify by –Non-Copyleft principle Licence
1.	CeCILL-B
2.	Academic Free Licence

Table 6: Recommended Class 4 Licences for SEMIC.EU

As a third licence, the CeCILL-B licence is recommended, if Non-Copyleft licensing principles are to be used. The fourth candidate licence, The Academic Free Licence (AFL), includes some disputable content, such as the "N*O WARRANTIES*" clauses. However was designed by an attorney and is considered to represent a rather short, elegant, legally stable, and robust licence for general use.

For the special circumstance of addressing asset contributors in a lawfully and legally adequate manner, the application of a legally binding Contributor Licence Agreement (CLA) is highly recommended. A possible template to illustrate a widely-used and well-checked CLA of the Apache Foundation is provided in Appendix A.2.3.

Appendix A INTELLECTUAL PROPERTIES AND RIGHTS INTRODUCTION

The following sections introduce the legal framework of the Intellectual Property Rights and their related rights. These sections are provided in order to inform interested users about the legal implications of licensing, the opportunities and, if applicable, any risks. Licensing in reference to SEMIC.EU mainly means to issue a contract between the author (licensor) of a piece of software and a potential user (licensee). In this contract, the user may then use the software according to the specific terms of the licensor. However, the extent of the rights which are granted to the licensee may vary from licence to licence.

This appendix introduces the basics and fundamental aspects of the Intellectual Property Rights and its legal framework. The following appendices also deal with aspects within the IPR but explain specialties in much more detail, such as licences.

This appendix gives general information for the licensing of interoperability assets in the context of the SEMIC.EU project. It is not to be seen as a substitute for specific legal advice of an authorised attorney. If specific advice is required, any legal advice must be obtained from an authorised attorney.

A.1. INTELLECTUAL PROPERTY LEGAL FRAMEWORK

The intention of this section of the document is to investigate the current legal environment of the protection of the minds creations - Intellectual Properties (IP) - and the relations between its legal regulations. A brief overview of the main legal concepts is provided here, as well as an introduction of the most important terms and definitions.

The following section describes the legal environment of the Intellectual Property Rights and distinguishes between its different legal concepts and the specific fields of application. At the end of this section, the actual licensing methodology is introduced. It is described how permissions can be granted to assign part of the intellectual property rights to other parties.

A.1.1. INTELLECTUAL PROPERTY RIGHTS

Intellectual Property Rights (IPR) constitute a legal framework for creations of the mind. This framework comprises a set of applicable rights and legal concepts, such as copyrights and patents. The specific rights are granted to the creator of the intellectual property. Because of the fact that there are multiple types of possible creators, such as an author or inventor, the more generalised term “IP holder” is used from now on.

The specific legal concept under which a property is protected can be chosen by the IP holder of the property. Based on this the specific choice, a bundle of certain rights is assigned to the IP holder of the property where some of those rights are exclusive thus may only be executed by the lawful IP holder.

In reference to the SEMIC.EU platform, three of the major concepts of intellectual property rights (although many more exist) are identified to be of fundamental importance:

- Copyrights
- Trade Secrets
- Patents

A.1.2. PROPERTY AND INTELLECTUAL PROPERTY

Traditionally, a property is an entity to which a party holds exclusive rights. In the context of this study, the most important feature of this property is that the property holder is in full control of the actions are performed with this entity. Property is usually categorised into three general groups:

- movable property

- immovable property (real property) and
- intellectual property

Of these three, only intellectual property is of interest for SEMIC.EU. Intellectual properties are almost all creations of the mind, which covers artistic work, literature, inventions, fine arts and – most importantly for the platform – computer programs.

However, the intellectual property rights comprise two major concepts in order to protect an intellectual property:

- *COPYRIGHT PROPERTY*, where the physical manifestation or other forms of expression are protected, but not the idea itself
- *IDEA-PROTECTED PROPERTY*, such as patents, trademarks and designs, where the idea itself is protected

The specific differences between these two major concepts are highlighted in the following sections.

A.1.3. COPYRIGHT

The copyright is a legal means in order to grant a creator of an intellectual property the exclusive rights to this property for a limited period of time. These exclusive rights comprise the right to exclude other parties from using the intellectual property, or to set certain limitations on the allowed usage. Additionally, copyright owners may totally transfer their ownership to another party or may licence other parties to use their work.

Copyright however, only protects the physical manifestation or another form of expression but not the idea itself. As the name copyright indicates, the aim is to protect the rightful IP holder against unauthorised copy of his intellectual property. In a nutshell, although the initial idea is not protected by the copyright regulations, the protection is automatically granted as soon as the idea is fixed in any way whatsoever. There is no lawful need to specifically apply for copyright protection.

Copyright Ownership

Although – at least in the first instance – the copyright ownership is assigned to the original creator of an intellectual property, there exist exclusions which are regulating this specific issue.

A very common limitation of copyright ownership is the principle of the employers' ownership: If a work is originally created by employees who have been asked to create the piece of intellectual property for their employer, the copyright ownership belongs to the employer rather than the individual employee. This special situation is usually regulated by national law and implements the legal principle of "copyright assignment", which is described in later in this section.

Moral Rights

According to international norms and treaties and national laws, a bundle of specific rights is always granted to the individual, human author. These rights include at least:

- the right to claim authorship for a work
- the right of integrity of the author's work

In contrast to any economic rights, the moral rights are independent and may never be transferred to another party. Therefore, the moral rights are always held by the original human author, regardless of the current holder of the copyright (economic rights).

Assignment of Copyright

As previously mentioned, in general the copyright ownership may be assigned to other parties. Assigning a copyright ownership means in practice that the actual ownership of a work is transferred to another party regardless of the other party's nature (organisation, person, public administration).

However, since international treaties are more of an international norm and not actual national law, there are many fundamental differences between the national implementations of the treaties. As a result, a transfer of a copyright ownership to another person or entity is possible in many, but not all countries. Therefore, there are two different forms of a copyright transfer: assignments and licences.

For instance, copyright legal regulations based on the French "*droit d'auteur*" (right of the author) on the one hand usually prohibit any assignment of copyright (but by heritage) and – on the other hand – disallow entities such as companies from being an "*original creator*" of work (German: Urheber).

In order to facilitate the interoperability of the German copyright with pan-European regulations, the specific limitations of national (German) law have been addressed and slightly adjusted to fit the pan-European environment. In countries where an assignment of copyright is prohibited, special legal regulations apply that grant an exclusive licence to certain parties such as employers. In such cases, the original creator of the work is still the employee [§69 (b) UrhG[4]], whereas the employer holds an exclusive licence [§ 43 UrhG]. An exclusive licence means that the original author and copyright owner may not grant other parties any licensed acts or rights of use.

In reference to that, article 2 (§1) of the EC 91/250 Directive[5] also defines an author as a natural person who has written the program however, specifically acknowledges the automatic transfer of rights if the author has developed the program within a specific employment contract (if the specific contract does not say otherwise).

Copyright of Software

As mentioned above, copyright protection applies for the physical manifestation or other form of expression of an idea. In reference to the SEMIC.EU platform, the copyright protection of computer programs (software[6]) in particular, but specifically, the actual semantic interoperability assets, is of interest.

Currently, computer programs are also fully protected by copyright regulations. Although some national regulations and the Berne Convention[7] do not specifically list computer programs as protected works, in article 2, the latter states "*every production in the literary, scientific and artistic domain, whatever may be the mode or form of its expression*"[8]. This undoubtedly includes computer programs.

