



Nexa Center for Internet & Society
Politecnico di Torino

Annual Report 2012

*Studying the Internet, exploring its potential
& experimenting new ideas*



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The Nexa Center for Internet & Society is a research center of the Department of Automatics and Informatics of the Politecnico di Torino (<http://dauin.polito.it>)

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EXECUTIVE SUMMARY: THE 5TH YEAR IN BRIEF

Abstract

During its 5th year of activity, the Nexa Center achieved important **results in several thematic domains. Its output included** scientific publications, policy proposals, white papers, software tools, outreach initiatives (both off- and on-line) and teaching activities.

In the open data field, the European Commission officially acknowledged the **role of the LAPSI project, led by the Nexa Center, in the ongoing review of the Public Sector Information Directive**. At the same time the Center had a crucial role in the **drafting of the first open data regional law in Italy**, which was approved by the Piedmont Regional Council in December 2011. Both policy results were a direct consequence of the work performed within the **EVPSI Piedmont-funded research project on public open data**, a project which also produced a rich set of **publications and working papers** (as well as a **white paper** addressing Italian policymakers and civil servants).

Regarding the **public domain**, the **Communia project** delivered its final and arguably more tangible fruits, in the form of a **final report** (which includes both a synthesis of the academic results facilitated by the project and its main policy recommendations) and of the **Communia book** “*The Digital Public Domain: Foundations for an Open Culture*”, both published in March 2012 and both freely available online.

In the Internet monitoring and analysis domain, the **Neubot project** delivered several **new releases of the piece of software designed to implement a distributed monitoring of network quality and of network neutrality violations**, as well as scientific articles, including **an article awarded the "best student paper award" at a IEEE international symposium in Greece in July 2011**. During the reporting period, **Neubot has also been accepted by MLAB**, the well-known network measurement platform.

The work of the Center in the **fundamental rights online** domain produced a detailed Nexa contribution **to a consultation of the Italian Communications Authority (AGCOM) about online copyright**. Among the contributors, the Nexa Center was unfortunately the only academic entity: we hope that our example will inspire other Italian universities in the future. The work of the Center about anonymity online (inspired by the now defunct, infamous “Pisanu decree”) contributed to the approval of a Piedmont **regional law about free and open access to public Wi-Fi**, which is, among other things, arguably the first Italian public act acknowledging that it is now possible to offer Internet access without prior strong identification of the users.

The Nexa Center has also inaugurated - within the context of the official courses of the Politecnico di Torino - its **teaching activity** via “**Digital Revolu-**

tion”, a **first-year undergraduate course** which summarizes many of the results of almost ten years of activities of the informal group that gave birth to the Nexa Center. The course was fully registered, with over 130 students registered to attend, plus several auditors (see <http://rivoluzionedigitale.polito.it>).

Regarding dissemination and communications activities, in December 2011 the Center launched the **new version of the website of the Center**, which in later months has contributed to a very strong increase (+380%) of the number of unique visitors, which has climbed to almost 1,000 per day as of early June 2012. In the same month, December 2011, the Center held a **very successful edition of the Nexa Conference devoted to open data** (with the usual Creative Commons session).

The second part of the year also witnessed some **new entries in the core staff of the Center**, the **kick-offs of two new EU-funded projects**, i.e., EINS and Open-DAI, and the submission to the European Commission of **three new project proposals**, i.e., PROSA (as coordinator), Share-PSI 2.0 and LAPSI 2.0. During the same months a laborious negotiation has been under way (and still is) with AGCOM about a research project on Internet content, which includes also Bocconi University (prof. F. Sacco) and Naples University (prof. G. Ventre).

2012 also brought new **partnership agreements**, including one with the **Internet & Society Lab at Keio University** (Tokyo, Japan), which follows on the footsteps of a similar one signed with the **Berkman Center for Internet & Society at Harvard University** in Spring 2011, and the first steps of a joint-venture with the Italian non-profit foundation **lettera27** aiming at extending the scope of activities of **Creative Commons Italia**, one of the flagship projects of the Nexa Center since its inception.

Activities

The Report at hand goes through the core research and policy support work of the Center along the **main threads** already discussed in the previous annual report, complemented by a residual group of other projects and a structured **Teaching section** started in 2012.

The **public sector information (PSI), or open (government) data**, thread arguably continues to represent the major field of research and policy support activities for the Center, at least in terms of funded activities. The **LAPSI EU-funded thematic network** on the Legal Aspects of Public Sector Information (p. 10) produced several meetings and delivered a richer set of position papers and policy recommendations. The **research activity of EVPSI** (Extracting Value from Public Sector Information) delivered a significant amount of research articles (p. 14) as well as other policy support outputs in the form of a white paper. The **support to the open government data activities of the regional government of Piedmont and other Italian public administrations** reinforced

the role of the Nexa Center as (arguably) the main research and policy support institution in this domain in Italy (p. 18). Moreover, the Center strengthened its technological competences in the linked open data and cloud computing domains through its role in the data assessment and technical specification work packages of the **Open-DAI project, collecting a series of pilots for the re-use of PSI** (p. 21). This thread also saw the launch of the ICONVIS project, a piece of software to link and visualize public data through ontologies (p. 24).

The Center continued to devote an important portion of its resources to **policy analysis and support** and this was especially true in the open data domain. In particular, the LAPSI thematic network on legal obstacles to an effective re-use of Public Sector Information (PSI) produced a set of position papers and policy recommendations in order to support the review of the European PSI Directive and the **“important legal analysis” delivered by LAPSI was explicitly acknowledged in the Explanatory Memorandum accompanying the new PSI Directive Proposal of December 2011**. Similarly, the EVPSI project continued its policy support activity, whose high level results profoundly influenced the **Regional law on Open Data approved in Piedmont** (as well as the drafting of the regulations implementing it) and whose implications were collected in a **White paper for the re-use of Public Sector Information addressed to Italian policymakers** and public servants. Also thanks to these achievements, Regione Piemonte continue to be recognized as the leading Italian public administration in the field of access and re-use of PSI in terms of norms and processes, while the ongoing work within projects such as Open-DAI will contribute to maintain dati.piemonte.it at the forefront also in technological terms. Again in the PSI field, the Center contributed to the launch of the **Open Data initiative of the City of Milan**.

Given the current obligations of the Center in terms of ongoing projects and the opportunity to exploit the cumulated knowledge and experience, PSI related activities will arguably remain a major field of work during the forthcoming reporting period. Some major policy effects of the work of the Center in this domain could also take place during 2012-2013, since the Center is involved in the consultations concerning the development of the Italian Digital Agenda, in particular with a proposal concerning the legal status of PSI. Moreover, some research and development activities will also likely take place in the Linked Open Data and Semantic Web domains, focusing the technological contribution of the Center in this domain on a set of logical and informational infrastructures that are part of the commons enabling innovation in the Linked Data field in Italy (i.e. freely licensed datasets and algorithms which could be used by other researchers and innovators in this domain).

A second thread of research was about the **public domain and the commons**. It included the **Creative Commons Italy** project, which characterized from their beginning the activities of the founders of the Nexa Center, and the closely related **SeLiLi open licenses clinic**. It also included the **Communia**

European Thematic Network about the digital public domain, which was formally concluded during the previous reporting period, but whose main results were published during the past year (see p. 31). In particular, the **Communia project**, which inaugurated the policy support work of the Center in 2006, delivered its **final report including a rich set of policy recommendations** concerning the preservation, strengthening and reinvigoration of the digital public domain and the **Communia book** “*The Digital Public Domain: Foundations for an Open Culture*”, which is freely available online under a Creative Commons Attribution license and which is going to be presented at the European Parliament in June 2012. Finally, this thread encompassed some supporting activities related to the **Public Domain related initiatives of the library system of the Politecnico di Torino**, the ongoing work about the **evolution of copyright in the digital age** (see § 2.5. *Copyright 2.0: a Copyright Reform Proposal*, p. 43) and some research and dissemination & awareness work about digital cultural heritage (which is at the border between this thread and the public sector information one, see p. 45).

On top of the final products of the Communia projects, this “public domain and commons” thread delivered the **Italian translation of the Creative Commons Zero** license/waiver, the **first public annual report of the SeLiLi project** and several research papers. Moreover, and even if the Communia project was formally completed in February 2011, the Communia international Association - which was formally incorporated during the reporting period - is continuing its work.

The forthcoming reporting period will include major developments related with the Creative Commons project, including - at the international level - the debate and the likely launch of version 4.0 of the CC license suite and - at the national level - increase in the awareness & dissemination and the launch of the fundraising activities of CC Italia, in cooperation with Fondazione Lettera27.

The thread concerning **fundamental rights online** (p. 57) included research projects about the **identification of Internet users and open WiFi** (p. 60) and the monitoring of **online freedom of expression in Italy** (p. 62). During the reporting period, the work of the Center on anonymity online gave its fruits also in terms of policy implications and **the Region of Piedmont approved a by-law providing for open WiFi access without prior identification of Internet users**. This thread also comprehended activities related to the **governance of the Internet**, in particular the co-organization of the Internet Governance Forum Italia 2011 and the beginning of the organization of **IGF Italia 2012, which will take place in Turin under the scientific coordination of the Nexa Center and the organizational coordination of Regione Piemonte** (p. 63). In the field of the **Internet & democratic participation** the Center continued its work, for instance establishing contacts with other players, such as the Basso Foundation in Rome (see p. 66). The (second formal) **answer to a public consultation about copyright online launched by the Italian**

telecommunication authority also gave an opportunity to discuss the **risk of censorship from ISPs**, in case they are charged with monitoring and prevention duties related to copyright infringement (p. 58).

On top of the aforementioned activities, the Nexa Center **translated (from English to Italian) the booklet “How the Internet works” published by the European Digital Rights Initiative (EDRi)**. This booklet was intended to provide policy-makers with a basic overview of Internet and related technologies and its plain language and user-friendly approach gathered significant attention by Italian media (p. 65).

The main expected development of the “fundamental rights online” thread during the next reporting period is represented by the **scientific organization of the Italian Internet Governance Forum 2012**, which will take place from the 18th (with some preliminary and self-organized meetings) to the 20th of October 2012.

The **Internet monitoring and analysis research** thread also saw an intense activity. The **Neubot (Network Neutrality Bot)** project produced new versions of the **distributed software application collecting information about the quality of Internet connections**, including potential traffic discrimination practices (p. 50). The current version of the Neubot software measures the speed of an Internet connection using both the **HTTP and BitTorrent protocols** and includes new features, such as **automatic updates**. Moreover Neubot is now **integrated with Measurement Lab, the open platform for researchers to deploy Internet measurement tools**. In parallel, the research activity concerning the same topics of the software project delivered significant results, including the aforementioned article awarded the “best student paper award” at the IEEE 16th International Symposium on Computers and Communications (ISCC'11) in Corfu and another paper accepted at an international peer-reviewed workshop (see p. 53).

The project also started to show its potential in term of policy implications, in particular since **Neubot was presented at a BEREC (Body of European Regulators for Electronic Communications) workshop and gathered the attention of various telecommunication authorities**.

An intense development and research activity is expected to take place during the coming year around the Neubot project: on top of various enhancements, such as the IPv6 support, the new features will increase the integration with Measurement Lab.

A research thread started during the previous reporting period and currently delivering its first results concerned the multidisciplinary (mainly legal and economic) analysis of cloud computing. This thread includes an **international co-**

operation with the **Berkman Center at Harvard University, Keio University and the University of St. Gallen** to analyze the issues raised by cloud computing and **cross-border flows of information** (p. 70) and a national project about the **use of cloud computing by the Italian public administration** (p. 72).

Amongst the other activities described in the report at hand there is the line of research concerning **universities and cyberspace** that was inaugurated at the international conference *University and Cyberspace: Reshaping Knowledge Institutions for the Networked Age* (Torino, 28-30 June 2010). During the reporting period, **Juan Carlos De Martin has intensified his research on the role of universities in the Internet age**, particularly during his stay in Cambridge (October 2011-March 2012). Universities are under unprecedented pressure due to a combination of factors, some of them due to long-term historical processes, other related to technological changes. A vision for the future is needed to face the challenges with a sense of direction and with an awareness of both opportunities and risks.

Another set of activities concerns **Internet Science** (p. 76). In a sense, Internet Science could represent an overall umbrella for all the activities of an Internet & Society research center, such as Nexa. During the reporting period, the Center started a specific project under this label, because **the Nexa Center is a partner of the European Network of Excellence on Internet Science (EINS)**, launched in December 2011 and funded under the European Commission's Seventh Framework Programme: Information and Communication Technologies. EINS is favoring **networking, exchanges and collaboration between research organizations studying the Internet from various angles** with the aim of creating a bridge between the different languages and analytical tools of a diverse set of scholars (and with the undeclared goal of exploring the foundation of Internet Science as an independent academic discipline).

Finally, the reporting period inaugurated **a full fledged Teaching thread**. Of course, various teaching activities somehow connected with the Center already took place during the previous reporting period and continued during the last one: for instance, Internet & Society topics were included in the academic courses of Nexa co-directors and faculty fellows and various Nexa fellows gave Internet & Society related lectures, e.g. within the WIPO LL.M directed by Nexa co-director Marco Ricolfi. However, the **“Digital Revolution” undergraduate course at Politecnico di Torino** described below (see p. 86 and <http://rivoluzionedigitale.polito.it>) is the first structured teaching activity completely planned by a member of the Nexa Center (Nexa co-director Juan Carlos De Martin), focused on Internet & Society and involving several members of the staff of the Center (e.g. Simone Basso as teaching assistant, but also Giuseppe Futia to film and make available online all the lectures) and several Nexa fellows and

trustees as guest lecturers. Considering that the course was fully registered, with over 130 students and several auditors, it is legitimate to expect a continuation of this activity in the future.

In 2011-2012, the international network and the visibility of the Center also continued to grow. **In April 2012, one year after the signature of the cooperation agreement with the Berkman Center for Internet & Society at Harvard University, the Nexa Center announced the signing of a similar partnership agreement with the Internet & Society Lab at Keio University (Tokyo, Japan).** During the reporting period, Nexa co-director prof. Juan Carlos De Martin was appointed as Faculty Fellow at the Berkman Center for Internet & Society at Harvard University and Senior Visiting Researcher at Keio University. Also prof. Alessandro Mantelero, faculty fellow at the Nexa Center, spent a month as visiting scholar at the Berkman Center.

Moreover, during the reporting period, the Center received various offers to be involved in the **drafting of research and policy-support proposals**. The Center coordinated the drafting of a European project coordinating actions for the development of open science and open access (see § 7.3. *PROSA: European Coordination Action providing Policy Recommendations for Open Science and open Access*) and joined two European thematic networks on the legal (see § 7.1. *LAPSI 2.0: European Thematic Network on the Legal Aspects of Public Sector Information*) and technological (see § 7.2. *Share-PSI 2.0: European Thematic Network for Shared Standards for Open Data and Public Sector Information*) aspects of Public Sector Information. Other proposal were also submitted at the national level (see §§ 7.4. *AGCOM SCREEN: Italian Proposal (approved – in standby)*, 7.5. *Smart Cities PRIN (Italian National Project): Smart Knowledge*, 7.6. *Smart City Proposal for the City of Turin*).

