

Committee on Development and Intellectual Property (CDIP)

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OPEN COLLABORATIVE PROJECTS AND IP-BASED MODELS (RECOMMENDATION 36)

Document prepared by the Secretariat

1. The Annex to this document, containing a thematic project proposal on “Open Collaborative Projects and IP-Based Models,” addresses WIPO’s Development Agenda Recommendation 36. The estimated cost for the project amounts to 895,000 Swiss francs of which 734,000 Swiss francs related to non personnel costs and 161,000 Swiss francs to the personnel costs.
 2. *The CDIP is invited to consider and approve the Annex to this document.*

[Annex follows]

1. SUMMARY	
Project code:	DA_36
Title:	Project on Open Collaborative Projects and IP-Based Models
Development Agenda Recommendation(s):	Recommendation 36 (Cluster D): To exchange experiences on open collaborative projects such as the Human Genome Project as well as on intellectual property models
Brief Description of Project:	<p>Open collaborative projects bring into play innovative solutions from inventors and problem-solvers from around the world through the sharing of best practices among several entities.</p> <p>In this context, this project will initiate and explore a range of activities for exchanging experiences on open innovation environments (including user-centric environments where users co-create innovations through open collaborative agreements) in developed and developing countries, as well as intellectual property (IP) models. Open collaborative innovation may be defined as the osmosis and reverse osmosis of knowledge across the porous membrane separating an organization or community and its environment. It can be promoted through a variety of arrangements. These may encompass more traditional models, such as, inter alia, licensing (of, inter alia, patents, utility models, trademarks, copyrights, industrial designs and trade secrets), subcontracting, R&D collaborative contracts, joint ventures and patent pools. Other options comprise Internet-enabled trends that foster customer driven innovation including, inter alia, crowd-sourcing, ideas competitions, creative commons, open source software and online encyclopedias. This project aims to map/examine existing paradigmatic open collaborative initiatives and their relations with IP models through a taxonomy-analytical study. Following an exchange of views and best practices from Member States and experts, the study will evaluate pros and cons of existing projects and identify lessons learned. In order to enable the broadest possible exchange and dissemination of technical information and experiences with all stakeholders, the project proposes to create an 'Interactive Platform on Open Collaborative Projects and IP-Based Models.'</p> <p>The project consists of proposals towards developing an Interactive Platform for the exchange of experiences on open collaborative projects such as the Human Genome Project as well as on IP models. We define the term 'Interactive Platform' as a two-way digital portal consisting of a web site and a web forum. The web site ('Send' function) will be an intelligent repository creating means for informing on studies/experiences in open collaborative projects and IP-based models. The web forum ('Receive' function) will be a means for receiving feedback from/on experiences in open collaborative projects and IP-based models.</p> <p>The project, namely, consists of: (i) the draft of a Taxonomy-Analytical Study with the aim of mapping, clustering, analyzing and correlating different open collaborative initiatives and the respective IP models they are based on; (ii) the organization of an Open-ended Meeting with Member States for a constructive debate on the essence, logic and stages of the approach; (iii) the organization of an Experts Meeting to exchange best practices on open collaborative projects such as the Human Genome Project, the European Commission's Open Living Labs Project, the Prize Proposals submitted by the Governments of Bangladesh, Barbados, Bolivia and Suriname to the WHO Expert Working Group on R&D Financing, and</p>

	other private firms' experiences such as InnoCentive, the Merck Gene Index and Natura; (iv) the completion of an in-depth Evaluation Study establishing pros and cons of existing projects by extracting inherent IP models for successful open collaborative environments; (v) the establishment of an Interactive Platform for exchange of experiences consisting of two components: a web site informing on the studies and proposing possible IP tools, and a web forum for receiving feedback from/on experiences in open collaborative projects and IP-based models; (vi) the incorporation of resulting recommendations into relevant WIPO programs after approval by Member States.
Implementing Programs:	Programs 18 and 16
Links to other related Program(s)/ DA Project(s):	Links to WIPO programs 1, 8, 9, 10, 16, 18 Links to DA clusters A and C
Links to Expected Results in the Program and Budget:	Stronger, empirically well founded policy dialogue between governments, international organizations, civil society actors, and the private sector on current and emerging global issues touching on IP (Program 18) Distinctive and practically useful information resources combining policy analysis with enhanced use of patent information for policy-makers and practical tools for open innovation (Program 18) Member States' capacity and understanding of innovation and technology management and transfer has been enhanced (Program 18)
Project Duration:	30 months
Project Budget:	Non-personnel costs: Sfr.734,000 Personnel costs: Sfr.161,000

