ROBotic Open-architecture Technology for Cognition, Understanding, and Behavior

Cogsys
Cognitive Systems

Project No. 004370

RobotCub

Development of a Cognitive Humanoid Cub

Instrument: Integrated Project
Thematic Priority: IST – Cognitive Systems

D1.2 CUB Licensing Strategy

Due Date: 1/12/2004
Submission date:1/4/2005

Start date of project: **01/09/2004**   Duration: **60 months**

Organisation name of lead contractor for this deliverable: DIST, University of Genova

Responsible Person: David Vernon

Revision: **1.0**

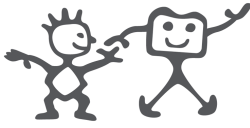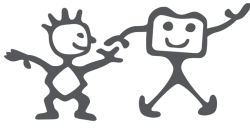| Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)		
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PP	Restricted to other programme participants (including the Commission Service)	
RE	Restricted to a group specified by the consortium (including the Commission Service)	
CO	Confidential, only for members of the consortium (including the Commission Service)	

Table of Contents

1 Introduction

The technical annex (Annex I) of the contract of project 004370 specifies that one of the tasks in Work-package 1 – Management – is to define the legal aspects of the licensing strategy. This definition is to be encapsulated in Deliverable D1.2: Cub Licensing Strategy.

The need for this definition arises from the manner in which intellectual property (specifically, knowledge) is handled in the Consortium Agreement. In particular, the Consortium Agreement distinguishes between two types of knowledge, CUB knowledge and all other knowledge. However, it only specifies the CUB knowledge licensing arrangements for research purposes. In particular, it states that use of CUB knowledge for research will be subject to a GP license and use for exploitation will be subject to an exploitation licence. The nature of the exploitation licence is not specified and is in fact the outcome of the task leading to Deliverable 1.2.

In the following, we will review the formal situation regarding knowledge, ownership, and licensing, as set out in the Consortium Agreement. We will then consider the implications of adopting a research open-source license on exploitation licenses, concluding that an open-source approach is necessary for both. We then summarize the procedures that all members must follow when licensing CUB knowledge. The actual licenses that are to be used are set out in the appendices.
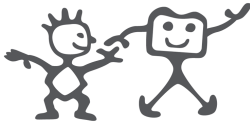
2 CUB Knowledge and Licensing in the Consortium Agreement

Section IV.1 of the Consortium Agreement defines CUB knowledge as follows.[1]

> **CUB Knowledge** means any and all *Knowledge* concerned with the physical mechatronic robotic humanoid platform, to include the physical system, its interface electronics, software drivers, diagnostic software, and all software that effects reflex and/or cognitive behaviour on this platform, either directly or through development or learning, or any other means.

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[1] Thus, CUB Knowledge is a qualification of, and therefore a subset of, *Knowledge*, as defined in Annex II to the contract:

Knowledge: means the results, including information, whether or not they can be protected, arising from the *project* governed by this *contract*, as well as copyrights or rights pertaining to such results following applications for, or the issue of patents, designs, plant varieties, supplementary protection certificates or similar forms of protection.

Thus, CUB Knowledge refers to any and all output of the RobotCub project that is associated directly with the creation and operation of the RobotCub humanoid platform. This definition allows for the creation of knowledge that is not CUB Knowledge.

The RobotCub project is committed to the creation of an open platform for research in embodied cognitive systems.   This issue of openness is linked directly to licensing and the concept of access rights to CUB Knowledge: the ability and entitlement of different parties to utilize CUB Knowledge. The CA defines the conditions of access for *Use* of CUB knowledge (see Sections IV.3.4). Note that the term *Use* has a formal meaning and is defined in Annex II to the contract as follows:

> *Use*: means the direct or indirect utilisation of knowledge in research activities or for developing, creating and marketing a product or process or for creating and providing a service.

Thus, the term *Use* refers to the utilization of CUB Knowledge by anyone (including a member of the consortium) outside of the RobotCub project.
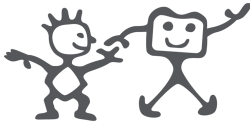
The CA (Section IV.3.4.2) distinguishes between two types of use: use for research and use for exploitation.

It states that use for research will be subject to a GPL-like licence. Thus, use of CUB Knowledge for research will be open and free (in the senses of the Open Source Initiative and the Free Software Foundation), *viz.*:

> IV.3.4.2 *Access Rights* for *Research*
> (i) Access Rights for *Research* are subject to the conclusion of the *GP License*. Key elements of the GP Licence are:
>
> - The licencee has legal permission to copy, distribute, and/or modify the CUB knowledge;
> - The *CUB Knowledge* licence and copyright notice must be included conspicuously and unaltered in any copied, disseminated, or modified version;
> - All CUB Knowledge and all modifications must be completely and transparently included in any copied, disseminated, or modified version;

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The CA states that the terms for use for exploitation will be defined in the 'Plan for using and disseminating Knowledge' which, in turn, is encapsulated in Deliverable D 1.2: "CUB's Licensing Strategy".