Finally, in terms of outreach, in December 2011, the Center organized **the third edition of the Nexa Conference on Internet & Society, which focused on “Open Data on an Open Network”** (p. 98), coupling the debate on public sector information and network neutrality. The **“Nexa Wednesdays” public seminars** also continue to be successfully held monthly in the conference room of the Center with live webcast (p. 98). A series of **“Nexa Lunch Seminars”**, which will take place the fourth Wednesday of each month starting from May 2012, was also inaugurated. Moreover, the main mailing-list of the Center showed an increased number of participants (from about 330 in the previous reporting period to more than 410) and messages (from about 2,000 to almost 2,200) arguably confirming itself as the **premier mailing-list for in-depth discussion of Internet-related issues in Italy**. The Nexa Center also continued to regularly issue press releases concerning its seminars, workshops, meetings and other initiatives (see nexa.polito.it/press-releases).

The recruitment of a part-time communication expert (mentioned in the

previous report), together with an intense work of the Nexa staff and co-director Juan Carlos De Martin yield to **the launch of the new version of the main website of the Center** (nexa.polito.it). This, together with frequent updates and initiatives, led **the average number of monthly (unique) visitors from 3,500 in the previous reporting period to 12,200**. Frequent updates also interested the websites of individual projects (communia-project.eu, creativecommons.it, lapsi-project.eu, evpsi.org, neubot.org). Likewise, the Center continued to use other online tools for its communications, such as the social networks Facebook (www.facebook.com/nexa.center and www.facebook.com/communia) and Twitter ([@nexacenter](https://twitter.com/nexacenter), [@cc_italy](https://twitter.com/cc_italy), [@LAPSI_project](https://twitter.com/LAPSI_project), [@evpsi](https://twitter.com/evpsi), [@neubot](https://twitter.com/neubot)).

As far as the **internal management** of the Center is concerned, **the reporting period did not introduce major discontinuities**, for instance, the monthly steering meetings (involving the co-directors, the managing director and the administrative manager) continued to take place regularly, with a minor innovation represented by several online meetings when one of the co-directors, Juan Carlos De Martin, was visiting at the Berkman Center at Harvard University. At the same time, **a relevant addition to the staff of the Center reinforced the overall robustness and flexibility of internal management**: at the beginning of 2012, Raimondo lemma, a researcher with multidisciplinary interests and project management experience who already collaborated with the Center in the past, joined the staff. His entry created a certain degree of **redundancy with respect to some core research, management and policy support skills and competences** and made it possible, for instance, to submit some new project proposals, including a major one coordinated by the Center (i.e. the PROSA proposal, p. 83), or to gain new degrees of freedom with respect to the possibility of taking part in meetings, conferences and policy support initiatives at the national and international levels.

Another relevant addition to the staff was represented by Federico Cairo, a PhD student with an eclectic background and software development experience, while amongst the former members of the staff, just the administrative assistant, Maria Crea, left the Center and is going to be replaced by Nadia Tecco in July 2012.

1. PUBLIC SECTOR INFORMATION

This section summarizes the main activities that the Center performed in the field of public sector information and open (government) data. It describes the international policy support network LAPSI (the European Thematic Network on Legal Aspects of Public Sector Information), the regional research project EVPSI (Extracting Value from Public Sector Information), other operational, policy support and technological activities that the Nexa Center performed.

1.1. LAPSI: the European Thematic Network about the Legal Aspects of PSI

Which are the main legal obstacles to an effective re-use of Public Sector Information? Consensus building and policy support at the European level.

In 2009 the Nexa Center for Internet & Society submitted a proposal for a call financed by the European Commission related to the implementation of a European thematic

For more information, refer to...

<http://www.lapsi-project.eu/>

network concerning legal aspects of Public Sector Information (PSI). The activities of the project formally started in the 1st quarter 2010 and from that date on LAPSI became the acronym for the Thematic Network on Legal Aspects of PSI. The kick-off meeting of the network took place on March 2010, followed by the first working group meetings. The project will last 30 months, ending the 21st of September 2012.

2.1.1. Background

Information generated and collected by public sector entities represents a veritable minefield and various studies, as well as a comparison with the US situation, suggest that it might make a much greater contribution to EU economies and societies, if current legal barriers to access and re-use were removed. In this context, the European Commission opened a call for proposals for a thematic network devoted to the policy support and consensus building activities, which could help the removal of such barriers.

2.1.2. Objectives

As a part of an ICT policy support program, the LAPSI project is:

- directly *contributing* to the i2010 strategy of the European Commission;
- building a *network* of organizations representing the main European *point of reference* for legal issues related to PSI;
- addressing areas that due to legal issues would not develop, or would develop at a slower pace, if left to the current incentive structures of monopolistic operators;

all that in order **to make PSI in Europe more accessible, re-usable and exploitable**, namely through analytical work and the diffusion of information in areas of public interest at the Community level.

This approach is intended to benefit all the involved players as well as to produce a *set of strategic guidelines* for the effective re-use of PSI.

As far as the *subject matter* is concerned, the LAPSI project will deal with

PSI in the broadest meaning of the expression (including both *non-cultural* and *cultural* information).

The LAPSI network collects best practices and optimal implementation policies within the current legal framework, taking into account the experiences in countries which have set up a central agency responsible for PSI. All that keeping in mind the review of the European PSI Directive that will take place in 2012 and building on state-of-the-art knowledge, including that which was documented and organized by the ePSIplus thematic network.

LAPSI provides a forum for considering the various legal challenges and opportunities related to PSI. The discussions will cover the following issues:

- legal rules that contribute to the creation of legal obstacles to PSI access and re-use;
- legal tools contributing to the promotion of PSI access and re-use.

The intersection of these themes presents a number of other issues that will be relevant for discussions within the LAPSI network:

- a) the consistency between rules concerning output (re-use licenses) and input (rights acquired by PSI-holding entities from employees and independent third party contractors);
- b) the role of “sharing” in the PSI generation, preservation and dissemination;
- c) the territorial dimension (including regulatory competition opportunities);
- d) the principles of re-use pricing.

The LAPSI Network brings together partners from leading research institutions as well as other crucial stakeholders from a large number of European jurisdictions (thirteen). Furthermore, thanks to its Advisory Board, the Network also builds strategic relationships with other countries, such as the United States and Switzerland, where significant policy discussions are ongoing and have in some regards generated especially beneficial outcomes. Additionally, even though LAPSI gives priority to the legal dimension, its Advisory Board is designed in such a way as to take into account cutting edge experiences in specialized fields such as access and re-use of geographical data.

For the complete list of the Network members, please see the Nexa Report 2010 and 2011 or the project website (lapsi-project.eu/members).

2.1.3. Results

The Network already held a kick-off meeting, 6 thematic seminars, 2 primers¹, 3

¹ A “primer” is a meeting in which the essentials of the current legal context and the first empirical evidence on the progress at the implementation stage as well as the main open issues are presented to an audience of professionals potentially involved in operational aspect of the sector.

internal conferences, 2 public conferences, 3 awards² ceremony. Only the final meeting and the 4th internal conference (open to the public) still have to be held. They will both take place on the 9th and 10th of July 2012 in Turin. The complete list of the LAPSI meeting is available at lapsi-project.eu/meetings.

Each type of meeting that the Network organizes serves different, specific goals and generates additional value by linking researchers, practitioners and stakeholders, allowing them to learn from each other.

Furthermore in occasion of all of these meetings the WGs met and identified and developed selected policy recommendations (on competition law aspects, selected intellectual property issues, trade secrecy, privacy and personal data, proportionality, regulatory bodies, cultural institutions, access), position papers (on digitization of cultural content, charging principles, licenses and public undertakings) and guidelines (on the exceptions to the principle of marginal cost and on licenses). The drafts are currently available on the wiki page of the LAPSI project.

The Thematic Network constantly identified interested parties, of which contact details are collected into a dedicated growing database; the Network constantly disseminates information to them via a public mailing-list and seek insights from, in various fields complementary to the legal one: ePSIplatform, APORTA, ENGAGE, PSI Alliance, Open Knowledge foundation, Regione Piemonte, Creative Commons, Communia Association, Europeana, AGCM, AGCOM, etc. One of the goal all along the project as been to lengthen this list and strengthen its relationships with each of these partners.

2 “Awards” are processes whereby specific experiences of PSI access and re-use are compared and evaluated on the basis of pre-established criteria, to generate a comparative assessments of the costs and benefits and a ranking in accordance with success parameters.

I. Public Sector Information

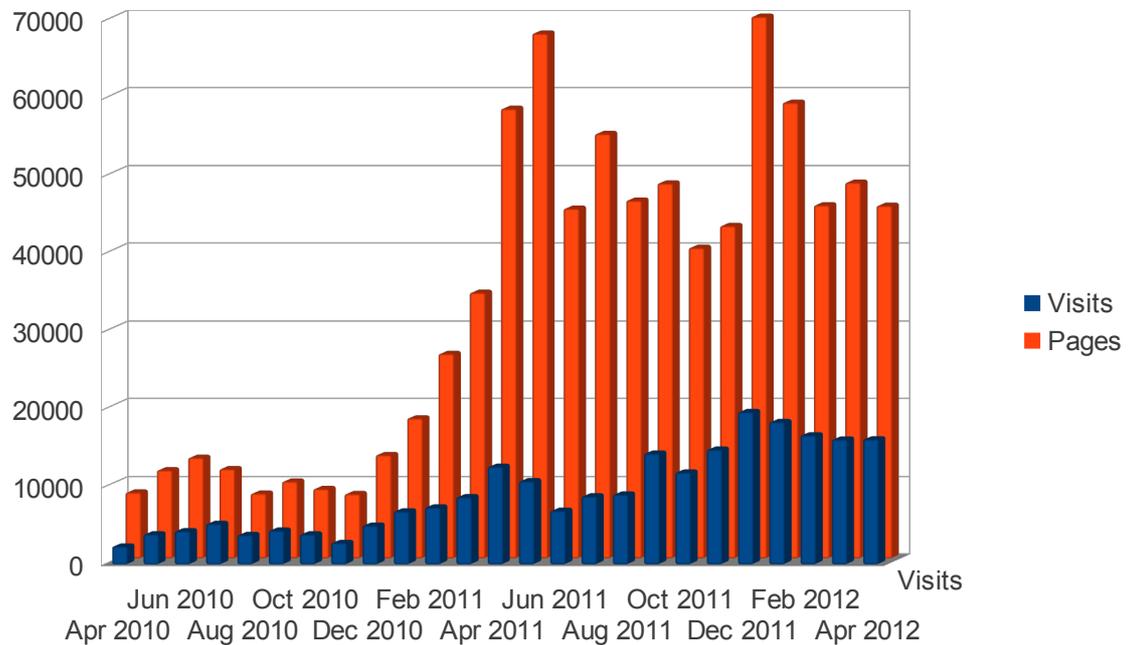


Illustration 1: LAPSI website - unique visitors and viewed pages

Moreover, the LAPSI website frequently presents updates on relevant initiatives related with PSI (such as, for instance, workshops, recent policy guidelines, launch of Open Data portals). 124 posts have been published so far, 86 of which between April 2011 and May 2012. At the end of May 2012, LAPSI had 148 Twitter followers and 188 contacts in its public mailing list. The LAPSI website had its pick of visits (19,630) in December 2011.

The work of LAPSI was mentioned amongst the key references on PSI-related issues in the Proposal for Review of Directive 2003/98/EC (p.7) and in the Open Data Strategy (p. 15), both released by the European Commission on the 12th of December 2011. In addition on the 18th of April 2012, the European Data Protection Supervisor quoted the LAPSI draft policy recommendation on privacy in its "Opinion on the 'Open-Data Package' of the European Commission including a proposal for a Directive amending Directive 2003/98/EC on re-use of public sector information (PSI), a Communication on Open Data and Commission Decision 2011/833/EU on the re-use of Commission documents" (footnote 17).

1.2. EVPSI: the Regional Research Project about Extracting Value from PSI

What are the main issues triggered by Public Sector Information re-use from a legal, technological and economic perspective? Which are the best practices of PSI re-use? Is it possible to create a local excellence center to answer these and more questions about PSI re-use?

Extracting Value from Public Sector Information: Legal Framework and Regional Policies (EVPSI) is a multidisciplinary regional research project that started in November 2009 and will last until October 2012, thanks to a one-year granted extension. The project is coordinated by the Torino Law School; the Nexa Center focuses on technological issues and issues related to user generated content and policy questions. During the first phases of the project, the Rosselli Foundation led the research on the economic aspects of the project (which is currently continued by the Nexa Center).

For more information, refer to...

<http://www.evpsi.org/>

2.2.1. Background

According to a legal based EU definition, Public Sector Information (PSI) is data produced and collected by public bodies (digital maps, meteorological, legal, traffic, financial, economic and other data). This kind of PSI is sometimes referred to as *non-cultural PSI*, while the broader OECD definition also encompasses *cultural PSI*, including documents held by cultural establishments such as museums, libraries and archives (although providing a distinction between PSI and Public Sector Content).

The Internet enables re-use, sharing, processing combination and integration of this vast and continuously produced amount of information. As a result, new resources providing considerable added value can be generated and disseminated. However, Public Sector Information Holders (PSIH) may not have sufficient incentives to manage this potential source of economic and cultural growth, and they often face various *technical, legal or economic* obstacles. The proposed research intends to address these difficult issues about PSI from a *multidisciplinary* perspective both for “*non-cultural PSI*” and for “*cultural PSI*”.

2.2.2. Objectives

The guiding hypothesis of the research project is that the creation of a **competence center on a regional basis** and the establishment of **policies at the local level** and as a product of a **multidisciplinary and comparative inquiry** is the best way forward to maximize access, dissemination and re-use of PSI.

This leads to a secondary effect and consideration: the importance of regional policies and local actors. The research aims at clarifying, at the theoretical

level, what is the optimal level of action in this field, envisaging the possibility that policies experimented with in a regional or local 'laboratory' may spread to another context. The attractiveness of a given location (in terms of whether its institutions and rules are conducive to added value creation based on extensive and well monitored PSI) should be a constant consideration in the frame of reference. This attention to the possibility of territorial growth is not only consistent with the fact that the Piedmont Region is one of the main constituencies of the Nexa Center, but also aims to contribute to the creation of some of the prerequisites for district-based digital creativity.

The potential impact of the research is therefore at least threefold.