2. PROJECT DESCRIPTION

2.1. Introduction to the issue/concern:

In an age of rapidly shifting technological landscapes and challenging economic conditions, maintaining an organization or community's competitive edge can hinge on its degrees of openness, connectivity, flexibility and adaptability, collaboration and self-organization, participative and distributed innovation. In this context, WIPO works with its Member States to support the development of the expertise, policies and structures necessary to nurture local open collaborative innovation capacity, especially in developing countries and LDCs. There is a wide interest in open collaborative innovation from the developing world as illustrated in several initiatives and international conferences such as the Open Innovation Summit in Africa, organized in Kenya during November 29 to December 1, 2010. Open collaborative innovation is promoted through a variety of arrangements. These may encompass more traditional models, such as, *inter alia*, licensing (of, *inter alia*, patents, utility models, trademarks, copyrights, industrial designs and trade secrets), subcontracting, R&D collaborative contracts, joint ventures and patent pools. Other options comprise Internet-enabled trends that foster customer driven innovation including, *inter alia*, crowd-sourcing, ideas competitions, creative commons, open source software and online encyclopedias that support the voluntary and collective creation of complex solutions.

As an example, WIPO and ten partner institutions developed a model for R&D networks and IP hubs http://www.wipo.int/freepublications/en/intproperty/921/wipo_pub_921.pdf. It fosters

scientific collaboration, improves results, optimizes resource allocation by using economies of scale and reduces the costs of research and IP protection, management and commercialization for the network members. The model was implemented in the health R&D sector of 6 West African countries (Cameroon, Central African Republic, Chad, Equatorial Guinea, Gabon and Republic of Congo) as well as Colombia. In Colombia, the project resulted in 18 patent applications filed since the start of the program in September 2004.

The objectives of the Project on Open Collaborative Projects and IP-Based Models are outlined as follows. The first step of the project would be to map, cluster, analyze different paradigmatic open collaborative initiatives and projects and correlate certain initiatives through discernment, by identifying similar combination of IP tools and procedures between them. Then, the next step is to discuss and debate on the commonalities, differences of these projects and evaluate their outcomes and success criteria. Building on these useful discussions, the next step would be to extract the inherent initial conditions and IP models for successful paradigmatic open collaborative initiatives and connect a given problem to a practical solution using these parameters. In order to exchange experiences on open collaborative projects and IP-based models with all stakeholders, the project would propose to create means for broadcasting and informing on successful experiences and possibly proposing useful IP tools for open collaborative environments. In addition, the project would enable all stakeholders (including, inter alia, financial and economic international organizations, NGOs, IGOs, universities and research institutions, the private sector, and independent individuals) to provide feedback on these successful open collaborative experiences as well as discuss their own experiences in this area. Finally, the project design would allow complementarities of its outcomes with other WIPO programs.

The tools used by the Project on Open Collaborative Projects and IP-Based Models are outlined as follows. The first tool would be an analytical report and taxonomy on the various ongoing paradigmatic open collaborative environments and projects and their relation with IP policy. The second tool would be open-ended meetings with Member States and presentations of the work of experts. The open-ended meeting would include the participation of relevant stakeholders chosen under consultation with Member States. For the experts meeting, experts from both the public and private sector would be invited. The terms of reference (TORs) for the experts would be decided in consultation with Member States. The third tool would be an in-depth evaluation study which would take into account the best practices and insight from the previous meetings with Member States and experts. The fourth tool would be an Interactive Platform which would consist of an intelligent repository of information, experiences and IP tools as well as an interactive medium for continuous self-sustained experience exchange through feedback. The Interactive Platform will be publicized on the WIPO web site and other interested sites to enable awareness from a wide audience including research institutions and university libraries in developing countries. Finally, the resulting recommendations from the project would be incorporated into relevant WIPO programs.