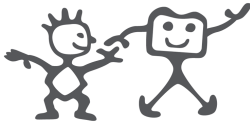> IV.3.4.3 Access Rights for Exploitation
>
> Access Rights for Exploitation are subject to the conclusion of a Exploitation Licence which will be part of the `Plan for using and disseminating the Knowledge'. Any income generated with such licence is subject to an appropriate arrangement between the Parties for the proper distribution of these payment, to be divided equally among the owners of the CUB Knowledge.

3 Implications of Adopting an Open-Source Software & Free Software Model

There are two complementary, but consistent, open source initiatives:

1. Open Source Initiative (OSI) - www.opensource.org
2. Free Software Foundation (FSF) - www.fsf.org

These initiatives have the same goals, a different philosophy, and slightly different mechanisms. In general, the overall approach to open systems is often referred to as Open Source Software / Free Software (OSS/FS): "OSS/FS programs are programs whose licenses give users the

freedom to run the program for any purpose, to study and modify the program, and to redistribute copies of either the original or modified program (without having to pay royalties to previous developers)."[2]

Open source licenses may be broadly categorized into the following types:

1. those that apply no restrictions on the distribution of derivative works (these are referred to as Non-Protective Licenses because they do not protect the code from being used in non-Open Source applications); and
2. those that do apply such restrictions (these are referred to as Protective Licenses because they ensure that the code will always remain open/free).

Licensors of Non-Protective Open Source licenses retain their copyright, but they grant all rights under copyright to the licensee.

Licensors of Protective Open Source licenses retain their copyright, grant all rights under copyright to the licensee, but apply at least one restriction, typically that the redistribution of the software, whether modified or unmodified, must be under the same license.
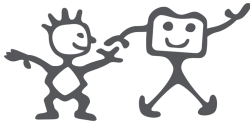
The most popular OSS/FS license is the GNU General Public License (GPL).[3] GPL is a protective license and is termed a "copyleft" license; that is, the license is designed to prevent (protect) the code from becoming proprietary. The GPL allows anyone to use the program and modify it, but prevents code from becoming proprietary once distributed and it also forbids proprietary programs from "linking" to it. The equivalent to GPL for documentation is the GNU Free Documentation License (FDL).[4]

GPL and FDL force the person distributing original or modified code/documents to make the distributed code/documents available on the same terms (*i.e.* under GPL, or FDL). This ensures that the code/documents can never become 'unfree' or proprietary. You can make code GPL or documents FDL, but you can't go back the other way (once GPL, always GPL … once free, always free). This is significant for the RobotCub licensing strategy.

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[2] Extracted from Why Open Source Software / Free Software (OSS/FS)? Look at the Numbers! at
http://www.dwheeler.com/oss_fs_why.html
[3] http://www.fsf.org/licensing/licenses/index_html#GPL
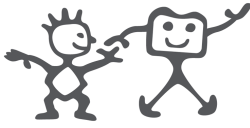[4] http://www.fsf.org/licensing/licenses/index_html#FDL

At the first Three-Monthly Meeting in Genova on the 26th November, the consortium discussed the implications of adopting an open systems approach for RobotCub.   It was agreed that, if the projects wants to be open in any meaningful and widely-accepted way, it needed to adopt the OSS/FS model.

However, if the project adopts an OSI licence, then it can't discriminate between research users and commercial users: it can't have two licences. That is, it cannot adopt two different strategies for use of CUB Knowledge, one for research and one for exploitation. A single unified strategy is required. Since GPL is the recommended and most-used OSI licence as it is protective, copyleft, and legally-sound, it was agreed:

- to adopt GPL for all CUB software and FDL for all CUB documents (schematics / designs, software manuals, software documentation) and that
- the use of CUB Knowledge for both research *and* exploitation will be subject to a GPL / FDL licence.

This ensures all CUB knowledge is and will remain completely open.