- a) At the level of **academia**, EVPSI provides Piedmont, and Italy in general, with a competence center on PSI-related legal and economic issues. Such a competence center was missing at the time of submitting the proposal and it is now established (even if it still has a significant growth potential). The creation of a competence center involves the creation of institutional *links with multiple stakeholders*, the creation of *common objectives* between the different players and the *mutual understanding of the different obstacles and constraints* each category faces in bringing to fruition the potential of PSI.
- b) In terms of **practical impact on local policies**, an active cooperation between the government of Piedmont and the envisaged competence center may create significant opportunities for the development of both commercial and non-commercial re-uses of PSI, spurring economic and cultural growth. The guidelines, best practices and policies could lead to a first step toward implementation of the EU PSI Re-use directive. Initiatives carried out along the recommended lines, including pilots, *could serve as an example for consideration by initiatives in other regions*, including those, such as Sardinia in the past and now Trentino, which have been (or are currently) looking at the Piedmontese experience and at the efforts of the Nexa Center for Internet & Society in the area of re-use of PSI.
- c) Finally, the project also aims at providing significant contributions in increasing the *value and development of the cultural and artistic heritage*, particularly with regard to the on-line environment and/or digitization programs. This aspect was especially underlined in the context of the work package devoted to the interactions between PSI and Web 2.0 (user generated contents in particular).

2.2.3. Results

The EVPSI team members (from the three partner institutions) regularly meet in order to discuss the project and specific objectives, to plan activities and strategies to best achieve these goals, and to remain updated on the advancement of everyone's research on issues such as access, charging policies, PSI re-use markets, intellectual property, licensing, privacy and administrative law aspects.

The most relevant aspects related with the aforementioned issues have been conveyed in the EVPSI 'White Book on the re-use of Public Sector Information', whose version 1.0 has been released in June 2012 under a CC BY license (the book is available at evpsi.org/librobianco). Especially addressed to decision makers in the public sector, the EVPSI White Book is aimed at explaining in the simplest possible way opportunities and challenges of the of Open Government Data and PSI re-use.

It is possible to identify a broad set of concrete developments (some of which discussed in the *Nexa Reports 2010* and *2011* hence not reported):

- the drafting of several works in Italian aimed to exhaustively illustrate the different aspects of PSI re-use and related challenges; these drafts focus respectively on economics and on administrative law issues (access and public undertakings), European and international law issues (access), intellectual property law (copyright, database protection, distinctive signs, licenses), privacy and personal data, compliance, which will be soon available on the EVPSI website under a Creative Commons-Attribution license; some of them have been published in a special issue focused on PSI of the Italian law journal *Informatica e Diritto* (vol. XX – 2011).
- the drafting of several scientific papers in English or in Italian, devoted to analyze in depth specific issues related to PSI; these papers will be made available on the EVPSI website under a Creative Commons-Attribution license;
 - among the Nexa Center specific contributions to the EVPSI Project, it is possible to mention the article *Open Data: la piattaforma di dati aperti per il Linked Data* by G. Rizzo, F. Morando, J.C. De Martin. According to this work, Open Data catalogs may enable data interoperability, assuming as sharing approach the Linked Data model. The paper also describes the technical foundations of the Linked Open Data approach;
- the establishment of a website (evpsi.org), which is a fundamental tool for disseminating the EVPSI project results and which was constantly enriched during the reporting period; the EVPSI website has so far published 115 posts on the most relevant Open Data initiatives, events and emerging policies, 83 of which between April 2011 and May 2012.
- the interconnection developed with other PSI-related international and national projects, such as LAPSI, ePSIplatform, Share-PSI, and APORTA;
- the participation of individual members of the EVPSI project in scientific events concerning PSI (not only in Italy, but also in Belgium, Germany, Spain, the Netherlands, etc.);
- the participation to the public consultation launched by the European Commission on the PSI Directive;

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- the participation to the public consultation launched by the *Comité des Sages* on the digitization of cultural heritage;
- the selection of a relevant bibliography which is also available on the EVPSI website;
- the continuous selection of relevant cases of national and European courts and of decisions of national administrative authorities, of which sum-ups are currently available on the EVPSI website in both English and their original language;
- the organization of a final meeting on the 9th and 10th of July for presenting all the findings of the research group. This meeting will be jointly organized with the LAPSI Thematic Network;
- the upcoming publication (October 2012) of most of the research group findings in a single volume.

1.3. Opening Italian Data: Policy and Operational Support to the Government of Piedmont and Others

Making Italian public sector information freely accessible and re-usable for the everybody (using Piedmont as a pilot case).

During the reporting period, the region of Piedmont continued to be almost unanimously considered the leading player in Italy in the field of PSI re-use. The role of the Nexa

Center in achieving this result was recognized in various fora and Nexa was invited to discuss about open data by other local governments, such as the City of Milan. Moreover, the Center interacted with various in house or private players leading the national debate about innovation within the public administration (i.e. Formez PA, Digit PA and Forum PA), giving a relevant contribution to the definition of an open data strategy in Italy.

See also... (in Italian)

<http://www.dati.piemonte.it/>

1.3.1. Background

The Regional Government of Piedmont owns a large amount of well structured and cataloged databases, also thanks to a long track record of highly efficient informatics services. During recent years, the Regional Government, particularly its Direction in charge of innovation and research, intensified its activities to make this impressive wealth of data available to firms and citizens at large.

Regione Piemonte is a key stakeholder of the Nexa Center since its creation. Also because of this, the Nexa Center offered scientific support to the Regional Government, starting from its experience with open licenses built in the context of the Creative Commons and Communia projects and offering strategic PSI specific guidance, thanks to the insights coming from the LAPSI Network, the Share-PSI.eu group and the EVPSI research project.

Thanks to the experience (and reputation) gathered by the Center at the European and Piedmontese level, during the reporting period the Nexa Center was recognized as a relevant stakeholder and interlocutor in the open data domain at the national level (including by Italian regions or municipalities).

1.3.2. Objectives

The objectives of the Center in this domain are twofold: playing a civic role fostering the opening up of government data and investing its energies in those projects which are more likely to produce innovative results (e.g. the publication of linked open data or the - legitimate - publication of data originating as personal data) or significant empirical evidence (e.g. about the characteristics and needs of PSI re-users), which could be used to reinforce related research and policy support activities.

In the case of the Piedmont Region, these incentives are very well aligned and the policy support activity of the Center in the open government data domain is one of the main elements justifying the funding of the Center by the Regional Government of Piedmont.

1.3.3. Results

An important result of the activity of the Center was the approval by the Regional Council of Piedmont of Regional Law n. 24 of the 23rd of December 2011 concerning “*Disposizioni in materia di pubblicazione tramite la rete internet e di riutilizzo dei documenti e dei dati pubblici dell'amministrazione regionale*” (i.e. norms about the publication on the Internet and the re-use of public documents and data of the regional administration).

The Nexa Center also had a central role in the drafting of the by-laws (regulations and official guidelines) implementing the new open data law: the final approval of these by-laws is expected before August.

Other results concern the publication of the first linked data sets on dati.piemonte.it, which followed the organization of a meeting about the use of Semantic Web technologies in the regional portal, which was organized (and partly supported, inviting some participants) by the Nexa Center, in collaboration with Linked Open Data Italia.

In collaboration with Top-IX and the Nexa Center, the government of Piedmont was also one of the main supporters of Apps4Italy, the first Italian national competition for the re-use of open government data. For the second time in two years, the Nexa Center was invited by the organizers of the Forum of Public Administration to intervene in the final conference, where the Nexa Center spoke as one of the organizations which promoted Apps4Italy and offered to the public some preliminary insights coming from the analysis of the (almost 200) submissions received.

During the Spring of 2012, the City of Turin launched its open data portal (www.comune.torino.it/aperTo). The Center did not play a direct role in this initiative, but it was Nexa that in 2011 triggered the beginning of the public open data initiatives of the City of Turin, co-organizing the **Torino Open Data Contest**, a call for ideas about the re-use of public sector information and the first open data competition in Italy.

Despite the lack of new developments during the reporting period, one could also mention the continuing support of the Nexa Center to IT.CKAN.net, the first Italian community-based open data registry established in mid 2010 as a joint project with the Open Knowledge Foundation (OKFN, that created the CKAN software infrastructure). In fact, CKAN is becoming the *de facto* technological standard for open data portals, the European Commission is going to adopt it for its own portal and the Italian open data portal (dati.gov.it) is likely going to be migrated on this infrastructure. Thanks to the strategic support of the Nexa Cen-

ter, also dati.piemonte.it already implemented an API which is compatible with the one of CKAN, so that it will soon be interoperable with the other main portals at the national and international level.

At the beginning of 2012, and joining its efforts with some civil society organizations such as the Italian chapter of the Open Knowledge Foundations, the Nexa Center was also successful in lobbying for the publication of a new version of the Italian Open Data License (IODL 2.0), which is now a genuine open data license (essentially equivalent and compatible with a Creative Commons Attribution license).

It also seems fair to argue that the Nexa Center is shaping the first generation of open data expert and consultants in Italy: Nexa fellow Lorenzo Benussi is one of the 6 young consultants hired by the Ministry of Education prof. Profumo (and one of the two working mainly on Open Data within the working group for the Italian Digital Agenda, together with Donatella Solda-Kutzman, who is another Nexa friend, involved in the LAPSI project), while Nexa fellow Eleonora Bassi has recently been hired by TrentoRise as open data project specialist to coordinate the open data initiative of the centre of excellence for research, innovation and advanced training in the ICT field which is being built in the autonomous province of Trento.

Last but not least, in mid March 2012, the policy support work of the Center in Milan delivered its first fruits. In an event organized by the University of Milano-Bicocca, together with the Nexa Center, the Tech And Law Center, Top-IX and CSI Piemonte, Giuliano Pisapia, Mayor of Milan, announced the official inclusion of open data amongs the main goals of the Digital Agenda of the City of Milan. Giuseppe Vaciago, of the new Nexa fellows for 2012, was the main organizer of this conference and is leading the open data activity of the Center in Milan.

1.4. **Open-DAI: Pilot(s) Opening Data Architectures and Infrastructures of EU Public Administrations**

How to make the monolithic and closed information systems of Public Administrations become open and interoperable? Open Data, cloud computing and SOA are key enablers.

In 2011 the Nexa Center for Internet & Society participated in the drafting of a policy support project proposal answering to the ICT PSP fifth call for proposals 2011 (objective: Toward a cloud of Public Services).

The Open-DAI project was launched in February 2012 and will last 32 months, ending in October 2014. Open-DAI is coordinated by CSI (Consortium for Informative Services) Piedmont and gathers 11 partners, including various European PSI holders and providers of informatics services to public administrations. The Nexa Center is the only academic partner in the project, and focuses its contribution on technological framework, legal and technical support to data assessment and disclosure, therefore covering key strategic areas of the project.

For more information, refer to...

<http://www.open-dai.eu/>

1.4.1. **Background**

Presently, it is often difficult to use (or re-use) the extensive amount of information stored in the Public Administration databases, even though it is widely recognized that the disclosure of public sector information can be helpful to face a wide range of social needs and enable innovation and business opportunities. In most of the cases, the information systems of PAs are based on monolithic architecture models that include all the application software levels (silos). This approach does not ensure any flexibility when new needs arise; in particular when the existing applications could be converted into basic services to mash-up information, implementing new different applications.

1.4.2. **Objectives**

The Open-DAI project aims to address the problems outlined above by testing the efficiency and added value of a SOA and Cloud-based architecture on several participating PAs by:

- implementing a data virtualization infrastructure deployed into a high availability infrastructure;
- simplifying access to legacy vertical applications data, by providing a virtualized version of the databases in the Cloud;
- implementing the PA Open Data data hub, exposing it by using classic web services as well as other standard protocols;

- designing value-added services based on Open Data available to the public at large.

The Open-DAI consortium is composed of 4 local “clusters” based in Italy (Piemonte), Spain (Barcelona and Lleida), Sweden (Karlshamn) and Turkey (Ordu) working together to **integrate their information systems and data streams in a Cloud-based environment**. Each local group involves one or two Public Administrations and a local technical provider, as well as an academic partner in Piemonte (the NEXA Center).

Service pilots based on Open Data made available by each PA, focused on accident and environment information (e.g. delivering real-time and geo-referenced information) will be implemented and made available to the citizens of the covered areas.

Not only Open-DAI represents a tangible occasion to **improve interoperability and data sharing** between four European areas (with benefit for their citizens), but also – hopefully – a **best practice** of reference for designing technical and policy measures to support the role of **information systems integration** and **Open Data** in Europe.

1.4.3. Results

The Open-DAI kick-off meeting was held on February 23rd and 24th, 2012.

During the 5 starting months of activity, Open-DAI has produced a first set of tangible results that represent the basis for the actual implementation of the project objectives.

In particular, between February and June 2012, Open-DAI has performed:

- a deep **assessment of the existing technology** of the partners to early solve possible integration problems;
- a **description of general architecture** of the Open-DAI platform and the cloud infrastructure, including software selection. To this end it was necessary a depth evaluation of available software options, taking into account both interoperability, license and technology stack issues. Particular attention was paid to the choice of: 1) middleware solutions that can automate installation and configuration of virtual machines and of their components; 2) database virtualization module to integrate and jointly access different partner data sources;
- a thorough **review of the datasets** that each partner plans to make available as open data within the project. To this end, a list including schema, access rules, output standards, **legal clearance** (especially concerning IPRs and personal data) has been produced;
- a detailed **design of the data services** (pilots) that will be supplied to query the exposed open data, including a catalogue of meta information about such data and services. The pilot projects to be implemented include

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the following services:

- accident reporting and support;
- 'shortest path' assessment in intermodal travelling;
- real-time air quality monitoring;
- geo-referencing of local services.

1.5. **ICONVIS: Linking and Visualizing Public Data through Ontologies**

A framework for linking and visualizing public data through ontologies, that focuses on an intuitive and graphical approach to explore information.

ICONVIS (Interactive and Customizable ONtology-based Visu-alization System) is an open source software framework that leverages Semantic Web technologies to enrich data sources with new conceptual elements, visualizing contents in a graphical on-tology-based fashion. The software, currently at version 0.2.2, is being developed by Federico Cairo (backend) and Giuseppe Futia (frontend), both research fellows of the Nexa Center.

For more information, refer to...

<http://iconvis.polito.it>

1.5.1. **Background**

Digitization process has led to the proliferation of a large amount of information, which is more and more complex to manage or exploit. In this context ontologies are a useful mean to restore order, because they describe a collection of interrelated concepts within a specific knowledge domain. In addition to providing valuable support to semantic search algorithms, ontologies can be represented visually: they become a graphical tool for users to pinpoint information they are interested in and browse it intuitively.

1.5.2. **Objectives**

From unstructured datasets such as databases or CSV files, ICONVIS allows to semi-automatically build an ontology and display it in the form of a semantic graph. Furthermore, the application enhances database information runtime, retrieving new data from the Linked Open Data (LOD) community through SPARQL queries on the REST endpoints of DBpedia and GeoNames.