The WIPO Project will consist of the following components:

1. Elaboration of a Taxonomy-Analytical Study with the help of external consultants;
2. Convening of an Open-ended Meeting with Member States;
3. Organization of an Experts Meeting structured around specific issues to exchange best practices on open collaborative projects presented as case-studies with the following objectives:
 - (a) exchange best practices for public ventures such as, inter alia, the *Human Genome Project* and the *European Commission's Open Living Labs*:

- (i) the *Human Genome Project* is an international scientific research project started in 1989 with a primary goal to determine the identity and sequence of 3.3 billion chemical base pairs which make up DNA and to map the 20,000-25,000 genes of the human genome from both a physical and functional standpoint. With the sequence in hand, the next step is to identify the genetic variants that increase the risk for common diseases like cancer and diabetes. The project was initially started by the U.S. National Institutes of Health (NIH). Immediately, it became clear of the market potential for seeking patent protection on thousands of genes as initially announced by Celera, a private competitor to NIH. In March 2000, the United States Government announced that the genome sequence could not be patented;
 - (ii) the *European Commission's Open Living Labs* are real-life trial and error environment where users and producers co-create innovations. Open Living Labs are characterized as PPP partnerships for user-driven open innovation. Their main activities are co-creation, exploration, experimentation and evaluation of live scenarios within communities of users. Open Living Labs partners will join forces as a network, to develop and offer a gradually growing set of networked services, including tailored IP services, to support the innovation lifecycle for all actors in the system.
- (b) exchange best practices for other private firms' experiences such as, inter alia, *InnoCentive*, the *Merck Gene Index* and *Natura*:
- (i) *InnoCentive* is the premier open innovation marketplace in the world. It is dubbed the "eBay of Innovation." It was launched in 2001 by Eli Lilly, a global pharmaceutical company. *InnoCentive's* global Internet-based platform is designed to help connect "seekers," those with challenging research problems, with "solvers," those proposing inventive solutions. 50% of its 135,000 registered solvers come from developing countries including India, Russia, and China – who are uniquely prepared minds. From the outset, *InnoCentive* ensured it had a governance structure in place that would protect the IP rights of both seekers and solvers;
 - (ii) the *Merck Gene Index* is a broad collaborative effort and public domain launched by Merck in 1995. Given the rapid progress in sequencing of the human genome, many early-stage biotechnology companies were pursuing research in closed labs. *Merck's* open approach consisted in funding a variety of university-based human genome research projects and publishing all of the findings. Within three years they had published over 800,000 gene sequences into the public domain. The *Merck Gene Index* accelerated the pace of biomedical research and drug development and gave researchers globally unrestricted access to an open resource of genetic information;
 - (iii) *Natura* is the biggest Brazilian cosmetic company which has been implementing an open-oriented R&D strategy since 2006. *Natura's* innovative process aimed to extend the sources of innovation in order to gain agility in the innovation process. It elaborated different strategies for each type of partner in order to identify, capture and manage new technological opportunities. The focus was initially on universities and research institutions and the strategy was based on active searching through a web site connected to a database where potential partners submit research projects or apply for new partnership opportunities. In 2007, *Natura* started to elaborate a complete strategy focused on suppliers and incubators and the next steps will concentrate on consumers.
- (c) describe the IP models and procedures that these open collaborative projects are based on and discuss the benefits and challenges of each of them.