To clarify this point and specifically address newer technology that is not yet reflected in the Berne Convention, the WCT and TRIPS specifically include references to computer programs. According to article 10(1) of TRIPS[9] and article 4 of the WCT[10], computer programs are to be protected like a literary work to at least the full extent of the Berne Convention. According to the directive EC 91/250 of the EU, computer programs (software) are also to be considered as literary works as mentioned in the Berne Convention.

Furthermore, the protection of computer programs does not distinguish between the various possible expressions of computer programs, such as source code, binary code, and printout.

However, if certain circumstances are met, software products may be protected by another means as well. This special aspect of the licensing framework is described in greater detail in section A.1.5.

[4] UrhG: http://www.bundesrecht.juris.de/urhg/index.html (German text)
[5] EC 91/250 Directive: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31991L0250:EN:HTML
[6] In the legal context there will be no distinction between computer program and software. Both terms are used in parallel depending of the referenced context.
[7] Berne Convention Article 2: http://www.wipo.int/treaties/en/ip/berne/trtdocs_wo001.html
[8] Berne Convention for the Protection of Literary and Artistic Works, last visited 02/2008 at : http://www.wipo.int/clea/docs_new/en/wo/wo001en.html
[9] TRIPS Article 10: http://www.wto.org/english/docs_e/legal_e/27-trips_04_e.htm
[10] WCT Article 4: http://www.wipo.int/treaties/en/ip/wct/trtdocs_wo033.html

A.1.4. TRADE SECRETS

A trade secret is usually enforced by legal contracts, such as a non-disclosure agreement (NDA) or a confidentiality agreement. In these legal contracts, the specific disclosure terms of trade secrets are defined. It is not advised to publish any information that qualifies as a trade secret.

A.1.5. PATENTS

A patent is a government-issued and approved document that grants an inventor the exclusive rights to an invention for a fixed period of time. The exclusive rights in reference to patents mean that the patented invention may only be exploited by another party with authorisation by the inventor or IP holder.

As already indicated in section A.1.2, patents and the fundamental patentability are significantly different from the copyright protection. By copyright, the manifestation of an idea is protected, whereas with patents the original idea is protected.

In the context of patents, an invention addresses a specific problem in technology and is required to provide a specific solution for that problem. However, in order even to qualify for patentability, an invention needs to meet at least this set of criteria [article 52 (1) EPC[11]]:

- *INDUSTRIAL APPLICATION*: the invention needs to be practically usable
- *NOVELTY*: the invention needs to be new
- *NON-OBVIOUSNESS*

Patents for Computer-Implemented Inventions

Although software itself is often considered to be excluded from patentability, it may be argued that a legal basis for the patentability of certain kinds of software may be found within the European Union. However, since the term "*software*" tends to be easily misunderstood, the expression "computer program" is commonly used. In close correlation to legal issues, the term "computer-implemented inventions" is also often applied.

There is currently no internationally accepted legal definition of computer software in reference to patents. However, many organizations and governments either have their own definition or provide none at all. The World Intellectual Property Organization (WIPO) defines a computer program as "*A set of instructions capable, when incorporated in a machine readable medium of causing a machine having information processing capabilities to indicate, perform or achieve a particular function, task or result*".

According to the European Patent Convention (EPC) article 52 (2c)[12], computer programs are specifically excluded from any patentability: "*The following in particular shall not be regarded as inventions within the meaning of paragraph 1: […] and programs for computers […]* ". Although "*Programs for computers as such are excluded from patentability by virtue of Art. 52 (2c) and (3) EPC*"[13], the patentability for software may be possible in some situations. Article 53 (2c) actually excludes only computer programs if taken "*as such*" and only "*as such*". If a computer program is extended by another aspect, the above exclusion may not be applicable anymore. That means in simpler terms that: "*Patents on computer programs are not allowed in European law "as such", but in practice, patents have been granted that cover functionality in many common software applications*"[14].

Therefore, software patents are in principle not granted within the European Union. Actually, the European Parliament has voted against patenting software, rejecting a proposal from the

[11] EPC: European Patent Office, Computer-Implemented Inventions (CII) , 12.10.2007
[12] European Patent Convention (EPC) Article 52: http://www.epo.org/patents/law/legal-texts/html/epc/1973/e/ar52.html
[13] European Patent Office, Computer-Implemented Inventions (CII) , 12.10.2007
[14] "How to use the EUPL?", section on Patent Claims, http://ec.europa.eu/idabc/en/document/7584/5980

Commission and Council. Parliament's overwhelming rejection sends a message to the other two Institutions that no legislative proposal requiring its agreement could succeed unless its opinion is taken under account[15]

A.2. LICENCE PRINCIPLES

A licence is basically a permission granted by the copyright owner allowing another party to perform certain actions on a specific property of the copyright owner. The permission of the copyright owner is termed a licence. The extent of the actions, any possible limitations, and additional terms of use, are regulated in the licensing framework.

Licences may be exercised explicitly or implicitly. In this study, only licences of explicit nature are included because implicit licences are quite risky and incomplete. A widely known scenario to illustrate that fact is the case where an IP (Intellectual Property) owner did not state any licence conditions or terms. It is possible that the IP owner has no desire to execute the exclusive rights; however, no one can be certain about that. If such a work is used in an asset/artefact, the further use of this work may be at risk if the IP owner decides to change the terms of his IP. Another dangerous point of implicit licences is missing patent clauses in licences. If a patent was used in an artefact, it may happen that royalty fees or restrictions might be claimed later by the patent holder from the asset users.

The following sections and sub-sections explain some important aspects of licences.

A.2.1. LICENCE AGREEMENT OR LICENCE CONTRACT

A licence itself does not necessarily form a legally binding contract. Therefore, a legally binding contract - called a "*licence agreement*" or "*licence contract*" is usually provided. This agreement forms the legal basis of the specific rights of use that are transferred to the licensee in a very detailed manner.

The "binding nature" of a licence agreement is of high legal complexity since it constitutes what is termed a "*licence in absence of a contract*". Licence users are not required to accept most Open Source licences explicitly, for instance by signature. Since the IP (Intellectual Property) of someone else may only be lawfully used if a permission (licence) is granted. Therefore, even if no real contract is formed, licensees are required to obey the terms when they choose to exercise any exclusive rights (such as using).

A.2.2. CONTRACTUAL ACCEPTANCE OF LICENCE TERMS WITHIN THE EU

As mentioned in the previous section, licences which are considered to be of a legally robust and stable nature, are usually presented in a contractual form. Naturally, such a licence contract needs to be accepted by any user in order to lawfully execute the rights granted by this licence.

However, due to rather fundamental jurisdictional differences and the fact, that many licences are designed for usage within the United States legal system, various problems may arise. The GNU Public Licence (see section C.2.5 for details) for instance automatically entails the acceptance to any and all of its licence terms by the fact, that:

- exclusively this licence may grant the right (among other rights) to distribute a work under that licence.

This means in practice, that anyone who is communicating (including downloading), using, or operating that work has rather automatically accepted to all licence terms, because without prior acceptance it would be unlawful to perform those operations.

15 *http://www.europarl.europa.eu/news/public/focus_page/057-1002-255-09-37-909-20050819FCS01001-12-09-2005-2005/default_en.htm*

However, within the European Union, a lawful licensee acceptance of a licence' contractual terms may only be derived if:

- the licensee had the chance to fully read a licences' terms and conditions prior to communicate the work
- the licensee has undoubtedly agreed to all of a licences' contractual terms and conditions

In traditional contractual situations, an undoubted agreement to the terms is substantiated by a written and signed document. However, providing a written document of some kind for software licences is rather difficult to perform, especially for software communicated over the Internet.