4 Procedures for Licensing CUB Knowledge

4.1 GNU General Public License (GPL) for Software

Attach the following notice at the beginning of the program source code file, replacing the constructs in angle brackets (< … >) with appropriate text.

```
<one line to give the program's name and a brief idea of what it does>
Copyright (C) <year> <name of author>, <author institute>
RobotCub Consortium, European Commission FP6 Project IST-004370
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```

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```
<Program name and version>

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email:   <firstname.secondname>@robotcub.org
website: www.robotcub.org

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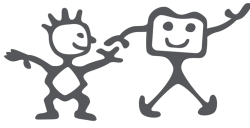
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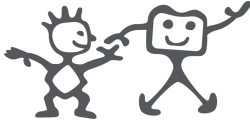
Appendix I
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```
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```

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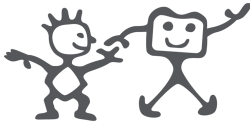
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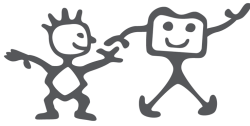
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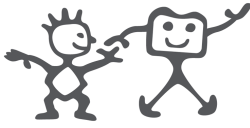How to Apply These Terms to Your New Programs

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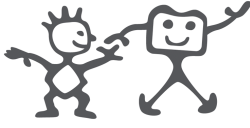
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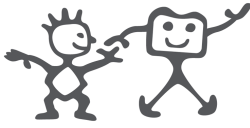license designed for free software.

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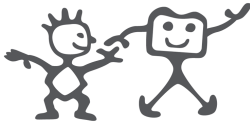
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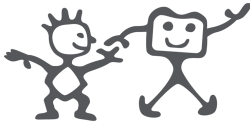you may publicly display copies.

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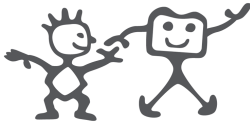them a chance to provide you with an updated version of the Document.

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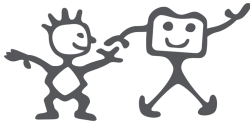license notice, and that you preserve all their Warranty Disclaimers.

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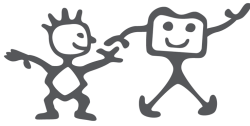copy, modify or distribute the work in a way requiring permission
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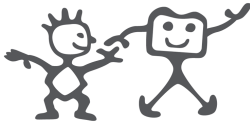preceding the beginning of the body of the text.

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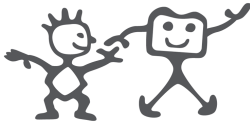reasonably) on the actual cover, and continue the rest onto adjacent
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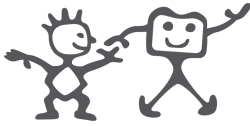other respects regarding verbatim copying of that document.

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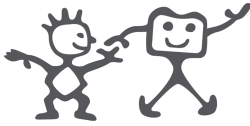\addcontentsline{toc}{section}{9. TERMINATION}
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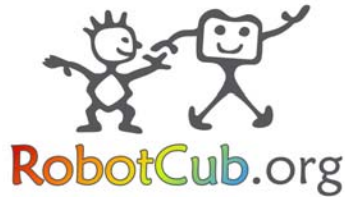
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Project no. IST-004370

RobotCub

Development of the iCub Cognitive Humanoid Robot

Instrument: Integrated Project
Thematic Priority: IST – Cognitive Systems

D1.2 CUB Licensing Strategy - Addendum

Period covered from **N/A** to **N/A**   Date of preparation: **13/10/2008**

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Project coordinator names: Giulio Sandini, David Vernon, Giorgio Metta

Project coordinator organisation name: **University of Genoa – DIST – LIRA-Lab**

Revision: 1.0

Table of Contents

1 Introduction

This document reports the updated activities of the consortium with respect to deliverable D1.2. It includes RobotCub policies about the management of Copyrightable material, and a study addressed to the individuation of legal and strategic aspects of a possible Spin Off initiative from RobotCub.

2 Management of RobotCub Copyrighted Knowledge

It is well known that some of the knowledge arising from the RobotCub project can be protected by copyright. It is the case, for example, of literary works, such as scientific articles and books, presentation of information, engineering projects and, of course, software. Since the RobotCub consortium has developed a precise policy relative to the exploitation of the copyrighted material, participants are required to take particular care in the definition and management of the intellectual property rights deriving from research.

The principal aim of this chapter is to provide the consortium with some general policies on management of the rights relative to the RobotCub knowledge which may fall within the copyright protection. In particular, the distinction between work Author and copyright Rights Holder is detailed.

2.1 Copyright, authors and exclusive right holders

Due to the fact that a common international copyright does not actually exists, the exclusive rights granted by the copyright can vary with different national laws. This leaves some uncertainty in the enforcement and in the management of the copyright, particularly in the ambit of multinational collaborations. Anyway, since the middle of the nineties, the World Intellectual Property Organization and the European Union[1] are adopting measures directly addressed to the harmonization of national copyright laws as well as of international markets rules, therefore the general principles of the copyright are now the same in most of the countries of our interest (e.g. EU, USA, CA, JP, TW). Such general principles state that the copyright is essentially a private right. The rights-holder has the exclusive right to exploit and enforce the copyright, hence he/she has the exclusive right to use, sell, reproduce and modify the copyrighted material, as well as to sell or license his rights. There is no need of official registration to obtain the copyright on a certain work, provided that the work falls into one of the categories of material protected by copyright: the copyright arises when the work is created, and the only owner of the exclusive rights is the author.

These principles apply to all the works which can be protected by the copyright, comprised software and engineering projects. Moreover, the author is not necessarily a physical person, but in many cases a legal entity may be entitled of authorship: it is the case, for example, of software houses and many Universities.

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[1] Directive 2004/48/EC enforcement of intellectual property rights; WIPO Copyright Treaty/1996.