- (i) Completion of an in-depth Evaluation Study assisted by an external consultants;
- (ii) Launch of a Interactive Platform for the exchange of experiences which include the creation of a web site and a web forum which could be integrated into the WIPO Innovation and Technology Transfer Support Structure for National Institutions (CDIP/4/2); and
- (iii) Incorporation of any new activities or initiatives from other WIPO programs required for the adoption and the implementation of the project would be taken into account. In addition, the project should be closely coordinated with other tasks from WIPO Divisions such as the Economics and Statistics Division which could integrate the outcomes of this project in the form of 'boxes' into WIPO's annual economic flagship publication.

2.2. Objectives

The objectives of this project are framed by Recommendation 36. The main objective is to establish an interactive platform for the broadest possible exchange of experiences on open collaborative projects and IP-based models. In particular, the project will intend to be a useful building block for the development of collaborative networks for innovation. It will aim to exchange information, experiences and existing best practices, as well as enhance the understanding of potential uses of IP models/procedures in order to stimulate local innovation. The project would facilitate the availability of IP tools and online training kits from WIPO by the creation of a web site and web forum. The proposed project solutions are beneficial especially for developing countries and should be in line with the time-frame indicated for the project.

Target beneficiaries include: Governments, universities and research institutions, the private sector, international organizations, intergovernmental organizations, non-governmental organizations, and independent individuals forming the network.

2.3. Delivery Strategy

The WIPO Project will consist of the following components:

1. the draft of a Taxonomy-Analytical Study (with the help of an external consultant) with the following objectives:
 - (a) review existing relevant studies and literature. Previous related studies such as studies on patents and the public domain undertaken under Projects DA_16_20_01 (CDIP/4/3) and DA_16_20_02 (CDIP/6/5) will be reviewed. A survey of existing literature and previous work done by other organizations, NGOs, IGOs in the area of open collaborative innovation would be necessary;
 - (b) map different existing paradigmatic open collaborative initiatives and the different IP tools and models for traditional open collaborative projects (such as, inter alia, licensing, sub-contracting, R&D collaborative contracts, joint ventures and patent pools) or newer types of open collaborations such as, inter alia, the use of problem-solvers on the Internet (customer-driven innovation through 'crowd-sourcing' or 'ideas competitions'), the promotion of open source and creative commons cooperation, or the creation of open domains;
 - (c) cluster the different initiatives and structure them according to the subjects such as,

inter alia, health, agriculture, biotechnology, micro/nanotechnology, pharmacology, genetic resources and traditional knowledge, energy, climate change, software and information and communication technologies;

- (d) analyze the different initiatives, determine the benefits and challenges for each and create an Atlas for the different IP models and procedures that these initiatives are based on;
- (e) correlate certain initiatives through discernment, by connecting parameters and identifying similar combination of IP tools and procedures between them;
- (f) identify emerging initial conditions and IP models for successful paradigmatic open collaborative initiatives.

Although at the end of this stage, the universal conditions will not be completely clear, the Taxonomy-Analytical Study will start to make visible certain useful patterns for how to find a practical solution to a real-life problem through a given successful open collaborative environment structure.

2. the organization of an Open-ended Meeting with Member States with the following objectives:
 - (a) consult on the essence, logic and different stages of the approach of the 'Project on Open Collaborative Projects and IP-Based Models;'
 - (b) exchange experiences of Member States in open collaborative projects and the IP models they are based on and discuss case studies from the Taxonomy-Analytical Study highlighting the possible obstacles and suggestions for the concrete use of open innovation; and
 - (c) discuss the practical outcomes, deliverables and solutions proposed by the 'Project on Open Collaborative Projects and IP-Based Models.'
3. the organization of an Experts Meeting to exchange best practices on open collaborative projects presented as case studies (refer to Para. 2.1: Introduction to the issue/concern).
4. the completion of an In-depth Evaluation Study (with the help of external consultants) with the following objectives:
 - (a) identify benefits and challenges of existing projects and identify lessons learned for each paradigmatic open collaborative initiative;
 - (b) extract inherent favorable conditions and successful IP models for effective paradigmatic open collaborative initiatives;
 - (c) propose recommendations on the ways WIPO programs can support developing countries and LDCs in overcoming the challenges they face in open collaborative innovation processes.
5. the establishment of an Interactive Platform for the broadest possible exchange of experiences with the following objectives:
 - (a) create a web site informing on the studies and proposing possible IP tools and models. The web site ('Send' function) will be an intelligent repository creating means for informing on studies/experiences in open collaborative projects and