In common practice, two methods to demonstrate a user's undoubted agreement to the terms have been implemented, accepted, and used for software. On the one hand, there is the so-called "*shrink-wrapper*" method, where the software is sealed and the licence terms are printed onto that seal. By breaking the seal, the user accepts the licence terms printed to the wrapper. On the other hand, there is the "*click-wrap*" method, which addresses software communicated without a physical storage medium (by Internet for example). As this kind of software obviously cannot be wrapped and sealed, the user is confronted with the full licence terms prior to the installation of the software. This is usually performed by presenting a screen consisting of the licence text and two buttons. The buttons are clearly and appropriately marked, so that the user may state his acceptance of the licence terms or simply clicks decline what immediately stops the installation process.

Those two methods are generally accepted, lawfully stable, and well-used but produce a considerable amount of effort.

For software which is exclusively distributed by the Internet, the licence is usually provided as a separate text file within the software package. The requirement of being confronted with the licence and the acceptance of that licence is usually addressed by making the licence accessible by some sort, such as a hyperlink or a pop-up window. This method is legally weaker than the two described above, however, could provide sufficient legal safety alongside with considerably less effort. The key point of this method is that the user had the opportunity to easily access and read the licence prior to communicating the software. This method is generally not advisable as it may not provide the same level of legal robustness, compared to the two methods described above.

The SEMIC.EU platform may provide the technical mechanism in order to indicate or document the users consent. However, the platform itself is not involved in the contractual relationship between the licensor and the licensee in any way and only acts as the storage and communication facility.

A.2.3. CONTRIBUTOR LICENCE AGREEMENT

In a Contributor Licence Agreement (CLA), the rights of a specific contributor are assigned or granted to the party to whom the contribution is given. In a simple case, a contributor assigns his copyright to the party who is contributing. This is an additional licence, which complements the primary licence in order to avoid problems which arise from multiple copyright ownership. Additionally, this complimentary licence may be used to prohibit infections of the licence terms, if the contribution of source fragments to an artefact is not regulated in the primary licence.

As an exemplary CLA the Apache "*Individual Contributor License Agreement ("Agreement") V2.0*"[16] (ICLA) is worth considering. The Apache ICLA is a rather complete CLA, including any possible patent issues.

A.3. DUAL AND MULTIPLE LICENSING

Planning, developing and implementing semantic e-Government interoperability assets usually require a considerable amount of resource investment. Therefore, an asset automatically represents a certain business value, which generally is well worth protecting. On the one hand especially in the e-

[16] The Apache CLA can be found at: http://www.apache.org/licenses/icla.txt

Government environment, achieving interoperability is one of the most important goals. On the other hand, adequate control and protection of investments is also a vital criterion.

Both aspects diverge substantial regarding the best fitting licence. Whereas an open source licence fits best for achieving interoperability, a proprietary licence provides a good level of control and protection of the investment.

To clarify the emerging conflict of interests, the following exemplary scenario is illustrated: if, for instance, a provider is well willing to share his assets freely in the e-Government community but wants to charge asset users in the private business sector and prohibit any unauthorised alterations on those assets, the asset provider needs most likely a proprietary, traditional licence.

Those traditional licences may – however – clash with some of the specific regulations in the e-Government sector: the promotion of software under the open source licence.

A possible alternative approach to address all of the given requirements is a so-called dual licence. In a dual licence scenario, a given software product features different licences for each target group.

Therefore it is possible to put an open source licence in place for use within a Member States public administration and a traditional, proprietary licence for further business application. This method has already proven to be appropriate in real-world business organisations. In particular, former open source initiatives which were turned into private businesses are using this alternative licensing method for their projects[17].

Dual licensing may be beneficial in complex situations, where the needs of the asset users and specific limitations of the asset owner need to be addressed simultaneously. However, dual licensing greatly increases the complexity of the licensing legal implications and needs to be considered carefully. For further reading concerning dual / multiple licensing, please refer to the workshop results of the workshop "*Advancing the Research Agenda on Free / Open Source Software*"[18] and the additional documents presented. Another source of information concerning dual / multiple licensing may be the documents of Välimäki.[19]

SEMIC.EU encourages asset owners not to use dual- / multiple licensing but to licence under the Open Software licences.

A.4. LICENCE TRANSLATIONS

As semantic interoperability assets will be published to pan-European public administrations it is possible that some of the licences come in rather uncommon languages and those may require translation. However, due to the possible legal nature of a licence, the extent, degree of reliance, and legal stability of a translation may vary. To the asset user it has to be very clear if the licence text he reads is legally approved or a non-authoritative translation.

In order to address this aspect, usually a short disclaimer is added to every translated licence which is clearly highlighting the source, the dependability level, and application recommendations of the given licence. As an example, the following excerpt of an unofficial licence translation is provided:

"*This is a translation of the GNU General Public License into German. This translation is distributed in the hope that it will facilitate understanding, but it is not an official or legally approved translation. The Free Software Foundation is not the publisher of this translation and has not approved it as a legal substitute for the authentic GNU General Public License. The translation has not been reviewed carefully by lawyers, and therefore the translator cannot be sure that it exactly represents the legal meaning of the GNU General Public License. If you wish to be sure whether your planned activities are permitted by the GNU General Public License, please refer to the authentic English version.*

[17] OSS Watch: "Dual Licensing", University of Oxford, http://www.oss-watch.ac.uk/resources/duallicence2.xml, 02/2008
[18] Rishab Aiyer Ghosh: http://www.infonomics.nl/FLOSS/report/workshopreport.pdf
[19] Mikko Välimäki: Dual Licensing in Open Source Software Industry, Systemes d´Information et Management, Vol. 8, No. 1, pp. 63-75, 2003, http://www.valimaki.com/org/dual_licensing.pdf

The Free Software Foundation strongly urges you not to use this translation as the official distribution terms for your programs; instead, please use the authentic English version published by the Free Software Foundation"[20].

This disclaimer clearly indicates its validity and its scope.

[20] Cited from: S.u.S.E. GmbH, Deutsche Übersetzung der GNU General Public Licence, Katja Lachmann, 1996

Appendix B OPEN SOURCE PRINCIPLES

As already mentioned, the SEMIC.EU project embraces the Open Software / Open Source principles. The concepts and ideas behind Open Source perfectly fit the intention, goals, and objectives of the project and may help SEMIC.EU to offer a useful and widely accepted service to the involved parties.

The fundamentals of Open Software principles and aspects are illustrated in the following sections.

B.1. COPYLEFT PRINCIPLE

The most fundamental principle of Copyleft licences is that any work under or derived from other Copyleft software or software parts is to be distributed under the same licence terms as the original software's licence terms. "*Copyleft is the practice of using copyright law to remove restrictions on distributing copies and modified versions of a work for others and requiring that the same freedoms be preserved in modified versions. An author may, through a copyleft licensing scheme, give every person who receives a copy of a work permission to reproduce, adapt or distribute the work as long as any resulting copies or adaptations are also bound by the same copyleft licensing scheme.*"[21] Because of this, software that is licensed under any Copyleft licence is sometimes called "viral" or "contagious".

Furthermore, the Copyleft licences may be categorized into two areas: strong and weak. In a strong Copyleft environment, all derivates and parts of a work that are originally based on a Copyleft licence can only be distributed under the very same licence conditions as the original software. A weak environment encompasses Copyleft licences in which not all of the parts and derived works must inherit the original licence terms.