In particular, in consideration of a recent EU directive[2] most of the European countries national laws state that where a computer program is created by an employee in the execution of his duties, the employer shall be entitled to exercise all the economic rights in the program so created, unless otherwise provided by contract. As a result, the employee has no economic rights on the software deriving from the copyright, since all the exclusive rights are owned by the employer. In many Universities and Public Research Organizations researchers receive a share on the net earnings, in case the software is commercially exploited. Researchers are indicated as the authors of the software but the University owns the copyright. In case of international projects financed by the European Commission under FP6 and FP7, contractors must agree both with the Commission and among themselves over some specific rules whose ratio reflects the endeavour of the Framework Programmes: the knowledge resulting from the project should have the highest potential impact on the European society, thus contributing to the innovation process, to the enlargement of the scientific knowledge, and to the public awareness of science.

To this extent the Commission requires that each contractor is fully entitled to protect use and access the knowledge deriving from the project, in accordance to the Rules for Participation[3] and to the Model Contract:

- RULES FOR DISSEMINATION AND USE, Art. 21 - Ownership of knowledge

  2. [Omissis] Knowledge arising from work carried out under other indirect actions shall be the property of the participants carrying out the work leading to that knowledge.

  5. If personnel employed by a participant are entitled to claim rights to knowledge, the participant shall take steps or reach appropriate agreements to ensure that these rights can be exercised in a manner compatible with its obligations under this Regulation and the contract.

- ANNEX II PART C, Art. II.32 - Ownership of knowledge

  3. If personnel working for a contractor are entitled to claim rights to knowledge, the contractor shall take steps or reach appropriate agreements to ensure that these rights can be exercised in a manner compatible with its obligations under this contract.

To this extent the contractors, where necessary, must reach agreement with their personnel (including students, both undergraduate and postgraduate) over the ownership of results, and it must be compatible with obligations of the model contract. For academic institutions, this is especially relevant regarding "non-employees" such as students, as well as in those countries having a "professor's privilege" (according to which the results of university research may be personally owned by researchers).

Since the RobotCub project has to be fully compliant with these requirements, explicit reference to these issues is made in the Contract and in the consortium agreement, which is the document which provides additional rules among the project partners, mainly in the field of project management and Intellectual Property Rights:

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[2] Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

[3] Regulation (EC) No 2321/2002 of The European Parliament and of the Council of 16 December 2002.

- RobotCub Consortium Agreement, Art. IV.2.3 - Transfer of Employees' Rights

In addition to the obligations pursuant to the EU Contract Article II.32.3, each Party shall ensure that it can grant Access Rights and fulfil the obligations under the EU Contract and this Consortium Agreement notwithstanding any rights of its employees, or persons it engages to perform part of its share of the Project, in the Knowledge or Pre-existing know-how they create after the effective date of this Consortium Agreement as identified in IPCA Part I.

In consideration of this, each partner should carefully check if it is actually able to exert its rights to protect, use, and access the copyrightable (as well as the patentable) knowledge deriving from the RobotCub research activities. This is a crucial issue to the extent of fulfilling the Commission obligations under the Contract, and it is necessary to achieve one of the main goals of the project: to provide the scientific community and the society with new and free knowledge. When knowledge is in the form of software and engineering project, RobotCub contractors must be able to distribute it under the GNU GPL licence. This implies that RobotCub partners must hold the rights of the copyrighted materials otherwise they cannot guarantee that:

- all CUB Knowledge is owned jointly and equally by each and every member of the consortium (Consortium Agreement, Section IV.2.1.1);
- all Access Rights to CUB Knowledge for the execution of the Project shall be deemed granted to the members of the consortium on the basis of a world-wide non-exclusive royalty-free license (Consortium Agreement, Section IV.3.3);
- Access Rights for Use are granted for the lifetime of the relevant CUB Knowledge. (Consortium Agreement, Section IV.3.4.1).

If partners are not the right-holders of the knowledge they have generated, we may incur in the paradox that partners cannot distribute part of CUB knowledge or even have access to it. More reasonably, it is important that the consortium members take care of their own obligations under the Contract in order to prevent any obstacle in using and diffusing CUB knowledge, in particular after the termination of the project.

2.2 Conclusions and recommendations

All this considered, it is advisable to refer to the RobotCub consortium as the copyright owner, while the developer of the knowledge should be indicated as author. The date of creation and the symbol © should also be added. Although this is not essential, it allows third parties to clearly understand when the copyright aroused, and it provides information on who to contact, should a third party need the permission to use the work.

To be precise, the RobotCub consortium is not a legal entity, therefore it cannot own any right. Nevertheless, we may use RobotCub name to indicate that the property of the CUB knowledge is equally divided among all the project partners, according to what partners agreed at the beginning of the project.

3 A Spin Off Company from RobotCub: overview of legal frameworks and possible scenarios