To realize ICONVIS prototype, several CSV datasets were downloaded from dati.piemonte.it portal and a domain ontology was implemented, formally representing the knowledge contained in these lists. Then a knowledge base was automatically populated using the ICONVIS RDF conversion module. As data published by dati.piemonte.it are not connected to any database, the DB management module was deactivated and just the LOD component was used. *LOD_query_mapping.xml* was customized in order to “hook” DBpedia knowledge base with appropriate SPARQL queries. The end result made clear many benefits provided by the use of an ontology for Open Data publishing. Disconnected and redundant datasets initially released on the portal became, through the ICONVIS process, a consistent and ordered semantic universe. The dizzying CSV lists were transformed into a set of graphics easy to navigate.

1.5.3. Results

By connecting data contained in a data source to further information made available on the Web by LOD providers, ICONVIS actually broadens a content repository beyond its initial capacity and makes it more interesting for end users. Our application demonstrates the ability of Semantic Web technologies to make data interoperable and consistent, providing at the same time new interactive usage patterns.

ICONVIS was presented at the following conferences:

- Open Government Data Camp, Warsaw 2011;
- International Meeting on Visualization in Complex Environments, Turin 2011;
- 3rd Annual Conference of the Nexa Center for Internet & Society, Turin 2011;
- Training seminar on Semantic Search Engines of CSI-Piemonte, Turin 2012.

ICONVIS has been used within the European project OPSA for visualizing OPSA Ontology, the semantic knowledge base of French-Italian health promotion: <http://www.opsa.eu/cms/fr/ontologie.html>

1.6. Outlook

The level of activity of the Center in the PSI and open data domains will likely remain constant - meaning high - during the forthcoming reporting period. Moreover, some major policy effects of the work of the Center could also take place during 2012-2013, since the Center will have a chance of influencing the final text of the reviewed PSI Directive directly through the LAPSI project and indirectly interacting with the governments of Piedmont and Italy.

The joint final conference of the LAPSI and EVPSI projects will take place in Turin on the 9th and 10th of July 2012. Then, the LAPSI and EVPSI projects will end in September and October 2012 respectively. Hence, formally, these project will be in a phase of quick consolidation of achieved results, in order to produce their final outputs (and then disseminate them properly). These outputs will include the final report and policy recommendations (including a guideline about licensing) of the LAPSI project and the final report and a book collecting the main results of the EPVSI project.

Even if, on the one hand, these projects are currently in their last months of activity, on the other hand the cumulated experience generated by them offers an opportunity to publish or otherwise apply this knowledge that exceeds the scope of the reports that will be delivered during the Fall of 2012.³ The funding of similar activities could be provided by the ongoing contract with Regione Piemonte, which funded also the majority of the activities mentioned above in § 1.3. *Opening Italian Data: Policy and Operational Support to the Government of Piedmont and Others.*

In the policy support domain, the Center is involved in the consultations concerning the development of the Italian Digital Agenda, in particular with a proposal concerning the legal status of PSI: this activity arguably has a very low chance of success in absolute terms, but - in case of a positive outcome - it could deliver a major achievement (i.e. changing the legal default status of most PSI, placing it into the public domain).

Finally, some research and development activities will also likely take place in the Linked Open Data and Semantic Web domains, focusing the technological contribution of the Center in this domain on a set of logical and informational infrastructures that are part of the commons enabling innovation in the Linked Data field in Italy (i.e. freely licensed datasets and algorithms which could be used by other researchers and innovators in this domain). These developments will partly

3 As one of many possible examples, the Center organized several conference sessions and even co-organized a workshop on the issues of interoperability between open data licenses, but existing literature in this domain is scant (and there is no formal academic contribution from the Center so far); hence, this topic will certainly be a chapter of the licensing guidelines of the LAPSI project, but it could also be embedded in other research outputs during 2012-2013. Indeed, the EVPSI project is the natural venue for producing these research products and - even after its expected end during the Fall of 2012 - the group of EVPSI researchers represent a natural pool to develop this kind of reasonings (as the LAPSI network remains the natural venue to ask for an international feedback and gather hints from other countries).

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take place within the Open-DAI project and will likely characterize the 3.0 version of the open data portal of the Piedmont Region (during the next reporting period and/or the following one). Other emerging research scenarios can concern the usage and interaction with Linked Open Data (LOD) by non-technical users, for instance experimenting new graphical and interactional models based on Linked Open Data in the domain of (public) digital libraries.

All these potential developments will be reinforced if one or both of the PSI related proposals submitted by the Center and other partners during the reporting period would be successful (see below, § 7.1. *LAPSI 2.0: European Thematic Network on the Legal Aspects of Public Sector Information* and § 7.2. *Share-PSI 2.0: European Thematic Network for Shared Standards for Open Data and Public Sector Information*). In any case, these thematic networks will not be capable of representing a major source of funding for the Center, but they could be strategic in terms of networking and policy impact.

The open data angle also characterizes other proposals submitted by the Center in the public domain & commons (see § 7.3. *PROSA: European Coordination Action providing Policy Recommendations for Open Science and open Access*) and smart city domain (see § 7.5. *Smart Cities PRIN (Italian National Project): Smart Knowledge* and § 7.6. *Smart City Proposal for the City of Turin*).

Finally, a minor note that could (or not) have some implications during the forthcoming reporting period. Nexa co-director, Juan Carlos De Martin, and managing director, Federico Morando, are amongst the founders of the Wikitalia Association (together with other Nexa fellows). For the moment, Wikitalia is just mentioned here because it has no formal link with the Nexa Center. That said, it is in the Open Data field that some concrete developments could be expected during the forthcoming reporting period (in fact, Wikitalia already supported the launch of the open data initiative of the City of Florence) and several potential collaborations between Wikitalia and the Nexa Center and the City of Turin or the Piedmont Region are being explored.

2. PUBLIC DOMAIN & COMMONS

This section summarizes the activities that the Center performed in the field of digital public domain, open licenses and other commons (in particular, immaterial commons in the online environment). It describes the final outputs of the Communia European Thematic Network on the Digital Public Domain and the beginning of the activities of the Communia Association, the work connected with the Creative Commons open copyright licenses and their Italian “porting”, SeLiLi, a clinic supporting the use of free and open licenses and other actions related to free and open knowledge in various domains, ranging from libraries to museums.

2.1. **Communia: European Thematic Network and International Association on the Public Domain**

Representing the dispersed interests of the digital public domain in European policymaking.

The Nexa Center for Internet & Society was the coordinator of Communia, the European Thematic Network on the Digital Public Domain. The project started in September 2007 and was formally concluded in February 2011.

For more information, refer to...

<http://www.communia-project.eu/>

<http://publicdomainday.org/>

<http://www.communia-association.org/>

During the reporting period, the Communia Network published its Final Strategic Report, including a set of policy recommendations addressed in particular to European policymakers and published the **Communia book** “*The Digital Public Domain: Foundations for an Open Culture*”, which is freely available online under a Creative Commons Attribution license and which is going to be presented at the European Parliament on June 18th, 2012.

The reporting period also saw the formal incorporation and the beginning of the activities of the Communia Association that represents the current development of the Communia network.

3.1.1. **Background**

The public domain, as understood in the Communia project, is *the wealth of information that is free from the barriers to access or reuse usually associated with copyright protection, either because it is free from any copyright protection or because the right holders have decided to remove these barriers. It is the raw material from which new knowledge is derived and new cultural works are created.* (From The Public Domain Manifesto: see <http://www.publicdomainmanifesto.org/>.)

3.1.2. **Objectives**

Communia was a thematic project funded by the European Commission within the eContentplus framework addressing theoretical analysis and strategic policy discussion of existing and emerging issues concerning the public domain in the digital environment - as well as related topics, including, but not limited to, alternative forms of licensing for creative material; open access to scientific publications and research results; management of works whose authors are unknown (i.e. orphan works).

The Communia effort was aimed at helping to frame the general discourse on and around the public domain in the digital environment by highlighting the challenges arising from the increasingly complex interface between scientific progress, technological innovation, cultural development, socio-economic change

on the one hand and the rise and mass deployment/usage of digital technologies in the European information society. The final policy-recommendations of Communia were aimed at synthesizing all that. The Communia Association builds on these basis *to foster, strengthen, and enrich the Public Domain* (quoting from the mission of the Communia Association).

3.1.3. Results

The main achievements of the Communia project during the reporting period concern the publication of the Communia Final Report (after the review and approval of the European Commission) and the publication of the **Communia book** “*The Digital Public Domain: Foundations for an Open Culture*”, including a selection of relevant papers representing part of the debate that took place within Communia.

The Public Domain Day 2012 was also organized in various places around the world, including several meetings in Turin, some of which are separately described below, in § 2.2. *Public Domain: Supporting the Libraries of the Politecnico di Torino*. For further information concerning other celebrations of the PDDay around the world, we remand to the web site www.publicdomainday.org.

Last but not least, the completion of all the administrative duties related with the COMMUNIA project represented by itself a major achievement (and triggered the availability of some residual funding which became available for other activities of the Center - see § 9.1. *Budget Summary*, p. 90).

Communia Final Report

The Nexa Center produced the Final Report for the Communia project (hereinafter the “Report”). The Report was authored by Giancarlo Frosio who was earlier appointed as the chief editor of the project. The Report represents the sum and final deliverable of the Communia project on the digital public domain. Together with the review of the definition, sources, and role of the public domain, the Report examines the challenges and bottlenecks impinging on the digital public domain. In addition, the Report discusses the opportunities that digitization and the Internet revolution offer to the public domain as well to access to knowledge. The Report largely refers to intellectual works developed within the Communia Network and in the context of Communia activities. In doing so, the Report attempts to explain what Communia has done for the public domain so far, while setting a roadmap for further promotion of the public domain in Europe. A positive view of Europe with a stronger public domain is discussed in the Report as a conclusive remark.

The Report includes three main Annexes: the Communia Project, the Digital Public Domain in Europe, and the Communia Policy Recommendations. The first Annex features an introductory section describing the activities of the Communia project and its network of participants. The second Annex is set to frame

the state of the public domain in Europe. This Annex develops and expands several of the themes and subjects briefly touched upon in the Report and is intended to be a useful resource for researchers and academics. Annex II is also designed to support the third Annex of the Report, which includes several policy recommendations, to be delivered to the European Commission. The final version of Annex III features seven policy recommendations accompanied by detailed supporting arguments. These are their titles:

1. The proposed **term extension of copyright protection for performers and sound recordings** will harm the public domain and **must not be implemented**.
2. The Public Domain needs to be protected from the adverse effects of Technical Protection Measures. **Circumvention of TPMs must be allowed when exercising user rights created by Exceptions and Limitations or when using Public Domain works**. The deployment of TPMs to hinder or impede privileged uses of a protected work or access to public domain material must be sanctioned.
3. In order to prevent unnecessary and unwanted protection of works of authorship, **full copyright protection should only be granted to works that have been registered by their authors**. Non-registered works should only get moral rights protection.
4. **Europe needs an efficient pan-European system that guarantees users full access to orphan works**. Both mandatory exceptions and extended collective licensing in combination with a guarantee fund should be explored. Any due diligent search requirements should be proportionate to the ability of the users to trace the rights holders.
5. Access to copyright protected works for education and research purposes must be facilitated by **strengthening existing exceptions and limitations and broadening them to cover uses outside of formal educational institutions**. All publicly funded research output and educational resources must be made available as open access materials.
6. **The PSI Directive needs to be broadened**, by increasing its scope **to include publicly funded memory organisations** - such as museums or galleries - and strengthened by mandating that Public Sector Information will be made freely available for all to use and re-use without restriction.
7. In order to support the emerging culture of sharing copyright protected works **alternative reward systems and cultural flat rate models should be explored**.

After its formal approval, which required some editing work that was completely concluded only in November 2011, the final version of the Report also went through a formatting and formal editing process to make it available as an almost independent sub-set of the Communia Website: communia-project.eu/final-

report.

Communia Book

The book “The Digital Public Domain: Foundations for an Open Culture” was edited by Melanie Dulong de Rosnay and Juan Carlos De Martin as an output of the Communia Thematic Network. It has been published in all formats (hardback, paperback, and digital editions) by OpenBookPublishers. The book is available under a CC Attribution license and the [PDF can be downloaded from the Communia Website](#). The citation reference is:

Melanie Dulong de Rosnay, Juan Carlos De Martin, (eds.), The Digital Public Domain: Foundations for an Open Culture, Open Book Publishers, Cambridge, UK, 2012, 220 p.

This book brings together essays by academics, librarians, entrepreneurs, activists and policy makers, who were all part of the EU-funded Communia project. Together the authors argue that the Public Domain — that is, the informational works owned by all of us, be that literature, music, the output of scientific research, educational material or public sector information — is fundamental to a healthy society.

The essays range from more theoretical papers on the history of copyright and the Public Domain, to practical examples and case studies of recent projects that have engaged with the principles of Open Access and Creative Commons licensing.

The Communia Association

The Communia Association is definitely an output - ad a major one - of the Communia Network. The decision to create the Association was taken during the previous reporting period (in Turin, in January 2011), while it was incorporated under Belgian law during the Spring of 2012 gathering several of the most active members of Communia (and it already attracted the attention of additional institutions).

The Association’s mission is to educate about, advocate for, offer expertise and research about the public domain in the digital age within society and with policy-makers. To fulfill its mission, the Communia Association and its members will raise awareness, educate about, advocate for, offer expertise and research about the Public Domain. Activities will include publications, meetings, conferences, projects, consultations, studies, research, representation towards institutions, collaboration with other associations and entities in Brussels, in Europe and worldwide.

The Communia-associates mailing list has 52 members and hosts a lively discussion, which already supported the production of various blogposts and two policy statements issues by the Association: the “*COMMUNIA policy paper on the proposed orphan works directive*” and the “*COMMUNIA policy paper on the proposal to*

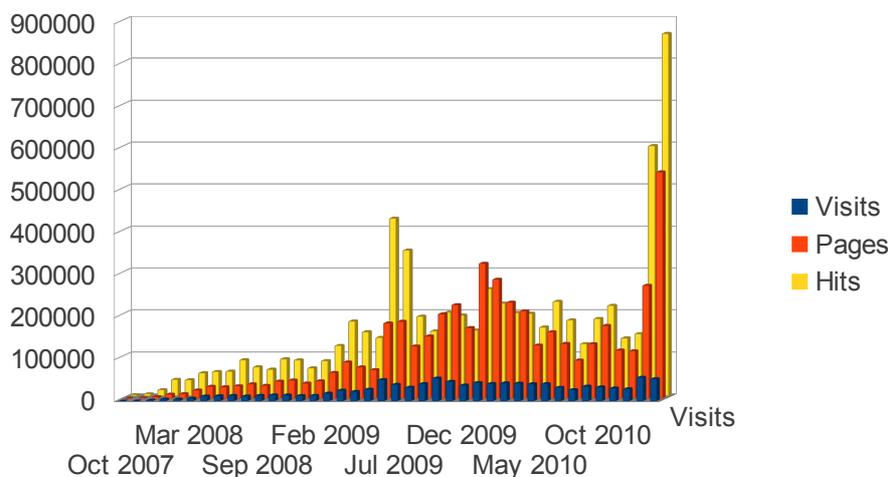
amend the European Directive on re-use of Public Sector Information”.