This circumstance is of vital importance as it highlights a possible clash of motivations. Whenever an artefact involving a strong Copyleft licence is used in one asset, all other artefacts and the asset itself are required to inherit the Copyleft mechanism (viral effect). However, this instance might not be accepted by all of the asset developers, thus blocking or at least hindering the asset's further development.

B.2. OPEN SOURCE LICENCE DEFINITIONS

This section clarifies the criteria, requirements, and underlying principles of Open Source Licences.

The fundamental principle of the Open Source Licensing is that it prohibits anyone from exclusively exploiting a given piece of work. In order to reflect this, a legal framework was originally developed to guarantee the openness by a certain set of principles:

The principles as defined by the Free Software Foundation[22]:

- "The freedom to run the program, for any purpose (freedom 0).
- The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can help your neighbour (freedom 2).
- The freedom to improve the program, and release your improvements to the public, so that the whole community benefits (freedom 3). Access to the source code is a precondition for this."

The principles as specified by the Open Software Initiative[23]:

[21] http://en.wikipedia.org/wiki/Copyleft on 10th of March 2008
[22] Cited from: http://www.gnu.org/philosophy/free-sw.html, last visited in February, 2008
[23] Taken and modified in format from: http://opensource.org/docs/osd, last visited in February, 2008

- "Free distribution: The licence shall not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources. The licence shall not require a royalty or other fee for such sale.
- Source code: The program must include source code, and must allow distribution in source code as well as compiled form. Where some form of a product is not distributed with source code, there must be a well-publicized means of obtaining the source code for no more than a reasonable reproduction cost preferably, downloading via the Internet without charge. The source code must be the preferred form in which a programmer would modify the program. Deliberately obfuscated source code is not allowed. Intermediate forms such as the output of a pre-processor or translator are not allowed.
- Derived works: The licence must allow modifications and derived works, and must allow them to be distributed under the same terms as the licence of the original software.
- Integrity of the author's source code: The licence may restrict source-code from being distributed in modified form only if the licence allows the distribution of "patch files" with the source code for the purpose of modifying the program at build time. The licence must explicitly permit distribution of software built from modified source code. The licence may require derived works to carry a different name or version number from the original software.
- No discrimination: The licence must not discriminate against any person or group of persons. The licence must not restrict anyone from making use of the program in a specific field of endeavour. For example, it may not restrict the program from being used in a business, or from being used for genetic research.
- Distribution of the licence: The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional licence by those parties.
- Licence characteristics: The rights attached to the program must not depend on the program's being part of a particular software distribution. If the program is extracted from that distribution and used or distributed within the terms of the program's licence, all parties to whom the program is redistributed should have the same rights as those that are granted in conjunction with the original software distribution. The licence must not place restrictions on other software that is distributed along with the licensed software. For example, the licence must not insist that all other programs distributed on the same medium must be open-source software. No provision of the licence may be predicated on any individual technology or style of interface."

B.3. REASONABLE AND NON-DISCRIMINATORY LICENSING TERMS

"*Reasonable and Non Discriminatory Licensing (RAND) is a term for a type of licensing typically used during standardization processes. The normal case is that when joining the standardization body, companies agree that if they receive any patents on technologies which become essential to the standard then they agree to allow other groups attempting to implement the standard to use those patents and they agree that the charges for those patents shall be reasonable. RAND licenses allow a competitive market to develop between multiple companies making products which implement a standard.*"[24]

[24] http://en.wikipedia.org/wiki/Reasonable_and_Non_Discriminatory_Licensing on 10th of March 2008

Appendix C OPEN SOURCE LICENCES

This appendix introduces publicly available and widely-used software licences. The primary intention is to provide an overview and help a platform user to distinguish between the different approaches of software licensing. Each individual licence presented here is accompanied by a brief introduction and a table, summarizing its specific features.

"The owner of intellectual property rights has the exclusive right to prohibit others from using those rights. Exclusive rights do not pose problems to the software ecosystem as long as the rights can be clearly separated from each other and the creators of new programs are not dependent upon the rights of others. Unfortunately, the implementation of even a simple computer program in the systems that are in use today typically depends on software components from many others. Thus, one company or independent developer can hardly produce a complete software product alone and without the explicit acceptance of others. Understandably, the fragmentation and overlapping of rights pose practical problems as software products become more complex and more parties participate in the development process. The interdependence of rights owners can create difficult lock-in situations if "difficult" rights owner tries to get as much control through the interfaces of exclusive rights. They may not license the intellectual property at all or may offer only non-acceptable terms. Especially open source developers seem to have a strict criterion that licenses cannot have any royalty requirements."[25]

In order to fully comprehend the various licences and licence classes for SEMIC.EU, it is imperative that the different licences are clearly distinguished from each other. Choosing a particular licence may have a great impact on usage restrictions of any software. A wrongly applied licence may, on the one hand, render artefacts unusable in semantic interoperability assets or – on the other hand – may not appropriately reflect the author's desired limitations of use.

For instance, publishing an artefact under the licence terms and conditions of the GNU Public License (GPL), the details of which are reviewed in the next section, basically prohibits the use of that particular artefact in any composition (assets) where the licence's other artefacts do not fully qualify for the GPL. This instance is one reason why the GPL is sometimes called "viral" or "contagious" for software development.

Another case might be that an artefact copyright owner, such as a public administration, wants to limit the exploitation of its artefact in a certain way. For instance, an artefact should be royalty-free for use within other e-Government assets of any public administration, but a royalty is charged when a private business uses the asset.

In order to provide guidance for artefact and asset owners about which licence should be assigned to an artefact, a list of appropriate Free Software Licences has been compiled and investigated.

The focus on Free Software licences has intentionally been chosen in order to achieve maximum flexibility and stability for all parties involved. Free Software licences are widely used, well known, and well accepted within the software development sector. These licences cover almost every issue that needs to be considered for interoperability assets and most support groupings, e.g. a set of different licences that are compatible with each other. This means that the artefacts in one asset may have more than one licence, and one asset may have a different licence from the others. This grouping effect is reflected by the licence classes.

Proprietary licences, however, are not part of this study. The focus is on well-known and well-accepted free software and non-discriminatory licences (see Table 7).

[25] Välimäki, M.: "Software Interoperability and Intellectual Property Policy in Europe", European Review of Political Technologies, Page 10, 12/2005

Licence Name	Licence Scope	Copyleft
Academic Free Licence (AFL)	Software	No
Apache Licence (APL)	Software	No
CeCILL	Software	Yes
Common Development and Distribution License (CDDL)	Software	Yes (weak)
Common Public Licence (CPL)	Software	Yes
European Union Public Licence (EUPL)	Software	Yes
GNU Public Licence (GPL)	Software	Yes
MIT/X11 Licence	Software	No
Modified BSD Licence (3-terms)	Software	No
Open Software Licence (OSL)	Software	Yes

Table 7: Licences investigated

C.1. CHART EXPLANATION

Additional to the explaining text, the specific properties of every licence are also briefly presented and summarised in a tabular form. Table 8 is an example for the presentation tables in which every property is explained.