IP-based models. It would consist of:

- (i) a collection of the different studies of the 'Project on Open Collaborative Projects and IP-Based Models;'
 - (ii) a list of helpful IP tools that could be exploited by Platform users in open collaborative projects such as, inter alia, basic principles for win-win negotiations, a standardized approach for negotiating open innovation deals, soft law instruments for regulating fast-moving situations, light touch IP legal and procurement processes for formalizing open collaborations, proactive IP strategies aiming at exchanging technologies between individual nodes of a network, catalyzing frameworks in patent information for the promotion of innovation through inter-operability and cross-fertilization of IP;
 - (iii) a list of IP models such as, inter alia, patent pools which aggregate and transfer IPRs related to a particular technology, IP standards which facilitate access to technologies, IPR sharing for collaborative R&D through cross-licensing agreements, open domains which embrace IPRs that belong to the community at large, consortia which enable partnerships through an open innovation model of access to IPRs, and IP hubs which centralize and dispatch IP services to R&D centers, TTOs, businesses and technoparks;
 - (iv) online training kits for technical assistance and capacity building in the area of IP management for open collaborative projects. According to a recent survey, the greatest disadvantage of open innovation is the risk of IP leakage: 62% of 300 senior executives questioned indicated theft of IP as the greatest risk (The Economist Intelligence Unit, 2007). In order to move from IP as a defensive mechanism to a more proactive IP strategy aiming at sharing technologies between individual nodes of a network, an effective IP management is critical both for identification of external knowledge and for value capture of an organization or community's own IPRs;
 - (v) links to other useful WIPO information and initiatives such as on, inter alia, open innovation from the WIPO Innovation and Technology Transfer Section, dispute resolution in open collaborations (as in click-wrap licensing) from the WIPO Arbitration and Mediation Center, the WIPO Innovation-Report 2011 on "Shifting Innovation Paradigms and the Role of Intellectual Property" from the WIPO Economics and Statistics Division.
- (b) create a web forum for receiving feedback from/on experiences in all open collaborative projects and IP-based models. The web forum ('Receive' function) will be a means for receiving feedback from/on experiences in open collaborative projects and IP-based models. It would consist of:
- (i) a digital forum collecting feedback, comments and suggestions from the users on the posted studies, the IP tools and training kits, the design or content of the Interactive Platform;
 - (ii) a drop box feature with possible downloaded reports, studies and practical experiences from other existing open collaborative projects; WIPO already experienced such a dropbox feature in the context of the PCT system after implementation of EDUS (PCT electronic documents upload service);
 - (iii) a database of different Interactive Platform users. This database will include results from an ex-post evaluation survey informing on impact assessment of the Interactive Portal. In addition, the possibility to receive email alerts directly to their personal inboxes (RSS feeds) could grant up-to-date information, contents and experiences on specific open collaborative projects or IP-based models to users with disparate interests.