Communia Project and Association Websites

The communia-project.eu website have been “frozen” after the publication of the final report and book. At the end of the project we had:

- Communia Mailing list: 239 members
- Communia-announce Mailing list: 248 members
- Communia member Mailing list: 172 members
- Facebook Communia Page: 258 likes
- Facebook Public Domain Manifesto Page: 1652 likes
- Communia twitter: 181 followers

The following graph summarizes the statistics of the Communia website, with a peak of 1,027,341 hits, 54,080 visits and 540,414 pages visited in February 2011.



The website of the Communia Association is now up and running and available at <http://www.communia-association.org/>.

The following graph depicts the constant growth of page-views for communia-association web site since February 2012 when the web site was launched.



2. Public Domain & Commons

The mid April peak is due to the release of the book “The Digital Public Domain: Foundations for an Open Culture”, edited by Melanie Dulong de Rosnay and Juan Carlos De Martin.

2.2. **Public Domain: Supporting the Libraries of the Politecnico di Torino**

Supporting the Library System initiatives to increase awareness on the Public Domain

In order to increase awareness on the public domain even to the layman, the Nexa Center encouraged and supported the initiative of the Library System of the Politecnico, which proposed a series of live performances of drama that revisiting the works of authors entered this year into the public domain.

For more info (in IT), refer to...

<http://www.biblio.polito.it/eventi/flashmob/>

3.4.1. **Background**

Like every year, the Nexa Center continues to favour and monitor the initiatives taking place across Europe to celebrate the works entering the public domain. Documents, pictures and videos of public domain events in Italy, France, Poland and Switzerland are collected on the publicdomainday.org website, highlighting the more interesting contributions. In 2012, the Nexa Center proposed to some of its partners the organization of long-term initiatives for a “continuous celebration” of the public domain (with some focal events).

3.4.2. **Objectives**

The Library System of Politecnico di Torino, with the support of the Nexa Center, MuseoTorino, the Public Libraries of the City of Turin and the actors of Fondazione Teatro Nuovo Torino, promoted a series of live performances, revisiting the works of some of the greatest writers entered this year into the public domain: James Joyce, Gaetano Mosca, Virginia Woolf, Luigi Natoli and Amalia Guglielminetti.

3.4.3. **Results**

The activities to celebrate the public domain were defined starting from a public workshop/brainstorming, organized at the Central Library of the Faculty of Engineering of the Politecnico di Torino on February 28th, 2012. Through flash mob experiences, the actors of Teatro Nuovo have proposed some shows to the students, first in the rooms of the Politecnico libraries and then, given the success encountered, even in some libraries of the City of Turin. The performances were filmed are available online, while the final event, featuring a live performance of many actors, was held on June 5th in the Salone d'Onore of the Valentino Castle.

Other events to celebrate the public domain were organized in Turin during the months of January (*Incontro sul Pubblico Dominio*, Biblioteca Shahrazàd di San Salvario) and February (*Educational Mashup - Wikipedia e Creative Commons: la rivoluzione del sapere*, ITI Majorana di Grugliasco).

2.3. **Creative Commons Italia**

The Italian affiliate institution of Creative Commons, “a nonprofit organization that develops, supports, and stewards legal and technical infrastructure that maximizes digital creativity, sharing, and innovation.”

The Nexa Center for Internet & Society hosts and coordinates the activities of the working group of Creative Commons Italy (CC-IT), founded in July 2003. This working group is the original core around which the Center was created, and the activities of Creative Commons Italy continue to characterize the nature of the Nexa Center.

For more info (in IT), refer to...

<http://www.creativecommons.it/>

During the reporting period, the discussion around the drafting of version 4.0 of the Creative Commons Public Licenses was launched. Also, the Italian translation of the CC0 Legal Tool was released.

2.2.1. **Background**

Creative Commons (CC) is a project building a new and more flexible paradigm for copyright. CC offers authors wanting to share some of their rights with users and fellow authors a way to do so that is easy, flexible and legally rigorous. This is achieved through standardized copyright licenses and some (optional) technical tools to facilitate the choice and understanding of the licenses themselves.

2.2.2. **Objectives**

Creative Commons Italy is a project and working group dealing with the translation and adaptation of CC licenses to the Italian legal setting. Hence, one of the main objectives of the project is to keep the Italian version of CC licenses up-to-date with respect to the international licenses and/or to keep international tools compatible with the Italian legal setting (this was the approach adopted for “unported” international licenses, such as CC0 and - most likely - it will be the approach for all 4.0 licenses). The project also manages the website and mailing-lists of CreativeCommons.it, collecting and spreading news and information about the project, and deals with awareness, dissemination, and some community building activities. About the last point, however, the Nexa Center mainly focuses on the more scientific aspects of the project, leaving ample room to the self organizing community of CC users in Italy.

2.2.3. **Results**

The CC project (<http://creativecommons.org/>) has already been presented and discussed at the first meetings of the Nexa Board of Trustees, and interested readers may refer to the website of CC (<http://creativecommons.org/> or

<http://www.creativecommons.it/>) for more details about the project in general. The following sub-sections focus instead on some specific activities that took place during the reporting period.

Awareness, dissemination, website and mailing-lists

During the last year, the [creativecommons.it](http://www.creativecommons.it/) website continued to be very popular, having a monthly average of about 53,000 visits (from about 17,000 different IP addresses each month).

Also the mailing-lists of Creative Commons Italy were quite active, with about 200 members and 128 posts this last year on the CC-IT Community's mailing-list (activity is stable with respect to the previous reporting period). The technical mailing-list devoted to discussion about the Italian Creative Commons licenses saw its member base increase (currently, 356 members; they were 344 in the previous year) while the number of posts decreased with respect to the previous reporting period (82 posts instead of 195).

As in the past, during the last year several members of the staff of the Nexa Center and fellows took part in various presentations, debates and interviews regarding CC licenses, playing an explicit role as advocates of open licenses.

Within the reporting period, a few remarkable adoptions of CC licenses by public and (partially) private bodies were noted: Enel S.p.A., the major Italian electric utility company, adopted a CC BY 3.0 Italia License in the context of its Open Data policy (August 2011); Istat, the Italian national statistical institute, adopted a CC BY 3.0 Italia License for the contents of its website (September 2011); Regione Piemonte enacted a Regional Law on the publication and re-use of public data which establishes the adoption of open licenses to disseminate documents and data held by the Regional Public Administration (December 2011): according to the current draft of the regulation implementing this law, CC0 will be the default licensing choice for all public datasets. These regulations will also include an operative guide for the adoption of CC licenses (or other similar open licenses).

Similarly, members of the Nexa Center have recently shared the Piedmontese experience with Comune di Milano in the development of its open data policy, which is also based on the adoption of CC licenses as the default publishing rule for public data.

A collaboration between Creative Commons Italy and ShareYourKnowledge – lettera27 is currently ongoing. lettera27 is a non-profit foundation, born in July 2006, whose mission is to support the right to literacy, education, and the access to knowledge and information. In substance, Creative Commons Italy would bring its legal and technical expertise on the CC licenses into the Share your Knowledge mission of enhancing the content and work of cultural organizations through Creative Commons and Wikipedia while Share your Knowledge would help Creative Commons Italy planning fund raising strategies, dissemination and community building activities.

CCIT2011

During the Winter of 2011, on account of the third annual Nexa Conference on Internet & Society, the tradition of organizing a yearly meeting of the Italian Creative Commons community (CCIT2011) was continued. CCIT2011 included a presentation from Massimo Travostino about the forthcoming features and issues in the development of the 4.0 CC licenses, followed by the presentation of some Creative Commons related projects (Fondazione Lettera27 & Fondazione Cariplo, Wikipedia, Io Penso Online, Patamu.com, and a catalog of high school manuals published under CC licenses). A presentation by Deborah De Angelis and Ermanno Pandoli on blanket licensing, cloud licensing and public performance completed the conference.

2.4. SeLiLi: the Free Licenses Service Clinic

Making socially beneficial projects possible and helping them to use open licenses, without being scared by copyright and other arcane legal issues.

The Free Licenses Service clinic (Servizio Licenze Libere, SeLiLi) started its activity in 2006 as an initiative of the Nexa Center, funded by the Piedmont Region. The goal was to offer *informative services* and *professional advice* to users of Free/Libre and Open Source Software (FLOSS) and open content licenses (such as the Creative Commons ones).

For more information, refer to...

<http://selili.polito.it/>

The activity of SeLiLi regularly continued during the reporting period and the birth of federated projects was facilitated, in order to kick-start a geographic expansion of this model.

3.3.1. Background

The idea underpinning SeLiLi originated from a simple observation: all the projects, websites, mailing-lists, user-groups, fora, etc. that deal with FLOSS and open content issues are filled up with disclaimers stressing that the information is provided *as is*: no guarantee of correctness or completeness is present. In order to use such information for a specific project, it is mandatory to contact a professional, usually a lawyer, who can advise on the specific case at hand. However, this is frequently unfeasible, since professional services are not affordable for most non-profit initiatives (or small for-profit activities). The resulting situation could be described as a market failure, where socially desirable projects are abandoned (or carried out but without implementing “open” tools) just because the (legal) rules of the game are too complex for ordinary people. Precisely to avoid such a situation, we felt it necessary to create a project that could help users pursuing their initiatives and openly sharing their results.

3.3.2. Objectives

SeLiLi offers a multidisciplinary approach and although legal issues are the most common, it also covers economic and technological requests.

The clinic operates on two different levels. The **first level** seeks to solve **basic issues** regarding some **elementary characteristic of free and open licenses** (also clarifying some basic copyright law issues). In such cases, the answer usually takes the form of an email describing, in a simple and clear manner, the state of the art on that specific point and addressing to where to find further relevant information.

2. Public Domain & Commons

The **second level** triggers when a **specific request** appears to be too complex for a simple “informative” answer. In such cases, SeLiLi, having verified that the request fits our institutional goals, puts a qualified professional in contact with the requester. At this point, a typical **professional advice** between the two subjects takes place, and SeLiLi steps back until the end of such a relationship. The cost of this professional activity is covered by the Piedmont Region.

After 6 years of activity, and despite the absence of marketing and promotional activities, SeLiLi receives a growing number of requests, including from small firms. The considerable demand for SeLiLi services may be justified, on the Italian landscape, by the low number of lawyers possessing the multidisciplinary skills required to deal with most open licenses related cases. This is why the creation of similar initiatives based in other institutions/regions became one of the objectives of SeLiLi. In this regard, during 2010 the Center started to develop contacts with players (lawyers, professors, associations) in the Lombardy Region.

SeLiLi answers to direct and specific inquiries about cases involving the use of open copyright licenses and it frequently does so through *ad hoc* legal counsel or, at least, direct interaction with the users. In other words, the output of SeLiLi is highly intensive in terms of very specialized legal expertise and has limited economies of scale and scope (also caused by individual inquiries which may be confidential). In order to disseminate as widely as possible the knowledge and expertise produced by SeLiLi, a major activity of 2011 has been that of reorganizing the website and making publicly available all the informative answers and professional advices that SeLiLi has produced so far. Of course, a great deal of attention has been put in rendering completely anonymized all the information on the website. For the time being, all the professional advices have been published, while only the 2010 informative activity is currently on the website. It is a priority to complete the release of these informations as soon as possible.

3.3.3. Results

During 2011-2012, SeLiLi continued its typical informative activities with the exchange of about 200 messages on the internal mailing-list, representing the discussion of 30 different cases. During the last year, we did not activate any new second-level consultancy activities. We did receive a few requests of a complexity that in the past would have triggered a “second” level, however they were already covered by advices present on the website, and the requesters have been invited to refer to those. The information must have proved sufficient since no requests of further assistance have been received.

The two most relevant developments during the reporting period were:

- The completion of a systematic review of the products of the (internal) mailing-list of the project and of a systematic dissemination of the results in the form of generalized questions and (sometimes) FAQs; This task has been completed for the 2010 period. Our goal is to make public all the rest of the archive.

- A new organization of the website, with more focus on the results and FAQs.

The review and dissemination activity (including the ongoing drafting of the public report for 2011) was started and is currently carried out by Giulia Aresca, former intern of the Nexa Center who is now articling for a law firm.

The efforts to “export” the SeLiLi model started with the drafting of the Lombardy-SeLiLi project proposal addressed to the Catalyst funding program of Creative Commons. The proposal, drafted by the non-profit association *lettera27* with the support of the Nexa Center, was not funded, but it inaugurated a fruitful cooperation. In fact, *lettera27* re-used the know-how built drafting this proposal in preparing its *ShareYour Knowledge* project, which aims at empowering the impact and the public of cultural institutions releasing their contents using open licenses. This received about 100,000 € of financial support from the Cariplo bank foundation and was kick-started in April 2011, in collaboration with Creative Commons Italia and Wikimedia Italia.

Both of the aforementioned developments address the limits of the SeLiLi project in different ways. On the one hand, the creation of generalized public versions of the discussions going on in the internal private mailing-list significantly increase the exploitation of the outputs of the project. On the other hand, the creation of other, local, but federated chapters of SeLiLi makes it possible to create new competences related to open licenses and to serve a growing number of stakeholders.

2.5. **Copyright 2.0: a Copyright Reform Proposal**

Making Copyright Fit for the Digital Agenda.

Prof. Marco Ricolfi proposes further elaborations of his original [Copyright 2.0](#) proposal (see *Nexa Report 2009*, § 7.2. *Copyright 2.0*).

For more information, refer to...

<http://nexa.polito.it/new-copyright-2.0>

3.5.1. **Background**

During the Communia 2008 Conference, Nexa co-director prof. Marco Ricolfi presented a paper titled *Copyright Policy for digital libraries in the context of the i2010 strategy*. This article happened to be better known as the *Copyright 2.0* paper, since – after examining specific issues related to digital libraries – it addressed the question whether copyright as we know it is still an appropriate tool in the current digital context. The outcome of this reasoning sketched the moves towards a new copyright regime (*Copyright 2.0*).

3.5.2. **Objectives**

The paper pursues the quest for a more flexible copyright, capable of taking into account the specificities of the Internet and of new categories of authors. As Professor Ricolfi put it, *[t]he time has come for us to finally become aware that in our post-post-industrial age, the long route which used to lead the work from its creator to the public by passing through different categories of businesses is gradually being replaced by a short route, which puts in direct contact creators and the public.*

Copyright 2.0 stands for a more flexible set of rules that may adapt to the new mechanics of creative production in the digital age. In particular, copyright 2.0 should serve and pave the way for the “short route” that enhances an unrestrained discourse between authors and the public.