Property	Explanation
Licence Name and Version	Licence Text base URL
Royalty-free Licence Usage	States, whether this a licence, which can be used free of charge (royalty-free)?
OSI approved	Is this licence is officially approved by the Open Software Initiative?
Free Software	Is this licence is suitable to be used in free software and does it follows the rules of free and open source software of the Free Software Foundation?
Copyleft Licence	Does this licence incorporate the Copyleft principle?
Commercial Usage	Is it allowed to exploit any software under this licence in a commercial way?
Linking to other Licences	Is it allowed that software, software parts and derived software or software parts under this licence link to software under other licences? (This aspect is of very complex nature due to technical issues. Therefore a detailed explanation is provided in Appendix D.1.)
Patent Clause	Does this licence explicitly address software patents and how to treat those?
Proprietary Forking	Does this licence allow software, software parts and derived software or software parts under this licence to be transferred into proprietary (closed source) software?
Transformation to other Licences	Does this licence allow software, software parts and derived software or software parts under this licence to be transferred

Property	Explanation
	into another licence?
Internationally Enforceable	Is this licence providing adequate and suitable information to be enforced internationally to all extent?
Compatible to GPL	Is this licence compatible to the GNU Public Licence V.3?

Table 8: Chart Explanation

C.2. COPYLEFT LICENCES

As already mentioned in section B.1, Copyleft reflects the principle of granting any user the execution of almost any right provided by the copyright law. However, the licensee is required to grant the very same rights received to any other user in order to enforce and maintain the Copyleft principle. The extent of the Copyleft is indicated by the terms "*strong*" and "*weak*" Copyleft. For instance, a weak Copyleft allows, in contrast to a strong Copyleft effect, licensed software to link to software under another licence (such as dynamically-linked software libraries).

C.2.1. CECILL

CeCILL is an Open Source licence that was explicitly designed to reflect the French copyright law (droit d'auteur) and the international copyright law. The CeCILL licence was originally developed by the French agencies CEA, CNRS and INRIA. The CeCILL V. 2 licence provides an English translation of its licence text and legally enforceable licence terms.

With that evolutionary step, the CeCILL licence may well be used internationally, because it fully enforceable by French law and by international treaties. The amount of international legal security provided by CeCILL V. 2 is notably high for an Open Source licence: "*CeCILL is the first license defining the principles of use and dissemination of Free Software in conformance with French law, following the principles of the GNU GPL. This license is meant to be used by companies, research institutions and all organisations willing to release software under a GPL-like license while ensuring a standard level of legal safety. CeCILL is also perfectly suited to international projects.*"[26].

Furthermore, CeCILL offers two additional licences, CeCILL-B and CeCILL-C. CeCILL-B is a BSD-like licence (refer to next section), whereas CeCILL-C addresses components and libraries. Both licences offer the same level of legal security: "*CeCILL, CeCILL-B and CeCILL-C are the first coherent family of Free Software licenses. The three licenses share most of their text and their compatibility is explicitly ensured. This family has been designed as a new tool, legally efficient and original, covering many needs, for developers of Free Software as well as companies and organizations wishing to use them with better legal safety*".

In reference to any potential patents, the CeCILL licence requires the licensor in Article 5 CeCILL V. 2: "*not to enforce the rights granted by these patents against successive Licensees using, exploiting or modifying the Software*". If the patent is transferred, this assurance is to be accepted by the transferee as well.

The CeCILL license features a so-called "*choice of law*" in its terms, which effectively sets the jurisdiction to the courts of Paris under the French law. The regulation 44/2001 (Brussels Regulation of 2000) states that such a choice is valid, if the "choice of law" is set to a court within an EU Member State. Therefore, the assigned jurisdiction of the CeCILL license is considered to be valid.

CeCILL is a very flexible and compatible licence whose main advantage is the high level of legal security. Since it is fully compatible with the GPL, the usage CeCILL may be a potential way to overcome the legal issues arising from the GPL when used outside of the U.S.A.

[26] Cite from: http://www.cecill.info/index.en.html

CeCILL V. 2	http://www.cecill.info/index.en.html
Royalty-free Licence Usage	Yes
OSI approved	No
Free Software	Yes
Copyleft Licence	Yes
Commercial Usage	Yes
Linking to other Licences	Yes
Patent Clause	Yes
Proprietary Forking	Yes
Transformation to other Licences	Yes
Internationally Enforceable	Yes
Compatible to GPL	Yes

Table 9: CeCILL Licence

C.2.2. COMMON DEVELOPMENT AND DISTRIBUTION LICENSE

The Common Development and Distribution License (CDDL) is a free software licence developed by Sun Microsystems that is widely used in well-reputed software projects. It is based on the Mozilla Public Licence and incorporates a weak Copyleft principle. This means that software under the CDDL may be combined with software of other licences: "*CDDL is file-based. That means files licensed under the CDDL can be combined with files licensed under other licenses, whether open source or proprietary. However, other licenses may have different restrictions which may prevent such combination; it is your responsibility to read and recognize such restriction*". This also means that the CDDL has no "viral" effect.

The CDDL was designed in order to address the specific needs of the OpenSolaris initiative of Sun Microsystems. The GPL was considered to be too restrictive for OpenSolaris, whereas a BSD-like licence was seen as too permissive: "*We wanted a copyleft license that provided open source protections and freedom and also enabled creation of larger works for commercial purposes*"[27]. The original Mozilla Public Licence was modified in certain areas:

"*We made a number of general changes, which are propagated throughout the license. These include:*

- *Changed use of the term "Code" to "Software". This was done to ensure that it was clear that this license can be used for both Source Code and Executables, not simply Source Code.*
- *Eliminated the definition of "Commercial Use". This term was thought to be misleading, since software may be distributed for both commercial and non-commercial purposes, and we didn't want anyone to see the definition and conclude that the license makes a distinction between commercial and non-commercial use. Since this definition was only used in one place (2.2(c)), we simply eliminated the definition, and embedded the descriptive text in the place where the definition had been used.*
- *Wherever software distribution is mentioned, added the phrase "or otherwise makes available" to cover passive types of distribution, such as with ASPs.*
- *Eliminated the definition of "Electronic Distribution Mechanism"; this was no longer necessary, since we simplified the requirements around how Source Code is to be made available.*
- *Clarified wording related to the file-based approach to Modifications and Covered Software. We wanted to make it very clear to the community what is covered and what is not.*
- *Added option of making Covered Software available under a specific version of the license, rather than allowing the use of future license versions. This change was made to make the license more reusable by others.*

[27] Citation from: http://www.opensolaris.org/os/about/faq/licensing_faq/, last visited: February, 2008

- *Eliminated Exhibit A, in order to simplify the process of contributing software under the license."*[28]

The CDDL requires any software to be distributed along with its source code. However, there is no specification of how the source code is to me made available to the public. Furthermore, the CDDL allows binary code to be distributed under any licence, as long as the source code uses the CDDL, and the binary distributor names the copyright holders.

The CDDL contains many sections specifically addressing patents. However the extent and implications of these sections are noticeably detailed and of deep impact, as they limit the patent usage grant to software licensed under the CDDL. This means that the patents involved are not available to other Open Source licences. Another interesting point is that developers may modify the licence text itself for usage in their own source code.

CDDL V. 1.0	http://www.sun.com/cddl/cddl.html
Royalty-free Licence Usage	Yes
OSI approved	Yes
Free Software	Yes
Copyleft Licence	Yes
Commercial Usage	Yes
Linking to other Licences	Yes
Patent Clause	Yes
Proprietary Forking	Yes
Transformation to other Licences	Yes
Internationally Enforceable	Yes
Compatible to GPL	No

Table 10: Common Development and Distribution License

C.2.3. COMMON PUBLIC LICENCE

The Common Public Licence (CPL) is an Open Source Licence that was developed and published by IBM in 2001.