The achievement of some of the RobotCub objectives such as the exploitation of the knowledge deriving from the project, the diffusion of the iCub robotic platform, and the maintenance of the open source framework after the end of the project, may bring a relevant advantage to Partners from the scientific, the strategic, and economic point of view. To this aim, the constitution of a 'Spin Off' Company from the RobotCub consortium may be a valid option. Hence, the legal, economic, and strategic related issues should be explored.

Principal aim of this chapter is to explore the possible legal frames of the Spin Off company, highlighting the most interesting solutions. Another aim is to provide a first outline of the Spin Off objectives, limits and goals in order to stimulate a discussion among the RobotCub partners and gather further contributions to the business idea.

3.1 Scopes of the Spin Off:

The mission of the Spin Off company may include:

- the diffusion of the iCub platform within the scientific community and industry;
- to provide a single reference point for the iCub platform after the end of the project;
- the production and/or selling of the iCub robot;
- the production and/or selling of parts of the iCub setup (e.g. hand, head, hand+head, legs);
- the distribution of the iCub related software;
- the production and/or selling of partners technologies deriving from, or connected to the iCub platform;
- the maintenance of an updated public repository containing iCub technical information and software;
- support service for iCub customers;
- to stimulate new scientific collaborations and attract funding opportunities for partners;

The gradual development and set-up of the new organisation will be done according to a roadmap and a master plan that will be discussed and agreed among the partners who are interested in this venture idea. A tentative time planning follows:

- 4th year (of RobotCub Project)
  - Definition of the business idea;
  - Identification of core partners;
  - Validation of the business idea;
  - Endorsement by the partners' authorities.

- 5th year:
  - Production of a complete business plan;
  - Approval of the business plan by the core partners;

- Endorsement by the partners' authorities.

- End of the project:
  - Foundation of the Spin Off.

Some of the benefits in funding the Spin Off company may be summarised as follows:

- A common front-end for the exploitation of RobotCub results;
- Industry and other subjects not implicated in the RobotCub projects may be involved;
- To contribute to keep the scientific interest on the iCub platform alive;
- To contribute to maintain a critical mass and the integration of competences required to further develop the iCub platform;
- A joint management of iCub knowledge and IPR;
- An increased effectiveness in knowledge dissemination;
- Participation to National and European projects;
- Publicity;

3.2 Survey on Legal structure for the Spin Off Company

The reason to form a legal entity lies primarily in the creation of a legal frame, which enables the associates to focus efficiently on the success of their business.

The formation of a company requires the choice of a certain type of legal entity. Before making such a decision partners should clarify all the important questions concerning:

- the envisaged exploitation purpose and
- the perspectives of a joint association.

Partners have to study the background for the decision and the legal/financial boundaries of their own Institutions. The following paragraphs will focus only on the possible legal structures, giving details on the abovementioned companies.

The creation of a unique legal entity offers the possibility to exploit research results and gaining benefits through a different structure, adequately adapted to the reality of the market.

Joining the yet-to-be-born company can be also worthwhile for participants who are not familiar with the exploitation of research results, or do not dispose of the necessary means (e.g. financial capacity) and adequate structures, but who are interested in the development and diffusion of iCub platform.

The choice of the most appropriate type of legal entity depends on the participants' necessities and wishes. Each situation has its own particularities and there is no general "right" legal form. Hence, there may be a "right" form for each case, and participants need to make a choice (taking any professional legal advice into account) that reflects their wishes.

Basically, there are two major options: creating a legal entity under national law, and creating a legal entity under European law. Under the first option, numerous possibilities exist, such as limited companies, joint ventures, etc. but also foundations and other non-profit organisations. Each State may have different rules for running these companies. Under the second option, three types of legal entities are provided by

European Law: the European Economic Interest Grouping (EEIG), the European Company (Societas Europaea - SE) and the European Cooperative Society (SCE).

We will now see the main juridical options under of EEIG and SCE, since the European Company is not suitable for our scopes (holding company with a minimum capital of 120'000 Euro).

The following legal structures that have been taken in consideration are:

- ▪ European Companies:
  - EEIG (European Economic Interest Grouping)
  - European Cooperative Society (SCE)
- ▪ National Companies:
  - Companies with a limited liability
  - Stock companies

The Criteria which have been used to highlight the most suitable frames are the following:

- ▪ Avoid complex management structure;
- ▪ Short time for the establishment;
- ▪ Low initial cost for entrance of the partners;
- ▪ Limited liability and preferably not for profit organisations.

3.2.1 European Companies

European Economic Interest Grouping (EEIG)

The European Economic Interest Grouping (EEIG) and the European Stock Company (SE), the latter as from 8 October 2004, are the European alternatives to a company created under national law and are introduced and governed by Regulation 2137/85 and Regulation 2157/2001 complemented by Directive 2001/86/EC respectively.

The EEIG is an instrument allowing entities established in various Member States to create synergies and work together to achieve common objectives. It has legal capacity and independence, and thus the right to sue and be sued, enter into agreements in its own name, etc. It offers some major advantages, as for example the fact that no start-up capital is required or the fact that its official address can be transferred from one EU Member State or member of the European Economic Area to another.