3.5.3. **Results**

Prof. Marco Ricolfi authored various versions of his *Copyright 2.0* proposal. One was titled [Making Copyright Fit for the Digital Agenda](#) (pre-print version available at <http://tinyurl.com/5vo5mkv>) and published in *Il diritto d'autore*, 2011, 359-372. Another version was titled [Consume and Share: Making Copyright Fit for the Digital Agenda](#), in M. Dulong de Rosnay and J.C. De Martin (eds.) *The Digital Public Domain*, Open Book Publishers, Cambridge, 2012, 49-60 (direct download available from http://www.communia-association.org/wp-content/uploads/the_digital_public_domain.pdf).

Other versions were also presented during the 12th EIPIN Congress 2011, *Constructing European IP: Achievements and new Perspectives*, Strasbourg, February 24-25, 2011, European Parliament. Prof. Ricolfi was also a key note speaker within the

Conference on the Future of Audiovisual Industry organized by the Hungarian Presidency and the European Commission, April 19-20, 2011, Budapest, Hungary. His intervention introduced a session titled *Consume & share (Copyright challenges)*. Finally, Prof. Ricolfi presented his Copyright 2.0 proposal in Italy, on May 3, 2011, within the meeting *Proprietà intellettuale e società della conoscenza digitale: quali soluzioni alle nuove esigenze?*, with a speech titled *Copyright 2.0: un'agenda digitale per l'Europa?*.

For a complete description of the Copyright 2.0 proposal, we cannot but refer the readers to the full paper. The new system can, however, be described by the following four basic features. “*Old copyright, or Copyright 1.0, would still be available; but it would have to be claimed for by the creator at the onset, e.g. by inserting the old copyright notice, ©, as the US did in the past, before accessing the Berne Convention. If no notice was given, Copyright 2.0 would apply; and this would give creators just one right, the right to attribution. The notice could also be added after creation, but then it would only have the effect of giving exclusivity against specified non authorized uses (in particular: subsequent commercial uses). The Copyright 1.0 protection given by the original notice could be withdrawn, and maybe it should be deemed withdrawn after a specified period of time (e.g. the 14 years of the original copyright protection), unless an extension period (of another 14 years) is specifically requested.*”

2.6. **Digital Cultural Heritage: from Public Sector to User Generated Content**

Studying cultural heritage goods from a public sector information / content perspective.

A series of research, consultancy, policy support and awareness raising activities to make digital copies of cultural heritage goods part of the public domain.

For more information, refer to...

<http://selili.polito.it/>

3.6.1. **Background**

In December 2010, a group of Communia members including Prodromos Tsiavos, Federico Morando, Stefano Costa and others gathered in Istanbul for a working meeting, with the aim of producing a set of recommendations about cultural heritage and the public domain. They discovered that national laws limiting the re-use of copies of public domain works (such as ancient statues or paintings) are more widespread than expected, concerning - for instance - Italy, Greece and Turkey. *De facto*, in these countries, “cultural heritage protection laws” (e.g. art. 107 or the Code of the Codice dei Beni Culturali in Italy or art. 46 of Law 3028/2002 in Greece) provide an additional layer of control over the access to cultural resources, often defined as monuments. Such access controls that are exercised by the state through the ministry of culture or its local/regional divisions, may impose an additional layer of restrictions over works that are otherwise copyright free.

3.6.2. **Objectives**

The activities of the Nexa Center in this domain are aimed at defining the actual scope and functioning of “cultural heritage protection laws”, in particular with respect to digital copies of public domain artifacts; moreover, they try to analyze the evidence concerning the pros and cons of these norms (for instance in terms of resources gathered to fund cultural institutions and negative effects on the production of user generated content in this domain); finally, some activities directly aim at supporting projects related with the creation or re-use of digital reproductions of cultural artifacts.

3.6.3. **Results**

During the reporting period, the following research outputs were delivered:

- the Library System of the Politecnico di Torino **published** a legal opinion of Massimo Travostino concerning “Le fotografie nella legge sul diritto d’autore ” (Pictures within copyright law), including several sections concerning the Italian cultural heritage protection law;

- Nexa research fellow Federico Morando and Prodromos Tsiavos (member of the Communia Network and Association and of the LAPSI Network) coauthored an article about “*Diritti sui beni culturali e licenze libere*” (Rights on cultural heritage goods and free/open licenses) which is forthcoming in the series *Quaderni del Centro Studi Magna Grecia* of the University Federico II of Naples (the publication is expected in June or July 2012);
- Nexa fellows Enrico Bertacchini and Federico Morando coauthored a paper about “*The Future of Museums in the Digital Age: New Models of Access and Use of Digital Collections*” and submitted it for a special issue of the *International Journal of Arts Management* (currently, the article has been resubmitted considering the comments of two anonymous reviewers);

Finally, the Nexa Center and the SeLiLi projects offered their support to Wikimedia Italia, in order to implement the WikiLovesMonuments initiative in Italy. WikiLovesMonuments is an international photo contest around cultural heritage monuments: the contest aims at making their pictures available on Wikimedia Commons (and, hence, Wikipedia) and - until now - it did not involve Italy precisely because of its peculiar cultural heritage law. During the reporting period, Nexa fellows Raimondo Iemma and Federico Morando supported the kick-starting of the contest in Italy and the related debate (also arguing that - for instance - it is at least legitimate to reproduce monuments which are visible from a public street). In parallel, Nexa fellow Deborah De Angelis, with the support of the SeLiLi project, started an interaction with the Italian Ministry of Culture in order to eliminate legal uncertainty and possibly obtain an endorsement of this initiative.

2.7. Outlook

Despite the lack of major funded projects (unless the PROSA proposal is approved: see below), this research thread is expected to continue to attract a significant amount of effort.

The Center will continue to have a proactive role within the Communia Association, whose main challenges in 2012-2013 will consist in becoming financially sustainable and an official observer capable of representing the dispersed interest of the digital public domain in front of institutions such as the WIPO and the OECD.

The Nexa Center will also continue to host and maintain the website of the Public Domain Day. Moreover, the public domain related initiatives organized by the Libraries of the Politecnico di Torino and Fondazione Teatro Nuovo, with the support of the Nexa Center, already resulted in a draft longer term agreement, which should be signed within the next few months.

The next reporting period will (expectedly) saw the public launch of Creative Commons licenses in their 4.0 version and the Center is already playing a significant role in the drafting process. Depending on the results of the ongoing collaboration with lettera27 Foundation, the Creative Commons and (the related) SeLiLi projects could also be reinforced significantly (also) exploring various fundraising opportunities.

In the cultural heritage domain, several ongoing activities should deliver their fruits during the second half of 2012. Moreover, Nexa faculty fellow Alessandro Mantelero is starting the drafting of a new multi-disciplinary research and pilot activity titled “Open Museum and Disability ” and focusing on the effects of (virtually) opening up museums on disabled people.

The Nexa Center is also committed to continue its support to the Politecnico (and the University) of Turin in moving toward more open access friendly internal policies. This effort could be magnified, in case of success of the PROSA proposal (see § 7.3. *PROSA: European Coordination Action providing Policy Recommendations for Open Science and open Access*, p. 83).

Finally, the effort toward a more balanced approach to copyright protection is a constant in the activity of the Nexa Center and the Copyright 2.0 proposal will likely find various avenues to be further developed (also in synergy with other projects, such as the PSI related ones or the Communia Association). Further developments could also be triggered by the ongoing discussion with the Italian Ministry of Education concerning the review of art. 5 (amongst others) of the Italian Copyright Act in order to change the legal status of (most) public sector information.

3. INTERNET MONITORING AND ANALYSIS

This section discusses the activities that the Center performed in the field of Internet Monitoring and Analysis, namely Neubot, a research and software development project for the distributed monitoring of network quality and of network neutrality violations.

3.1. **Neubot, the Network Neutrality Bot**

Distributed, collaborative network-performance and network-neutrality monitoring tool.

Neubot, the Network neutrality bot, is a research project on network neutrality.

The project is based on a lightweight free-software computer program that users can download and install on their computers. The program runs in the background and periodically performs transmission tests. Currently, tests are performed with test servers provided by the distributed server-side M-Lab¹ platform. But, in future, the program will also implement peer-to-peer tests with other instances of itself.

For more information, refer to...

<http://nexa.polito.it/neubot>

<http://neubot.org/>

The purpose of these transmission tests is to measure end-to-end performance with different application-level protocols (currently HTTP and BitTorrent). Such performance measurements are saved on the test server, and then periodically collected and published on the Web, as open data (CC0), by the Neubot project and M-Lab. In turn, this allows anyone to perform network neutrality analysis, by comparing performance measurements of different application-level protocols.

Neubot research and development is carried out by Eng. Simone Basso, a PhD research fellow of the Nexa Center. Other fellows, namely Att. Monica A. Senor and Dr. Eleonora Bassi, provided legal support to implement Neubot privacy policy, which allows to collect and publish results as open data.

5.1.1. **Background**

Network neutrality is the principle that the Internet should be neutral with respect to applications, senders and destinations. This was the key property of the Internet of the origins, a network conceived to minimize the exchange of state information between applications and the network. Nowadays, however, the Internet is no longer neutral, due to technologies that allow for fine-grained traffic differentiation.

Given the importance that an open, neutral Internet has for our societies, network neutrality is a strongly multidisciplinary topic. There are, indeed, economic, legal, policy and networking sides of the debate. However, the Neubot project just focus on the networking side and strives to characterize differentiation of Internet traffic from the edges of the network. With the goal of collecting and pub-

¹ M-Lab (Measurement Lab) is a world-scale server-side platform. It hosts server-side components of research tools that measure network performance and network neutrality, like Neubot, NDT, Glasnost, NPAD, etc. M-Lab is a joint initiative of New America Foundation's Open Technology Institute, Google, and academic researchers. Its 70+ servers are either installed at Internet Exchange Points, or hosted by academic institutions and partner companies. In addition to hosting, M-Lab also provides support services, such as automatic data collection and publishing.

lishing reliable data, to inform the other sides of the debate.

Neubot, of course, has much in common with existing network performance and neutrality tools. With network performance tools (like iperf, NDT and Grenouille), it shares the idea of saturating the bottleneck with a TCP (or TCP-like) transfer. With network neutrality tools (like Glasnost and NANO), it shares the idea of comparing performances experienced by different protocols. Moreover, like many other active measurement tools, Neubot is now deployed on M-Lab.

5.1.2. Objectives

Since the last trustees meeting, Neubot major achievements were the inclusion into M-Lab, the deployment of a BitTorrent transmission test, automatic updates for MacOSX and Windows. They are discussed in detail in the results section, since this section is mostly concerned with current and future objectives.

Strategically, Neubot R&D pursues three long-term objectives:

1. study of mathematical and empirical models to analyze the collected performance measurements;
2. continuous improvement of the software, to make it more scalable, robust and capable of hosting more transmission tests;
3. data analysis, visualization and automatic reporting.

With respect to objective 1., work is in progress to research a mathematical model that allows to estimate low-level network characteristics from Neubot application-level performance measurements. Indeed, breaking down performances into the parameters that influence them is key to go beyond qualitative analysis and perform a robust end-to-end paths comparison. A simplified, prototype model has already been described by a paper submitted (acceptance pending) to ACM Workshop on Measurements Up and Down the Stack (W-MUST). During the year, the model presented in such paper will be further evaluated with larger scale experiments. Moreover, it will also be extended, to model a wider range of data transfers, including request-response-based transfers, like BitTorrent.

With respect to objective 2., work is in progress to ensure that BitTorrent and HTTP tests results are always comparable. Empirical evidence shows that they are reasonably comparable for typical ADSL conditions, but theory indicates a number of issues that may cause differences outside of such typical conditions. Hence, equalizing the two tests behavior is key to shift Neubot's focus from qualitative to quantitative, model-backed results. Some counter-measures against possible differences have already been implemented, such as restricting the HTTP test to use just one TCP connection, to mirror the behavior of the BitTorrent test. Current efforts focus on making sure that the two tests run for the same number of seconds, as well as on quantifying (and, if needed, reducing) the overhead of BitTorrent's request-response behavior.

Moving the focus from TCP to UDP, another possible task concerns with

implementing the required infrastructure and then designing and adding a Skype test on top of that. This new test would not only require significant coding efforts, but also modeling and research efforts to design it properly. Therefore, despite there is no discussion that the Neubot project is interested to write a Skype test, the decision whether implementing it this year is strategic. In particular, it depends on the progress of the above-mentioned tasks, as well as on the available resources. So, at the moment of writing this report it is not possible to say whether this task will complete next year or later.

Similarly, the Neubot project is definitely interested in measuring the hosting computer load and implement peer to peer tests, but both tasks depend on the available resources and on the progress on TCP model, tests, and Skype tasks.

With respect to objective 3., the Neubot project aims to develop and deploy a public web interface to browse and plot Neubot results. The web interface shall offer the user the possibility of filtering results by time, protocol, type of measurements, geographic location and ISP. The web interface will be developed and launched using results collected in Piedmont (Regione Piemonte).

5.1.3. Results

Here is a list of the major development achievements of the Neubot project since last board of trustees meeting:

1. privacy policy that allows to publish results as open data, with the user's informed consent. Two major revisions of the privacy policy have been authored. Version 1.0 was released with Neubot 0.3.7, on May 20th 2011. Version 2.0 is coherent with M-Lab's policy, and was released with Neubot 0.4.6, on January 24th, 2012;

2. results published as open data. Since June 2011, initially using Neubot own format, then using M-Lab format since mid-January 2012. Results available at M-Lab² and Neubot website³ under Creative Commons Zero 1.0 Universal;

1. BitTorrent test (Neubot 0.4.0, July 20th, 2011);

2. automatic updates under MacOSX (Neubot 0.4.2, September 19th, 2011);

3. M-Lab deployment, which allows to install Neubot-server on more than 70 servers at various geographic locations, in three continents (Neubot 0.4.6, January 24th, 2012);

4. automatic updates under Windows (Neubot 0.4.11, March 24th, 2012).