<p>6. The incorporation of resulting recommendations from the project into relevant WIPO programs after approval by Member States.</p> <p>Potential risks include ensuring that the project appropriately addresses the relevant issues of different stakeholders, in particular, bearing in mind the various roles and interests of each users' technical, marketing, financial and legal functions. In order to mitigate these risks, consultations with different stakeholders throughout project delivery will be crucial.</p> <p>Long-term sustainability presupposes and requires the resources, both substantive and IT-related, to regularly update the contents of the Portal.</p>	
<p>3. REVIEW AND EVALUATION</p>	
<p>3.1. Project Review Schedule</p>	
<p>1. Monitoring reports, every six months after the start of the project, will indicate whether outputs and targets have been reached; and</p> <p>2. A final self-evaluation report will be established at the end of the project, evaluating the performance of the project and recommendations for the best ways of including such results into the global WIPO capacity building framework.</p>	
<p>3.2. Project Self-Evaluation In addition to the project self-evaluation, some projects would also be the object of independent evaluations.</p>	
Project Outputs	Indicators of Successful Completion (Output Indicators)
1. Taxonomy-Analytical Study	First draft of the analytical study ready within six months from approval of the project.
2. Organization of an Open-ended Meeting with Member States	Meeting organized within three months from the completion of the analytical study, the debate will focus on the essence, broad logic stages of open collaborative innovation projects as well as on their outcomes, deliverables and solutions; (a) Consensus of Member States on the way forward; (b) 60% positive feedback on the project process from participants (on the evaluation questionnaires).
3. Experts Meeting Organization	Meeting organized within six months from the organization of meeting with MS, the discussion will highlight the best practices in open collaborative projects for both public and private organizations; 70% positive feedback from participants on the usefulness of the meeting for exchanging experiences.
4. Evaluation Study	In-depth evaluation study completed within six months from the convening of the experts meeting. This activity will aim to estimate pros and cons of existing projects and identify the lessons learned for each open collaborative initiative.
5. Interactive Platform	Digital Portal functional within six months after the completion of the in-depth evaluation study; (a) Widespread and regular use of the web site and web

	<p>forum by users, particularly by developing countries;</p> <p>(b) 55% positive feedback from users reporting usefulness of the platform (through online questionnaires).</p>
<p>6. Support existing activities within WIPO, which foster the exchange of experiences on open collaborative projects</p>	<p>Discussion of resulting recommendations from the project for their incorporation into related WIPO programs after approval by Member States within three months after the entry into force of the Interactive Platform.</p>
<p>Project Objectives</p>	<p>Indicators of Success in Achieving Project Objective (Outcome Indicators)</p>
<p>Establish an Interactive Platform for the broadest possible exchange of experiences on open collaborative projects and IP-based models.</p>	<p>Better awareness, understanding of experiences/best practices and practical application of IP tools and training kits in the Interactive Platform for the creation and implementation of open collaborative projects, and feedback from the Committee on the extent to which understanding of the issues has been enhanced and project objective has been met:</p> <p>(a) Number of web site users and visits per country/region;</p> <p>(b) Number of web forum users exchanging experiences on open collaborative environments and IP-based models;</p> <p>(c) Increased demand for WIPO training on open collaborative innovation based on the contents of the portal; and</p> <p>(d) Increased number of initiated joint projects using Open Innovation.</p>

5. BUDGET (non-personnel resources)

Table 1 – Project Budget by Cost Category and Year

Cost Category	Budget (Swiss Francs)			
	Year 1	Year 2	Year 3	Total
<i>Travel and Fellowships</i>				
Staff Missions	40,000	40,000	20,000	100,000
Third-party Travel	50,000	150,000		200,000
Fellowships				
<i>Contractual Services</i>				
Conferences	10,000	20,000		30,000
Experts' Honoraria	20,000	120,000		140,000
IT Consultant		67,000	67,000	134,000
Publishing		30,000	50,000	80,000
Others	10,000	20,000	10,000	40,000
<i>Equipment and Supplies</i>				
Equipment				
Supplies and Materials		10,000		10,000
TOTAL	130,000	457,000	147,000	734,000

BUDGET (personnel resources, where applicable)

Table 2 – Project Budget by Cost Category and Year

Cost Category	Budget (Swiss Francs)			
	Year 1	Year 2	Year 3	Total
1 P3 at 50%		80,000	81,000	161,000
TOTAL		80,000	81,000	161,000

BUDGET (total resources)

Table 3 – Total Project Budget by Program and Year (in case of more than one Program)

Program	Budget (Swiss Francs)			
	Year 1	Year 2	Year 3	Total
Program 18	110,000	517,000	218,000	845,000
Program 16	20,000	20,000	10,000	50,000
TOTAL	130,000	537,000	228,000	895,000

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