On the other hand, there is an unlimited, joint and sever, liability for the grouping's debts and other liabilities between the EEIG itself and participating organisations. This can be a major issue for some participants, especially universities and other research organisations, because they either can't or won't assume such a responsibility.

Even though participants have the possibility "to exclude or restrict the liability of one or more of its members in respect of a particular debt or other liability by means of a specific contract between the grouping and a third party" (see recital 10 of the Regulation), Universities and Public Research Organisations might still find their participation in a EEIG difficult, as their liability may be restricted only for a specific debt, by means of a specific contract and always with the consent of a third party.

A synthetic table on this legal structure follows.

Obligations and Rights	Advantages
- Unlimited and joint liability (although specific exclusions might be apply). - Admission of new members is taken unanimously. - The modification of: the purpose of the EEIG, the votes attributed to their members, the decision taking process, the financial contribution of members and any other modification of the contract not foreseen in the own contract can only be taken unanimously.	- It is based on European Law (more equality between partners) - Founding capital is not required. - Unlimited liability of one or some members can be excluded in specific contracts signed with third parties. - The EEIG can not control the activities of their members, they keep their economical and legal autonomy. - Both public and private bodies can form part of EEIGs. - The EEIG can participate in Public Tenders and other public funding programmes (e.g. European Projects). An EEIG can participate alone in every project as an independent partner.
Issues to negotiate	Disadvantages
- Duration of the EEIG (Limited or unlimited). - How a member can resign from the EEIG. - Liability exclusion in specific contracts signed with third parties. - Place of the head office establishment determines the applied law in specific issues. - Definition of the causes of EEIG conclusion. - Distribution of profit and loss. - Founding capital and fees.	- Unlimited joined liability - A regression to a single member is possible, when the EEIG was requested to pay or payment has not been made within an appropriate period.

European Cooperative Society (SCE)

SCE permits the creation of a cooperative by persons residing in different Member States or by legal entities established in different Member States. With a minimum capital requirement of 30'000 Euro, these new SCEs can operate throughout the internal market with a single legal identity, set of rules and structure. They can expand and restructure their cross-border operations without the costly and time-consuming exercise of setting up of a network of subsidiaries.

Formation of the SCE: the SCE is defined as a body with legal personality for which the capital subscribed by its members is divided into shares. Its registered office, which is to be specified in its rules, must be within the Community and must be in the same place as its central administration. The SCE is to have legal personality from the day of its registration in the State in which it has its registered office.

A European cooperative society should have as its principal object the satisfaction of its members' needs and/or the development of their economic and/or social activities, in compliance with the following principles:

- its activities should be conducted for the mutual benefit of the members so that each member benefits from the activities of the SCE in accordance with his/her participation;

- members of the SCE should also be customers, employees or suppliers or should be otherwise involved in the activities of the SCE;

- control should be vested equally in members, although weighted voting may be allowed, in order to reflect each member's contribution to the SCE;

- there should be limited interest on loan and share capital;
- profits should be distributed according to business done with the SCE or retained to meet the needs of members;
- there should be no artificial restrictions on membership;
- net assets and reserves should be distributed on winding-up according to the principle of disinterested distribution, that is to say to another cooperative body pursuing similar aims or general interest purposes.

Capital of the SCE: the capital of an SCE shall be represented by the members' shares, expressed in the national currency. It may not be less than 30'000 Euro or the equivalent in national currency. An SCE whose registered office is outside the Euro-zone may also express its capital in euro. The laws of a Member State requiring a greater subscribed capital for legal bodies carrying on certain types of activity shall apply to SCEs with registered offices in that Member State.

The capital may be increased or reduced without amending the rules, and without any public announcement, provided the minimum level is observed and that the amount of the capital is disclosed annually. The general meeting is to pass a resolution each year recording the amount of the capital at the end of the financial year and the variation by reference to the preceding financial year.

Structure of the SCE: the Regulation provides for the SCE structure to be made up of a general meeting on the one hand, and for either a management board with a supervisory board monitoring its activities (the two-tier system), or for an administrative board (the one-tier system), depending on which option is chosen in the SCE statutes.

Winding up, liquidation, insolvency and suspension of payments: a SCE may be wound up either by a decision of the general meeting, in particular where the period fixed in the rules has expired or where the subscribed capital has been reduced below the minimum capital laid down in the rules, or by the courts, for example where the registered office has been transferred outside the Community.

As regards liquidation, insolvency or suspension of payments, the SCE is to be subject to the laws of the State in which it has its registered office.

3.2.2 National Companies