2 <http://measurementlab.net/data>

3 <http://neubot.org/data>

3. Internet Monitoring and Analysis

With respect to research and talks, instead, this is the list of major achievements and events since last board of trustees:

a) Neubot presented at BEREC (Body of European Regulators for Electronic Communications) internal workshop on the Internet, by Simone Basso and Juan Carlos De Martin (Brussels, June 27th, 2011);

b) article "The network neutrality bot architecture: a preliminary approach for self-monitoring of Internet access QoS" by Simone Basso, Antonio Servetti and Juan Carlos De Martin, received the "best student paper award" at the IEEE 16th International Symposium on Computers and Communications (Corfu, July 1st, 2011);

c) Neubot presented by Simone Basso at Open World Forum, in the context of the panel "A tour of Network Neutrality Solutions", featuring Jeremie Zimmerman (La Quadrature Du Net), Daphne van der Kroft (Bits of Freedom), Laure de la Raudiere (French M.P.) and John Palfrey (Professor of Law and Vice Dean for Library and Information Resources, Harvard Law School), Paris, September 22nd, 2011.

d) article "The hitchhiker's guide to the Network Neutrality Bot test methodology" by Simone Basso, Antonio Servetti and Juan Carlos De Martin, accepted and presented at the Congresso AICA (November 16th, 2011);

e) started studying model for continuous TCP transfers, which aims to estimate packet loss ratio (PLR) from Neubot application level measurements (December 2011);

f) Neubot presented at ETH Zurich by Simone Basso, in the context of an internal seminar on Neubot organized by prof. Bechtold Stefan and Dr. Thomas Maillart, both of the Professorship on intellectual property (Zurich, March 26th, 2012);

g) paper "Estimating packet loss rate in the access through application-level measurements" by Simone Basso, Michela Meo, Antonio Servetti and Juan Carlos De Martin, which describes and evaluates above-mentioned TCP model, submitted (acceptance pending) to ACM W-MUST, Workshop on Measurements Up and Down the Stack (April 10th, 2012).

Here are some quantitative indicators about the project, again computed since the last Board of Trustees meeting:

- i. number of releases: 12;
- ii. number of downloads: 12,414 (about 1,000 downloads/month);
- iii. number of contributors: 4;
- iv. changes: 356 changed files (120 files in Neubot 0.3.6, 317 files in Neubot 0.4.11), 38,535 added rows (+), 14,712 deleted rows (-);
- v. number of patches: 1,421 (95% by Simone Basso).

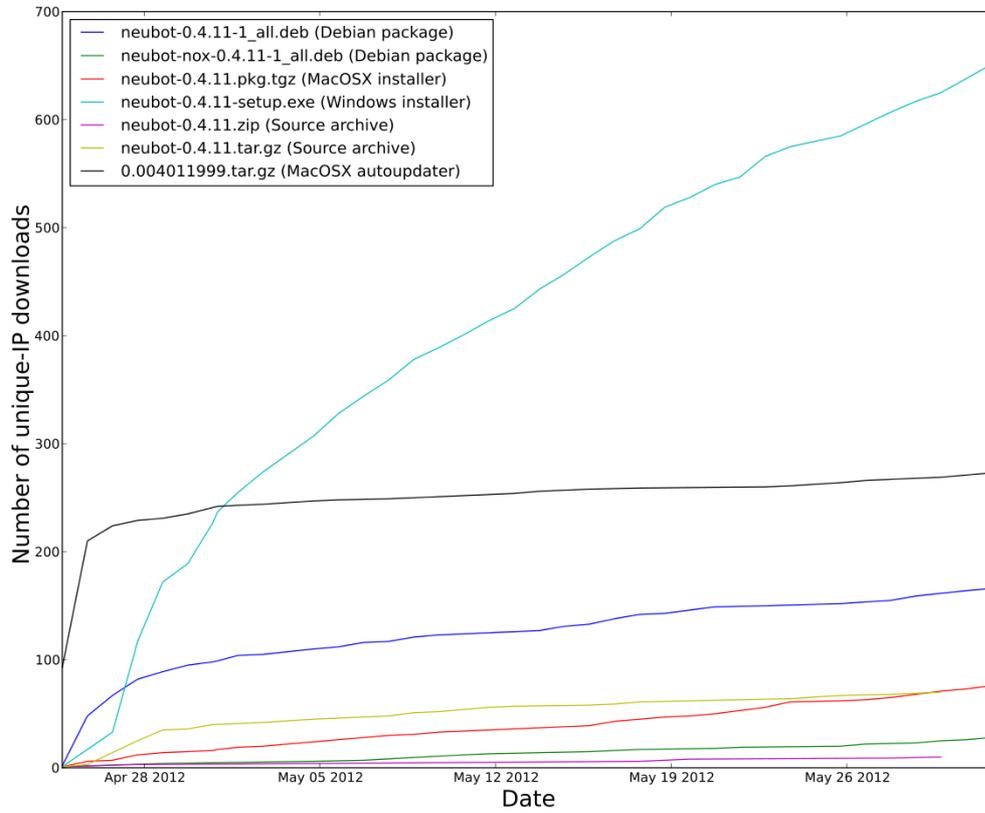


Illustration 2: Number of Neubot downloads

3.2. *Outlook*

Given the distributed nature of the Web, it is not easy to gather information about its structure and its content. This makes projects such as the Neubot one a promising field of research. Hence, the Nexa Center will continue to invest resources in this domain (and that despite the current lack of funded projects directly supporting the development of Neubot).

The future development of the Neubot project will go along three main threads concerning (1) software development, (2) theoretical research and (3) the analysis of collected data. Future developments of the Neubot software include: (i) modification of Neubot to guarantee it will work without problems in a mixed IPv4 and IPv6, considering the imminent transition to IPv6, (ii) amend the Neubot architecture, relying on the distributed DNS Donar, to eliminate the dependency on a single central server and make the service more robust to failures. Research developments will concentrate on the theoretical model justifying the performed measurements, in order to maximize their relevance and comparability. The analysis of Neubot data will feature statistical elements, which are closely connected with the aforementioned theoretical research; moreover, the empirical analysis could form the basis for deriving normative conclusions and policy recommendations.

4. FUNDAMENTAL RIGHTS ONLINE

This section summarizes the research and policy support activities that the Center performed in the field of fundamental rights online. It describes two projects concerning privacy and freedom of expression online and other advocacy/policy support activities in the field of Internet governance, Internet & democracy and the role of administrative authorities and ISPs in controlling the behavior of Internet users.

4.1. **AGCOM 2nd Consultation: Copyright Infringement and the Role of ISPs Censorship**

Encouraging the Italian telecommunication authority to preserve online freedom (and discouraging norms that could trigger ISPs censorship)

In September 2011, the Nexa Center provided its answer to the second phase of the Consultation about online copyright launched by AGCOM, the Italian Telecommunication Authority.

For more info (in IT), refer to...

<http://nexa.polito.it/consultazione-agcom-398-11>

As for the first phase of the Consultation, this has been a relevant advocacy effort and – apparently – in this specific context no *pro bono* submission was made, all other submissions coming from businesses or their organizations: The Nexa Center was the only academic entity who answered to the consultation.

4.5.1. **Background**

The Nexa Center appreciated the thorough report *Copyright Issues in the Electronic Communications Sector* (hereinafter, the *Copyright Issues* study) that AGCOM published on February 12th, 2010. In fact, the Nexa Center also supported the translation of the study from Italian to English (<http://bit.ly/ivQXWw>) in order to facilitate its widest dissemination and discussion. However, during the previous reporting period, the Nexa Center already provided a critical answer to a consultation opened by AGCOM about copyright related issues in the online environment. The Consultation concerned Deliberation n° 668/10/cons of December 17th, 2010 titled *elements for measures concerning the exercise of the competencies of the authority in activities related to the protection of authors' rights on electronic communication networks*.

4.5.2. **Objectives**

The proposed Deliberation to be analyzed during the second phase of the Consultation was focused around a set of measures for a “selective removal procedure” of copyright infringing content, inspired by the US notice-and-take-down approach.

4.5.3. **Results**

Many fellows of the Nexa Center and other legal experts met several times to draft an extensive and detailed answer to the consultation. The final document was authored by two Nexa Fellows, Carlo Blengino and Alessandro Cogo, together with the co-directors of the Center, Juan Carlos De Martin and Marco Ricolfi.

The conclusion of the document was that the proposed procedure to

4. Fundamental Rights Online

combat online copyright violations could not offer to right-holders significant advantages with respect to available civil and criminal sanctions (or, at least, could not do that offering at the same time sufficient guarantees to legitimate users and third parties in general).

As for the first phase of the Consultation, the Nexa Center was also audited in October 2011. The Center was represented by its co-director Marco Ricolfi and by the Nexa fellow Deborah De Angelis. On top of illustrating its specific comments, the Center reiterated its doubt about the existence of a legislative source conferring to the Authority the power to regulate the domain of online copyright. (Incidentally, these doubts were dismissed by the Authority at the time, but they re-emerged - with significant visibility also on the media - during the following months.)

4.2. Anonymity Online in Italy and Free WiFi: Security vs Fundamental Rights and Innovation

Monitoring users' access to the Internet: Enhancing security? Deterring expression? Impairing innovation?

The final output of the research work of the Center about anonymity online (inspired by the now defunct, infamous “Pisanu decree”) was published during the reporting period. This work, together with a legal opinion taking it into account, contributed to the approval of a Piedmont **regional law (and related regulation) about free and open access to public Wi-Fi**, which is, among other things, arguably the first Italian public act acknowledging that it is now possible to offer Internet access without prior strong identification of the users.

For more information, refer to...

<http://nexa.polito.it/anonimity> (EN)

<http://nexa.polito.it/anonimato> (IT)

4.1.1. Background

The so-called Pisanu Decree is an anti-terrorism act requiring the identification of Internet users. Since no cost/benefit evaluation of this norm had been conducted, the Center autonomously initiated research about *Identifying Internet users: technical, legal and economic analysis of the consequences on privacy, fundamental freedoms, innovation and business models*. To do so, a 12-month post-doc position was awarded in 2010 to Silvia Bisi, a post-doc researcher in computer law.

At the end of 2010, after a period of strong requests aimed at modifying the Pisanu decree (pioneered by the Nexa Center in 2008), an important modification has been passed, justified with the intervened capability of judicial authorities to use other effective investigative means in fighting criminal activities. Since then, the growing number of private and public initiatives to spread the use of Wi-Fi connection seems to demonstrate one of this research assumptions, i.e. that Pisanu decree actually was an obstacle to innovation.

The research project also yield awareness and dissemination and policy support results. Some FAQs related to the application of the Pisanu Decree were published (nexa.polito.it/pisanu_faq) and a short position paper (nexa.polito.it/nexafiles/memoria_nexa_wifi.pdf) was drafted on the basis of Silvia's work and submitted in response to a consultation from the Regional Council of Piedmont about the forthcoming (at the time) regional law supporting WiFi connectivity. The intervention of the Nexa Center succeeded in triggering a modification of the first article of the final version of the regional law that currently aims at making Wi-Fi connections not only “free”, but also “open”.

4.1.2. Objectives

The purpose of the research was to clarify the legal framework for Inter-

net users' identification in Italy and provide a comparative analysis of other legal frameworks in OECD and non-OECD countries.

4.1.3. Results

The final version of the paper “*To be or not to be (anonymous)? Riflessioni in tema di libertà e controllo*” (i.e. “Reflections on freedom and control”), published during the reporting period, includes an introduction about anonymity online and considers the most recent reforms concerning the (remnants of the) criticized Pisanu decree. (The Italian version of the paper is available at nexa.polito.it/anonymity; a shorter English version of the paper is part of the activities that Silvia Bisi will perform as a Nexa fellow in 2012.)

In the context of the policy support activities that the Nexa Center performs for the Regional Government of Piedmont, Nexa fellow Nicola Bottero wrote a legal opinion in the form of a “Document summarizing the analysis of norms and regulations concerning the identification of Internet users”. The opinion is focused on the implications of Regional Law n. 5 of April 22nd, 2011 of the Region of Piedmont (the so-called “Free WiFi Law”). Drafting such a document as a legal opinion offered a stronger support to the drafting of the regulations implementing the Free WiFi Law and resulted in a by-law explicitly providing for free and open access to the WiFi Internet connections made available by Regione Piemonte in its premises and their surroundings.

4.3. **Freedom of Expression Online in Italy - Global Information Society Watch 2011**

Contributing the Italian bit to the overall picture of freedom of information and expression online.

Nexa (former) fellow, Andrea Cairola, and Nexa's friends Arturo Di Corinto and Giacomo Mazzone authored the section of the “Global Information Society Watch 2011” about Italy.

Report available here (see pp. 148-151)

<http://goo.gl/ni8jT>

4.2.1. **Background**

The Association for Progressive Communications (APC) is an international network of civil society organizations and activists of freedom of expression and human rights. APC's vision is “All people have easy and affordable access to a free and open Internet to improve their lives and create a more just world.”

In 2007, APC published the first edition of the yearly report Global Information Society Watch.

4.2.2. **Objectives**

After providing some Internet related statistics concerning Italy, the authors of the Italian section of the report highlight some relevant trends concerning freedom of expression online in Italy, discussing in particular the so-called “gag law” or Alfano Bill. The proposed law would have created a very special situation in the country, compared to the other G7 economies, requiring, for instance, bloggers to guarantee a right to reply within 48 hours in case of defamatory comments, obliging the blogger to correct news content as required by the Italian Press Law of 1948, which provides for harsh penalties when this is not done.

4.2.3. **Results**

The actual output of this work was, of course, the chapter in the Global Information Society Watch 2011. However, it is also worth mentioning that the authors and other Nexa fellows and members of the Nexa mailing list have been amongst the protesters who used the Internet to prevent the approval of the Alfano Bill and similar bills.

4.4. **Internet Governance: IGF Italia 2011 & 2012**

Convening a forum for multi-stakeholder policy dialogue about the Governance of the Internet from an Italian perspective.

The Nexa Center has contributed to the organization of the IGF Italia 2011 and is the scientific coordinator of the IGF Italia 2012, to be held in Turin on October 18th-20th, 2012.

For more info (in IT), refer to...

<http://www.igf-italia.it/>

<http://www.igfitalia2011.it/>

4.3.1. **Background**

The Internet Governance Forum (IGF) is a multi-stakeholder forum for policy dialogue on issues related to Internet governance. IGF Italia brings together many stakeholders in the Italian Internet governance debate, including representatives of the civil society and of the academic community, but also of governmental agencies and of the private sector. As for the international IGF, all stakeholders are on an equal basis and the entire process aims at being inclusive.

4.3.2. **Objectives**

IGF Italia has a twofold objective. On the one hand, it represents a multi-stakeholder open platform of discussion about the most relevant topics of the Internet Governance, focusing debates on the Italian situation and emerging trends. On the other hand, IGF Italia 2012 will enable debate and gather contributions in order to produce a synthesis of the Italian position to be proposed to the delegation that will represent Italy at the international IGF (to be held on November 6th-9th, 2012 in Baku, Azerbaijan).

4.3.3. **Results**

IGF Italia 2011 covered a wide set of themes, from the very nature of the Internet to human rights in the cyberspace, from network neutrality to digital commons, from open data to the digital divide, and the role of Internet in urban planning, education, science and other relevant activities. The Nexa Center was involved in several of these debates, and used this occasion to publish the study *Internet Governance. Analysis of technological and regulatory assumptions, of theoretical principles, of historical development and goals* by Antonella Giulia Pizzaleo (see § 1.3. of the Nexa Annual Report 2010 for a summary of the past research of the Center in this domain).