The CPL[29] is a classical Open Source licence, compatible with the definition of the Free Software Foundation and the Open Source Initiative, including the use of patents as stated in [CPL 2(b)]: *"Each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free patent license under Licensed Patents to make, use, sell, offer to sell, import and otherwise transfer the Contribution of such Contributor, if any, in source code and object code form."*

This makes the CPL a highly flexible Open Source licence with a strong copyleft effect, which enables the user to use, modify, and sell the software. It does not require the user to bundle the source code with any publication of the object code, but it does require the developer to make the source code available to others.

The CPL includes a patent reference for the purpose of rendering patent injection useless: Whenever a contributor injects code that is covered by a patent, the contributor grants a royalty-free licence to that patent to all further potential users.

Common Public License V 1.0	http://www-128.ibm.com/developerworks/library/os-cpl.html
Royalty-free Licence Usage	Yes
OSI approved	Yes
Free Software	Yes

[28] Citation from: http://www.sun.com/cddl/CDDL_why_details.html, last visited: February, 2008
[29] CPL V. 1.0, full licence at: http://www-128.ibm.com/developerworks/library/os-cpl.html

Common Public License V 1.0	http://www-128.ibm.com/developerworks/library/os-cpl.html
Copyleft Licence	Yes
Commercial Usage	Yes
Linking to other Licences	Yes
Patent Clause	Yes
Proprietary Forking	Yes
Transformation to other Licences	Yes
Internationally Enforceable	Yes
Compatible to GPL	No

Table 11: Common Public Licence

C.2.4. EUROPEAN UNION PUBLIC LICENCE

The European Union Public Licence (EUPL) is an Open Source licence developed by the European Commission in 2007. The EUPL is available in 22 official languages of the European Union. The EUPL is the first licence to be released by an international entity that includes such a large number of official linguistic versions. The EUPL is a licence incorporating a strong Copyleft effect.

The EUPL was firstly designed in order to provide a consistent and harmonised licence for use within the European Community's IDABC program while maintaining basic compatibility with other Open Source licences. However, due to the fact that the EUPL is written in rather neutral terms it may be used by any potential user, even outside the European Union. Another goal of the EUPL was to encourage and facilitate the use of Open Source software within the Public Administrations of the European Union: "*For Europe's public administrators promoting Open Source, the EUPL makes convincing their bosses a little easier"*[30].

The following list of Open Source licences is specifically marked as compatible under article 5 of the EUPL:

- General Public License (GPL) V. 2
- Open Software License (OSL) V. 2.1, V. 3.0
- Common Public License V. 1.0
- Eclipse Public License V. 1.0 (modified CPL)
- CeCILL V. 2.0

The EUPL's main advantage is the high legal security it provides. The EUPL is a generally applicable licence specially designed by the European Commission for use within the European Union and internationally. It offers high-level legal safety and stability by having full compliance to all applicable national laws for a smooth and full enforcement of the licence:

- *"For the first time, a public body of the size of the European Commission has officially developed and approved an Open Source licence for the release of its software.*
- *Although the EUPL v. 1.0 was approved originally by the European Commission only in English, German and French, it has now been validated in all (except the Irish) official languages of the European Union and may produce legal effects in any of these languages.*
- *The EUPL has considered the specificity and diversity of Member States Law and the Community Law (copyright terminology, information, warranty, liability, applicable law and jurisdiction).*
- *The EUPL ensures downstream compatibility issues with the most relevant other licences (including the most intensively used, the General Public licence or GPL)."*[31]

The EUPL is a good choice for a Copyleft licence with an extremely high level of legal safety and stability.

[30] Quotation of Karel de Vriendt taken from: http://ec.europa.eu/idabc/en/document/7340, last visited February, 2008
[31] "What makes the EUPL unique?", http://ec.europa.eu/idabc/en/document/7584

EUPL V. 1.0	http://ec.europa.eu/idabc/eupl
Royalty-free Licence Usage	Yes
OSI approved	No
Free Software	Yes
Copyleft Licence	Yes
Commercial Usage	Yes
Linking to other Licences	Yes/No (differs in some Member States)
Patent Clause	Yes
Proprietary Forking	Yes
Transformation to other Licences	Yes
Internationally Enforceable	Yes
Compatible to GPL	Yes

Table 12: European Union Public Licence

C.2.5. GNU PUBLIC LICENCE

The GNU Public Licence (GPL) of the Free Software Foundation (FSF) is one of the most widely used and most famous Open Source Licence and features an extraordinarily strong Copyleft principle.

The GPL was originally developed in 1989 by Richard Stallman to reflect the principle of free and open software. In order to ensure the right to use modify study, and redistribute software, the GPL requires making any source code publicly available.

This requirement also includes derived works partly or fully based on GPL'ed software. Furthermore partly or fully derived work is also required to be licensed under the very same GPL licence. This instance is sometimes referenced as a "viral effect" and its viral effectiveness has already been proven by several law cases[32].

The GPL V. 3 specifically includes certain terms addressing the use of software patents and patent cross-licensing. This instance is of fundamental importance to any patent holder who decides to publish under the GPL V. 3 licence. Article 11 of the GPL V. 3 states: "*Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims in its contribution, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contribution*". In practice, this causes the patent holder to grant each potential user a licence to the patent.

Although the GPL has already proven itself in several lawsuits, some aspects of the GPL's terms remain controversial. For instance, articles 11 and 12 of the GPL are generally considered partially invalid within the legal regulations of some Member States, such as Germany.

GNU Public Licence V. 3	http://www.gnu.org/licenses/gpl.txt
Royalty-free Licence Usage	Yes
OSI approved	Yes
Free Software	Yes
Copyleft Licence	Yes
Commercial Usage	Yes
Linking to other Licences	No
Patent Clause	Yes
Proprietary Forking	No
Transformation to other Licences	No
Internationally Enforceable	not to full extent
Compatible to GPL	Yes

Table 13: GNU Public Licence V. 3

[32] Such as: District Court Munich I, file number: 21 O 6123/04, 2004

C.2.6. OPEN SOFTWARE LICENCE

The Open Software Licence (OSL) is an Open Source licence originally created by Lawrence Rosen in 2005. The OSL follows the strong Copyleft principle; however, its effect is somewhat weaker than the GPL.

In reference to patents, the OSL follows a different approach than other Open Source Licences besides the usual grant of a patent use. If any OSL-licensed work is attacked by a patent, the licence terminates itself automatically, revoking the permission and rights to the use of the particular software that is infringing on one ore more of the licensee's patents. This particular combination of a rather defensive licence termination while simultaneously maintaining the patent-holders exclusive rights may be seen as a fair balance of rights and needs.

The OSL claims to be legally stronger than the GPL; however, this has not yet been verified in court. However, the simplicity and straightforward nature of the OSL and its non-Copyleft sister AFL qualify these two licences for wider usage.

Open Software Licence V. 3.0	http://rosenlaw.com/OSL3.0.htm
Royalty-free Licence Usage	Yes
OSI approved	Yes
Free Software	Yes
Copyleft Licence	Yes
Commercial Usage	Yes
Linking to other Licences	No
Patent Clause	Yes
Proprietary Forking	No
Transformation to other Licences	No
Internationally Enforceable	not yet performed
Compatible to GPL	No

Table 14: Open Software Licence

C.3. NON-COPYLEFT LICENCES

In the following subsection, licences are to be introduced which generally follow the Non-Copyleft principle.

C.3.1. ACADEMIC FREE LICENCE

The Academic Free Licence (AFL) is actually an OSL (see C.2.6) and only differs in one fundamental point. The primary concern of the AFL is to maximise the freedom of re-use. Therefore, a mandatory sharing of the modified source code is not required when using the AFL.