The most important legal forms for the formation of companies are companies with a limited liability (e.g. the English Limited, the Spanish S.L. or the German GmbH). They are typical forms of organisation for profit-oriented associations with a strong and long-lasting structure of members.

In contrast to stock companies the capital share is not freely transferable and may not be used to deal at stock markets. Therefore, a large spreading of property cannot come into question. This legal form shows a strong personal bond of the partners and a fixed structure of members.

Limited companies demand a minimum capital, which is much lower than the minimum capital for stock companies. It differs strongly from state to state (e.g. German GmbH: 25'000 Euros, Spanish S.L.: about 3'000 Euros, English Limited: about 400 Euros, Italy:10'000 Euro). Additionally, limited companies do not follow the strict stock and bond law provisions. In contrast to stock companies, the formation conditions

are much easier, but some formal provisions have also to be kept, e.g. the registration in the trade register.

The great advantage of this legal form is the principle of the legal limitation of liability in relation to third parties. The liability is limited to the assets of the company. A regression of one the partners' assets can only be done exceptionally. Such a legal form makes it easier, especially for universities and public research institutions, to take part in the commercial exploitation of their research results.

For non-commercial purposes the Member States' laws provide other legal forms with or without limited liability and, additionally with tax benefits and easy formation conditions.

Since a limited liability and not-for-profit company may be an option for the Spin Off company, the legal entity "Consortium" has been analysed in 4 countries: Spain, France, Belgium and Italy.

This research has been aimed at finding a suitable organisation that offers 2 main traits:

- Limited liability organizations
- Participation of not-for-profit and profit organisations (Where necessary, "not-for profit associations" have been analysed)

ITALY

There are two types of Consortium:

- Consortium Society (SC)
- Consortium Society with Limited Liability (SCARL)

I.   Consortium Society (SC)

SC is a legal entity that allows its members (natural persons or legal entities) to carry out certain activities in common, while at the same time preserving their independence.

The activities of a SC could be undertaken for the *mutual benefit of its members* in such a way that each member benefits from the activities of the association in relation to his volume of trade with the co-operative, not his capital contribution.

Mutual benefit definition: "To offer goods, services and jobs to consortium members at better conditions than those offered by the market".

Consortium societies could be not-for-profit organisations.

In Italy, the Act of 2000 strongly affirms the importance of not-for-profit organisations as a means to promote equal opportunities, solidarity duties, citizenship rights, culture, and *research activities.*

According to this regulation, SC aims to create an organizational form in which the following principles find acceptance:

- mutual benefits: promoting the development of entrepreneurial entities, which are capable of meeting the members needs;
- open membership: new members can join the consortium (no membership restriction)
- Democratic participation: vote's weight is directly proportional to the social capital quota owned by each member permitting the participation of a wide spectrum of stakeholders in the enterprise; promoting along with the pursuit of profit, the willingness of being accountable to those *stakeholder*s.

Capital: the social capital is variable in accordance with the total number of consortium members. Minimum social capital required €10'000

II. Consortium Society with Limited Liability (SCARL)

SCARL is characterized by limited liability (art 2462 Civil Code): the social capital is perfectly separated from those of consortium members. In case of failure, credits are paid with social capital exclusively and consortium members are not liable for the consortium debts and obligations with their own personal capital.

Minimum number of members to create a SCARL is 2.

Public act: Italian regulation requires the form of public act to establish a SCARL (art. 2615 and 2463 c.c. Italian Civil Code);

Registration: Statutes must be registered in the *Companies register* within 30 days since creation but upon registration the SCARL acquires the legal entity and can operate.

Duration: Determined or undetermined.

Capital: Minimum social capital required €10'000. It's useful to underline that the social capital, once decided, is "fixed", in the sense that, if a new partner joins the SCARL, either the pro-quota capital is reduced to fit in the new member in the amount, either the General Assembly must decide a capital raise.

Organisational structure:

- *Administrators* (members or members' delegates): consortium executive body. The number of the Administrators can be freely decided. A sound solution appears one Administrator per Core Partner.
- *Assembly* (general assembly and/or separated assembly): consortium decisional body.
- *Board of statutory auditors*: consortium control body (mandatory if the social capital > k€120)

Further Bodies can be included to match the consortium statutory aims (e.g. Technical Committee, Scientific Committee, Coordinator, etc.).

The Board is in charge of the execution of General Assembly decisions. Commonly, the Board is appointed by the General Assembly. However, the Statute can establish that specific subjects have the right to appoint specific members of the Consortium Bodies.

At the time of creation, the Statute includes the first Board compositions. The members nominated are in charge until the first General Assembly. General Assembly is the decisional body of the consortium. For consortia with a large number of members and territorially distributed, the Statute could define a 2-step decision making process: Separated Assemblies (preparatory) and the General Assembly.

Voting procedures are the same of commercial companies; it means that the voting weight of a Partner is proportional to the value of its quota of the social capital. Although the mutualistic purposes of the SCARL, voting rules are mandatory.

The Board has a twofold aim:

- monitoring and controlling the correct execution of consortium activities according to the consortium finalities as set up in the Statute.

The definition of the Consortium activities must be wide enough to include all possible options of the primary objectives.

- Controlling the financial accuracy and the correctness of the accountancy.

Regulated by the *Vienna Convention (1969)*, stating the rules for the mutual recognition, there is the possibility, at any time, to transfer the legal headquarter to another European Country; in this case, the Spin Off statute should take into consideration both the Italian law and the one of the Country of final destination.

The Spin Off will obtain the nationality of the country where the headquarter will be transferred to.

SPAIN

In Spain, 2 different organisational structures have been investigated:

- Uniones Temporales de Empresas (UTE)
- Agrupaciòn de Interés Econòmico (AIE)

I.   Uniones Temporales de Empresas

"Temporary Business association": This is an association of companies, temporary grouped to develop common activities for a limited period to implement a specific project.

Membership: natural persons (2) and legal entities (with or without Spanish nationality).

Establishment: UTE is established by public act, and registered in the "UTE special register".

Duration < 10 years - art. 8, c), **(** Ley 18/1982)

Law 12/11991 of 29 April

Law 46/2002 of 18 December

Law 18/1982 of 26 May (Fiscal Regulations)

II.   Agrupaciòn de Interés Econòmico – AIE Economic Interest Group

This is an association of natural persons and legal entities aimed at implementing activities for the members mutual benefits which are subsidiary to members' activities.

Capital: no minimum capital;

Membership: minimum 2 founders;

Establishment: AIE is established by public act, and registered in the "Registro Mercantil";

Liability: Unlimited liability of AIE members.

Law 12/1191, 29 April.

FRANCE

In France, a specific regulation of the Consortium does not exist. However, it is possible to stipulate specific contracts among interested partners aimed at sharing resources implementing not-for- profit activities.

An association is the convention whereby natural persons and/or legal entities have in common, on a permanent basis, their knowledge or activities for a purpose other than sharing profits (Article 1 of the law of 1901).

Minimum number of founders: Two.

Types of associations:

- Non-recognized or de facto associations;
- Recognized associations;
- Associations recognized as a public utility (no legal definition, this recognition is a discretionary act by the State);

Non-recognized or de facto associations presents the following main traits according to the French regulation.

Membership nationality requirements: No particular conditions.

Establishment: declaration to the local authorities of the name of the association, its objects, its premises and the name, profession, domicile and nationality of each of the directors, with two copies of the statutes. This declaration must be published in the French Journal Officiel.

Liability: unlimited.

Recognized associations: Limited liability.

Criteria for recognition: application for recognition is made to the Ministry for the Interior and granted, under certain circumstances, by decree by the Conseil d'État have operated regularly as such for three years, cover more than the local area adopt model statutes drawn up by the Conseil d'État.

BELGIUM

In the Belgian law, exists a general definition of the "consortium" (art.10 Code des sociétés) but there is not a specific regulation of this legal entity. Accordingly, the not-for-profit associations have been further analyzed: apart from the EEIG, only one juridical form appears suitable:

I.   *Association International Sans Bout Lucratif* **- AISBL.**

As a requirement for the constitution, a Statute must be presented with the following detailed information:

- The object of the non-profit activity (in details);
- Management structure (Board, General Assembly etc...);
- The members of the Board must be indicated, their election mechanism, salary, etc;
- Forecasted costs for the fist year (no detailed business plan is required);
- The administrators must be indicated as well.

All documents have to be sent to the Belgian Justice Minister who will decide whether the AISBL has all the requirements. All documents have to be in French.

Capital: no minimum capital is required.

Expenses: one of the members pays the bills and then is reimbursed by the other members. AISBL do NOT pay taxes (only 100 Euros per year). Whenever the AISBL provide consultancy services to external customers, VAT is applied. VAT is NOT applied on funding similar to EU funding.

Constitution: about €1500 for the notary and €1500 for the law consultant.

Annual costs for accounting: there is fixed amount + variable amount. About €3'000 (2000+1000)

The association can make business activities, but it does not have to be the main object of the association, and these activities have to be conducted in the framework of their social object.

AISBL requires at least 6 months (most probably one year) for its establishment.

3.3 Conclusions and future actions

A large number of possibilities for the company legal frames exist. All these parameters define the final role of the legal entity, and give it the initial shape. Among the most important issues, partners have to consider if the legal entity should be only a commercial/seller company, or it should be a manufacturing company, if its activities may be limited to the iCub platform or they may be enriched by other technologies provided by the partners. In this case the Spin Off may be the owner of the research results or obtain simple licences for their exploitation; it might be solely responsible for the use of some research results, or it might share these responsibilities with the participants; its structures and decision-making procedures can be more or less complicated, etc.

As it has been previously stated, a discussion within the RobotCub consortium has started, in order to evaluate the possibility to carry out this business idea, taking in account the various possible legal frames that the business can adopt. This process will individuate the partners which are willing to undertake the joint venture, their conditions and bounds. Only after this process, the consortium will be able to develop the idea into a real business plan.