The Academic Free Licence is considered to be a rather lightweight and well-designed licence. Its usage was recommended by independent parties, such as the Open Software Initiative: *"The OSI recommends the AFL as a best-practice replacement for the entire class of academic licenses. It is a well-crafted third-generation license covering issues and vulnerabilities with respect to patents, liability, and warranty of copyright ownership that the older ones cover incompletely or not at all."*[33]

Academic Free Licence V. 3.0	http://rosenlaw.com/AFL3.0.htm
Royalty-free Licence Usage	Yes
OSI approved	Yes
Free Software	Yes
Copyleft Licence	No
Commercial Usage	Yes
Linking to other Licences	Yes

[33] Eric Steven Raymond, Licensing How-To, Detailed comparison of licences 2002, last visited: February, 2008

Patent Clause	Yes
Proprietary Forking	Yes
Transformation to other Licences	Yes
Internationally Enforceable	not yet performed
Compatible to GPL	No

Table 15: Academic Free Licence

C.3.2. APACHE LICENCE

The Apache Licence (APL) is a Non-Copyleft software licence and is based on a rewrite of the original BSD licence. As such, this licence places no restrictions on providing source code, forking into proprietary software or any changes of the licence, as long as the original copyright notice and the disclaimer are preserved in a certain way. The Apache licence was originally developed for usage within the Apache Web-Server project.

Like other free software licences, the Apache Licence explicitly grants the licensee the right to use a patent when this is required to operate given software.

The main advantages of the Apache Licence are:

- explicitly grants patent rights when needed to operate the software
- permits possible forking of a project into closed-source software
- permits binary-only distribution
- permits a licence change, when all copyright, trademark and patent rights notices are properly referenced and shipped with each modification
- the Apache licence is an extremely flexibility
- existing use in a project of international reputation

The Apache Licence is an extremely flexible and well-supported licence.

Apache Licence 2.0	http://httpd.apache.org/docs/1.3/LICENSE
Royalty-free Licence Usage	Yes
OSI approved	Yes
Free Software	Yes
Copyleft Licence	No
Commercial Usage	Yes
Linking to other Licences	Yes
Patent Clause	Yes
Proprietary Forking	Yes
Transformation to other Licences	Yes
Internationally Enforceable	not yet performed
Compatible to GPL	Yes

Table 16: Apache Licence

C.3.3. MODIFIED BERKELEY SOFTWARE DISTRIBUTION LICENCE

The Berkeley Software Distribution License (BSD License) is a well-known and widely used Non-Copyleft free-software licence. It was originally developed by the University of California at Berkeley in the 1980s. Until the late 1990s, the BSD licence contained a so-called “advertisement clause”, which required mentioning every author in a certain way: “*All advertising materials mentioning features or use of this software must display the following acknowledgement: This product includes software developed by (developer)*”. This impractical licence term was removed, forming the new BSD Licence.

When comparing the BSD licence to other open source licences such as the GPL or the MPL, it is clear that it does not try to exercise anywhere near as much control over its licensees. Consequently, licensees can take some code that is licensed under the BSD licence and incorporate it into their closed source work. Licensees can take BSD-licensed code and add to it, safe in the knowledge that whatever they contribute can be distributed in whatever way they choose. For this reason, the licence is seen as friendly to traditional software business models that depend upon keeping the source private and capitalising on the sale of licensed binaries. Code that enters a traditional software business as BSD-licensed need not be distributed that way, and thus a competitive advantage in the traditional sense can be maintained[34].

Modified BSD Licence	http://www.opensource.org/licenses/bsd-license.php
Royalty-free Licence Usage	Yes
OSI approved	Yes
Free Software	Yes
Copyleft Licence	No
Commercial Usage	Yes
Linking to other Licences	Yes
Patent Clause	No
Proprietary Forking	Yes
Transformation to other Licences	Yes
Internationally Enforceable	Yes
Compatible to GPL	No

Table 17: Modified BSD Licence

C.3.4. MIT/X11 LICENSE

The MIT License – or X11 Licence – is a free software licence of a non-Copyleft nature: It specifically grants permission "*to deal in the Software without restriction*", i.e. it allows forking into proprietary software.

The MIT/X11 Licence originates from the three-clause Modified BSD Licence and differs in the specific number of rights granted to the licensee: "*use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software*"[35]. Like the modified BSD Licence, the MIT/X11 Licence requires anyone to state the licences copyright notice clearly in every substantial portion of the software.

This licence, however, only implies rights to use a potential software patent. There is no statement whatsoever that specifically addresses and grants any usage of patents that might cause software to be attacked by patent claims. As stated earlier, implicit licence conditions are quite vague and may cause further legal risks when contested by a patent holder.

The MIT/X11 Licence is GPL compatible.

MIT/X11 Licence	http://www.opensource.org/licenses/mit-license.php
Royalty-free Licence Usage	Yes
OSI approved	Yes
Free Software	Yes
Copyleft Licence	No
Commercial Usage	Yes
Linking to other Licences	Yes
Patent Clause	No
Proprietary Forking	Yes
Transformation to other Licences	Yes

[34] taken from: http://www.oss-watch.ac.uk/resources/modbsd.xml
[35] MIT/X11 Licence: http://www.opensource.org/licenses/mit-license.php

Internationally Enforceable	Yes
Compatible to GPL	Yes

Table 18: MIT/X11 Licence

Appendix D FURTHER COMMENTARY ON LICENSING ISSUES

D.1. LINKED CODE

As already indicated by a column in the licence charts, linking – e.g. using code from a library – is of significant importance to software licensing. In general there are two ways of linking to foreign code. One is the so-called "*STATICALLY LINKING*", whereas the other way is called "*DYNAMICAL LINKING*". This aspect is illustrated in Figure 4.

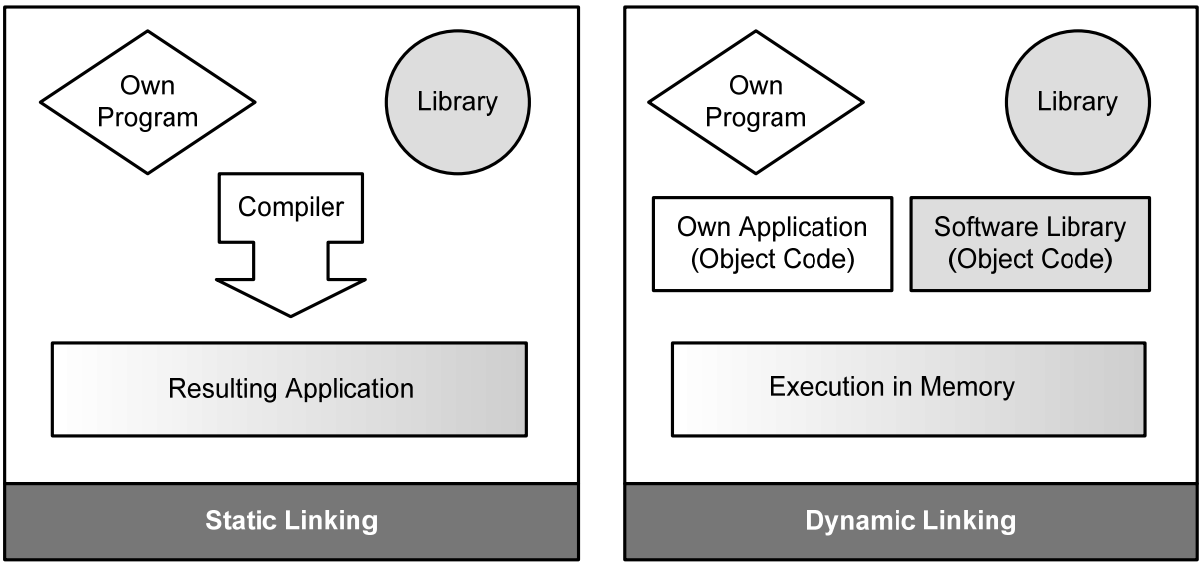

Figure 4: Static and dynamic code linking

The fundamental different between the two ways is, that statically linking actually *COPIES* foreign code into another software. In contrast to that, dynamically linking is merely a *REFERENCE* to code of foreign origin.

Although this does not necessarily seem to be a big difference, its reference to licensing it is of fundamental importance. Since the object code of software libraries to which an own work is linked, is covered by copyright ownership and usually provided with a licence, the very same copyright rules may apply.

When using a licence of a Copyleft nature in conjunction with static linking, the whole resulting software must reflect the licence terms of the original libraries licence to its full extent in every case. When using dynamic linking there are legally-acceptable exceptions in conjunction with a certain set of licences. The column "*Linking to other Licences*" in the individual licence tables indicates, whether dynamic linking without a mandatory licence change (e. g. "viral effect") is legally possible. However, for licences incorporation a strong Copyleft, such as the GPL V. 3, there are no exceptions at all.

D.2. RISKS AND IMPLICATIONS OF EXTERNAL SOURCES

External contributions to an existing asset from a contributor of significant extent usually imply that the copyright ownership for that particular contribution is held by the particular contributor. In order to avoid impairing the existing copyright ownership of the relevant asset, all external contributions are either required to be handled under a traditional licence where a contributor waives his copyright ownership on his work, or the copyright owner or an authorised agent may inspect the contribution and implement (reprogram) the contribution by themselves.

The first option is quite unsafe from a legal point of view. Usually there is no trustworthy way to determine whether the whole copyright ownership of the contribution can be waived. The contributor may not possess the required rights to do so or may have “borrowed” his contribution from other developers. The second of the two options, however, is generally a safe one but requires a significant quantity of resources. However, in both cases a possible violation of any non-discriminatory regulations may apply. Therefore, external contributions need to be considered and weighted extremely carefully in order to choose the most appropriate legal approach. In order to avoid any legal restrictions by contributors, a special type of a licence – which is called a Contributor Licence Agreement (CLA) - can be used.

Appendix E SEMIC.EU TECHNICAL IMPLEMENTATION DETAILS

In the following implementation details for the SEMIC.EU platform will be provided, reflecting the legal environment introduced, assigning concrete tasks to the roles determined and incorporating the Open Source licences described. As described above, these licences well comply with the goals of the SEMIC.EU platform. These licences will be offered by SEMIC.EU as predefined ones, which are specifically supported on the platform.

The implementation details comprise

- the description of the metadata amended to releases of assets and artefacts concerning licences and
- the description of metadata for licences themselves.

E.1. LICENCE METADATA

Metadata concerning licensing have to be provided for each artefact of an asset. In the following the metadata for artefacts and, as a special case, the metadata for releases of an asset will be introduced and for each metadata it will be explained how they are related to the legal requirements described in the Appendix A.1 and how the licence classes and the predefined licences will be treated on the platform. Licences themselves also will be described by specific metadata which will be introduced as well.

E.2. RELEASE METADATA CONCERNING LICENCES

As assets are versioned, physically releases of assets are reused (see document "Vision of the Clearing Process"). To avoid conflicting licences within one release, all licences assigned to artefacts of the release have to belong to the same licence class that is indicated by the following attribute.

E.2.1. LICENCE CLASS

This attribute indicates which licence class the licences of the artefacts of the release belong to. The value of this attribute has to be exactly one of the licence classes introduced above. Dual or multiple licensing is due to its complexity not further supported by the platform. In this case the licences have to be in the class "*Traditional licence*".

As in the case of dual and multiple licences respectively for each specific use case, i.e. the use by a specific target group, the licences applied have to belong to the same licence class. This means in practice, prior to the practical use of the specific asset, a potential asset user must decide on which of the licences provided is to be applied. To clarify this further, the following hypothetical case may be drawn: In a dual-licensed asset, there is one licence for the general and royalty-free use and one indented to address commercial use. The potential asset user must decide on which licence is used prior to execute any rights of any of those two licences (e. g. prior to usage of the asset).

This attribute has to be contributed to the core attributes related to each asset (see document "Vision of the Clearing Process").

The value of the attribute has to be set by the asset owner.

E.3. ASSET METADATA CONCERNING LICENCES

As stated above, licences are assigned to each artefact of an asset. As licences may change from one release to the other, the licence class attribute is an attribute of each release of an asset, not of the entire asset. Therefore for assets no metadata concerning licences have to be provided.

E.4. ARTEFACT METADATA CONCERNING LICENCES

For each artefact the following attributes concerning licensing have to be provided.

E.4.1. LIST OF LICENCES

This attribute list indicates which licences an artefact is subject to. The licences themselves are part of the administrative data of the asset release; the values of the attributes are references to these data. The technical specification of the references will be provided in the SEMIC.EU specification document.

The licences chosen have to belong to the licence class assigned to the release of the asset the artefact is part of. The licences themselves have to be added to the same release the artefact is in.

E.4.2. PATENTS

The asset owner has to provide information on the "patent status" of an artefact. Five cases are distinguished:

- Not applicable:
  Due to the type of the artefact it cannot be based on patent, e.g. a text document.
- None found:
  It has been investigated whether patents are pending one the artefact. No patents pending were found.
- Patents pending and
  - patents that are held by the asset owner
  - where patents are explicitly granted by the licence conditions
  - patents are royalty-free and free-to-use
- Patents pending otherwise
  None of the three cases above applies
- Not investigated:
  It is unknown whether patents are pending on an artefact of an asset: In this case the publishing of the artefact has to be blocked by the clearing process manager.

According to the case, different follow up actions have to be triggered:

- In the first three cases the artefacts can be published.
- In the fourth case the publishing of the artefact has to be blocked.
- In the fifth case the publishing of the artefact should be blocked until it has been investigated whether patents are pending.

E.4.3. METADATA FOR LICENCES

Licences themselves are contributed to the administrative data of each release of an asset. They have to be contributed physically, not as links or references.

Licences must have at least the following attributes (additional attributes may be defined in the manifest of the release, a description of the manifest can be found in the document "Vision of the Clearing Process"):

Name

This attribute provides the name of the licence. This name can indicate one of the predefined licences or the name of a "self-defined" licence.

Predefined

There are predefined licences which are instances of the licences described in section five. These predefined licences should be further supported on the platform. It should be considered to provide specific assets for each predefined licences from which instances of concrete licences could be gained. These assets could contain all translations of a licence as well.

This attribute indicates whether the licence is one of the predefined ones or proprietary.

Licence Class

This attribute indicates which licence class the licence belongs to. The licence must belong to one of the predefined licence classes described above except for the case of dual or multiple licensing. As the licence class is inherited by the release and the licence class attribute of the release has to be set first, this attribute will be set automatically.

Authoritative

This attribute indicates whether the licence is the original document or a “certified” translation of the document, which is legally binding. If the document is a mere translation of the document without being authorized, i.e. it has no legal binding, and then it is not authoritative. Possible values for the attribute are true and false.

Reference to Original Document

In the case of being a translation, a reference to the original document, i.e. to the source location of the original document has to be provided.