The IGF Italy 2012 will take place in Turin on October 18th-20th, 2012 and will be organized by the government of the Piedmont Region. The Nexa Center will play the role of scientific coordinator, in contact with the organizers of the previous editions (2008-2011, [igf-italia.it](http://www.igf-italia.it)). In light of its role, the Nexa Center is

leading the definition of the structure and contents of the forum, that can currently be described as follows:

- on Thursday October 18th, civil society groups will have the opportunity to meet, in spaces provided by the IGF organizers, to discuss topics of their interest to prepare their contributions during the course of the following two days;
- on October 19th, the IGF Italy 2012 will start with a plenary introductory session, with the participation of both local and national authorities, including the Italian Ministry for Education, University and Research, which will present the results of a public consultation on themes strongly related with Internet Governance;
- the afternoon of Friday, October 19th and the morning of Saturday, October 20th, will feature two parallel sessions each (four sessions in all) on topics which could be roughly summarized as:
 1. *The Divides*: cultural, technological, economic, infrastructural;
 2. *What Infrastructures?* Net neutrality, DNS reform, IPv6, and other topics;
 3. *eGovernment*: Open Data, current achievements of the Open Government Partnership, an Italian experience (Wikitalia), a U.S. Experience (Code for America), policies (e.g. FOIA);
 4. *The Digital Agendas*: EU, national, regional, municipal: how do they interact? Who does what?

4.5. Italian Version of “How the Internet Works” by European Digital Rights (EDRi)

A guide for policy-makers about the functioning of the Internet.

The Nexa Center curated the Italian version (including the translation from English to Italian) of the booklet “How the Internet works” published by the European Digital Rights Initiative (EDRi).

For more information, refer to...

<http://nexa.polito.it/annuncio-pubblicazione-edri>
http://www.edri.org/files/2012EDRiPapers/how_the_internet_works.pdf

4.6.1. Background

The increasing regulation of copyright and privacy on the Internet requires greater expertise on these issues by policy-makers. For this reason, European Digital Rights (EDRi), which includes 32 privacy and civil rights organizations based in 20 different countries in Europe, published this year “How the Internet Works”, a booklet that gives a basic overview of Internet-related technologies.

Even in Italy these issues are becoming crucial, as proven by the resonance on Italian media of the appointment of the board of AGCOM and of the Data Protection Commissioner. So, thanks to a collaborative effort, the Nexa Center has translated and improved the EDRi booklet, publishing last month “*Come funziona Internet*”.

4.6.2. Objectives

As explained in the introductory part of the booklet, it provides a guide to policy-makers on some of the key technologies that constitute the core of the Internet. It seeks to represent a useful reference tool to explain in an accessible manner the functioning of the Internet, on which so many civil rights and much economic activity now rely. Among the various topics are dealt cloud computing, encryption, deep packet inspection, social media and Internet governance.

4.6.3. Results

The writing process of the Italian version of “*How the Internet Works*” involved many people coordinated by prof. Juan Carlos De Martin. First, some members of the Nexa mailing-list started to translate the EDRi booklet. After this step, Nexa fellows contribute with their legal skills to improve sensitive aspects concerning, for instance, privacy law.

The booklet has been widely commented by the Italian media (newspapers and radio) and was distributed to the members of Italian Parliament. Furthermore, the guide “*Come funziona Internet*” will become part of the teaching materials for the e-learning platform [Federica](#) of the University of Naples Federico II.

4.6. **Internet & Democracy: towards Biennale Democrazia 2013**

Contributing to the permanent public laboratory on democracy of the City of Turin

The Nexa Center is involved in the organization of the “Internet & Democracy” activities within the program of Biennale Democrazia (the “Biennial of Democracy”).

For more info (in IT), refer to...

<http://biennaledemocrazia.it/>

<http://nexa.polito.it/biennale-democrazia-2011>

4.4.1. **Background**

Since 2009, the City of Turin hosts and supports Biennale Democrazia, an international cultural event devoted to the ethical and political project of democracy in the broadest sense, inspired by Norberto Bobbio's studies on democracy. Juan Carlos De Martin, Nexa co-director, is a member of the scientific committee of Biennale.

The Nexa Center supports Biennale Democrazia since 2009, when it organized the Open University projects (see *Nexa Report 2009*, § 5.5.). Also the University & Cyberspace international conference (see *Nexa Report 2010*, § 2.1.3. and *2011*, § 2.1.3.). The Center had a very active role within the 2011 edition of Biennale Democrazia, supporting the organization of events such as **Lawrence Lessig's Lectio Magistralis In sunlight. The nature of corruption within the US Congress** (April 16, 2011) or of the **Torino Open Data Contest**.

4.4.2. **Objectives**

The Nexa Center nurtures the “Internet & Democracy” related themes within the program of Biennale Democrazia. It also uses the Biennale venue to increase its outreach in domains such as the discussion about fundamental rights online.

4.4.3. **Results**

During the reporting period, **the City of Turin launched its open data portal** (www.comune.torino.it/aperto), acknowledging the propulsive role of the **Torino Open Data Contest** (in occasion of which several datasets were made available under the CC0 public domain dedication/license).

Biennale Democrazia also granted its **patrocinio and support** to the organization of the **2012 edition of the Internet Governance Forum Italia**.

More generally, and more importantly, the scientific committee of Biennale Democrazia is going to devote a **growing part of the program of the 2013 edition to Internet & Democracy topics**.

4.7. Outlook

During the next reporting period, the Center will make a major effort to coordinate the scientific organization of the 2012 edition of the Internet Governance Forum Italia. This activity will represent the core of the fundamental rights online thread for 2012.

The Anonymity Online research will also continue to be used to support the implementation of the policies of the Region of Piedmont concerning WiFi connectivity. (Again, IGF Italia 2012 will offer a good occasion to discuss and experiment and this domain.)

In the Freedom of Expression Online domain, also in 2012 the Center will participate in the drafting of the Italian part of the Global Information Society.

Last but not least, the involvement of the Nexa Center in the activities of Biennale Democrazia is becoming a constant, also thanks to the participation of Juan Carlos De Martin in the scientific committee of Biennale. The next edition will take place from the 10th to the 14th of April 2013 and it will feature even more Internet & democracy related activities than the (already rich) 2011 edition (arguably representing the main activity of the Center in this domain during the second half of the forthcoming reporting period).



5. CLOUD COMPUTING

This section describes two projects concerning cloud computing: an international one focused on cross-border flows of information; and a national one concerning cloud computing and public administrations.

5.1. **Cloud Computing: Berkman-Keio-St.Gallen Project**

An international cooperation to analyze the multi-disciplinary issues raised by cloud computing and cross-border flows of information.

During the last year, the Nexa Center has continued its collaboration with the Berkman Center, Keio University and the University of St. Gallen in the field of cloud computing, with a focus on cross-border flows of information.

For more info (in IT), refer to...

<http://nexa.polito.it/cloud-computing>

5.1.1. **Background**

The trend towards “cloud computing” needs almost no introduction. Moving data and services into the online “cloud” promises the creation of unparalleled efficiencies for firms and consumers. And, of course, it also raises new questions and potential dangers in fields such as data protection, security, competition policy and innovation.

5.1.2. **Objectives**

The research project focuses on cross-border data flows. Instead of addressing just specific privacy, intellectual property or other specific issues from the perspective of one particular jurisdiction, the work focuses on the legal and regulatory issues that emerge when data in the cloud cross borders. In particular, the research tackles issues such as:

1. the identification and discussion of specific problems in various disciplinary areas such as security, privacy, intellectual property, etc. (problem analysis);
2. the discussion and evaluation of traditional approaches to deal with these specific problems (problem solving with traditional means, such as international law); and,
3. the development and evaluation of alternative approaches to deal with the challenges identified above (problem solving with more innovative means, such as design and architectural choices).

The products of the research work have been a White Paper, including a high-level recommendation section, and a Wiki hosting foundational materials.

5.1.3. **Results**

The project is in its ending phase. The members of the research group discussed the project outline during conference calls and Urs Gasser, Juan Carlos De Martin and Catharina Maracke also met in Berlin during February 2011 to further progress the work-plan.

5. Cloud Computing

In the meantime, some research meetings and workshops were organized. At the Politecnico di Torino, on March 31st, 2011 Alessandro Mantelero, Faculty Fellow of the Nexa Center, organized a meeting titled *Profili giuridici e aziendali del cloud computing: un dialogo a più voci* (Legal and business profiles of cloud computing: a dialogue of many voices) and featuring interventions from several renowned Italian scholars, such as V. Zeno-Zencovich. The meeting was followed by another seminars from the cycle ICT Law Seminars at Politecnico : *Cloud computing e processi di outsourcing dei servizi informatici* (Cloud computing and outsourcing processes of IT services).

In the end of October, the Nexa Center produced its contribution: a paper on “Trans-border data flows and the European Directive 95/46/EC: applicable law and task distribution” written by Alessandro Mantelero. The document analyzed the EU framework on data protection, the task distribution in processing the information and the regulation of trans-border data flows, with regard to the enterprise outsourcing processes and to the consumers data processing.

At the beginning of 2012, some Nexa fellows reviewed the draft version of the White Paper and in May our previous contribution on trans-border data flows was updated with a new short paper on “The Proposal of General Data Protection Regulation and its impact on trans-border data flows”.

5.2. Cloud Computing and Italian Public Administrations

A pilot study on ICT resources in Piedmont, focused on school services, health services and local government.

The Nexa Center is developing a pilot study on the ICT usage in public bodies supplying essential services, in order to identify the distribution and use of IT resources and to estimate the potential effects of to the adoption of federated cloud computing solutions.

For more info (in IT), refer to...

<http://nexa.polito.it/cloud-computing>

Nexa Center Faculty Fellow, Alessandro Mantelero, is especially involved in this research thread, together with Nexa Center Staff Research Fellow, Raimondo Iemma.

5.2.1. Background

The Italian public administration is characterized by a considerable fragmentation and by a significant degree of managerial autonomy of single bodies operating at local level.

For these reasons, in many cases, the ICT resource management seems to be inefficient and could therefore benefit from the development of strategies focused on the aggregation and sharing of IT resources.

Thus, the transition towards cloud-based solutions may represent an opportunity to reshape the existing local ICT environment under an efficiency-oriented perspective.

5.2.2. Objectives

The analysis covers three different areas / types of organisms belonging to the public sector: primary and secondary education bodies, local health services and local administrations (mainly municipalities). Those areas have been selected in light of their relevance with respect to the everyday life of citizens, considering as well the level of complexity of the service they supply (which is reflected also in their IT configurations).

The methodology adopted encompasses case-studies (all based, as a first round, in the Piedmont region) and interviews with domain experts, as well as *in itinere* and *ex post* validation and integration of the evidence gathered with other sources and background knowledge. For each public body, the data gathering is mainly aimed at assessing:

- the adopted IT structure;
- the current hardware and software equipment (and related costs);

5. Cloud Computing

- the current adoption of cloud-based solutions;
- the propensity to adopt cloud-based solutions in the future.

5.2.3. Results

The project is reaching the end of its first phase and has involved Raimondo Iemma (Nexa Staff Research Fellow) and Alessandro Mantelero (Nexa Faculty Fellow).

In February, the members of the research group defined the project outline and in the following two months examined eight case studies concerning the three different public sector areas.

The analysis of the results is still ongoing, but some conclusions with regard to primary and secondary education institutions have been already sketched and presented in May in Rome, during the national workshop “ForumPA2012”.

In particular, the field analysis carried out by the research group highlighted the opportunity of a broader adoption of cloud-based services by the Italian schools, to be carried out under two potentially complementary frameworks: (i) enabling the creation of local federations sharing storage and computational resources (not only for teaching purposes; (ii) increase the efficiency of the centralized procedures defined by the Ministry of Education, which hosts several platforms for data sharing (in some cases with some private competitors).

5.3. Outlook

The main products of the international collaboration on the Cloud Computing research thread with the Berkman Center, Keio University and the University of St Gallen should be published soon, since the project is reaching its maturity.

Toward the end of June 2012, a first report concerning the Italian project about cloud computing and the public administration should also be opened for a first round of comments and then published, ideally during the Summer or the month of September. IGF Italia 2012 could represent a first venue of public discussion.

6. OTHER PROJECTS

This part of the research agenda of the Center collects some projects, which do not easily fit within the previously described research and policy support threads (typically because they encompass more than one of the already discussed domains).

It includes the recently launched European Network of Excellence in Internet Science (EINS) project and the University & Cyberspace related activities of the Center.

6.1. **EINS: the European Network of Excellence in Internet Science**

Analyzing the functioning of the Internet, its multiple relationships with all human activities and foreseeing its future evolution requires an active dialogue between different disciplines, making intersections and common paths emerge, paving the way towards an integrated 'Internet Science'.

In December 2011 the Nexa Center joined the EINS European Network of Excellence on Internet Science.

For more information, refer to...

<http://www.internet-science.eu/>

The EINS Consortium is composed of 33 research organizations (mostly academic) from all over Europe, also including partners based in other continents, each one bringing its expertise in specific fields related with Internet Science. The complete list of the EINS members is available at www.internet-science.eu/partners. EINS activities are organized around various threads, from joint research activities to activities supporting the integration of partner projects, passing through dissemination activities and the interaction with external stakeholders in the area of Internet Science.

1.1.1. **Background**

The various disciplines which contribute to "Internet Science" – from network engineering to computation, from complexity and game theory to humanities, just to mention a few - inevitably adopt different languages and use different design and analysis tools. It is therefore required to establish an effective and productive dialogue between these different disciplines, also in order to identify incentives to create collaboration opportunities. As a platform, the Internet can enable integration of the various sciences that have made the greatest sustained contribution to human progress; however, their differing perspectives can also lead to missed opportunities and unanticipated consequences. Moreover, the Internet generates unprecedented amounts of data on all sorts of human behaviour, and at the same time makes possible their integration with analytic and computational facilities. Finally, the global reach, discretionary connectivity and openness of the Internet, combined with the potential for generating 'subnets' and human-machine complexes, provides an ideal test bed for technological, socioeconomic and cybernetic experiments to complement the natural experiments provided by the observability and diversity of the Internet.

1.1.2. **Objectives**

The goal of EINS is coordinating and integrating European research aimed at achieving a deeper multidisciplinary understanding of the development of the Internet as a societal and technological artifact, whose evolution is increasingly intertwined with that of human societies.

To this end, EINS will:

6. Other Projects

- coordinate the investigation, from a multi-disciplinary perspective, of specific topics at the intersection between humanistic and technological sciences, such as privacy & identity, reputation, virtual communities, security and resilience, network neutrality;
- lay the foundations for an Internet Science, based on Network Science and Web Science, aiming at understanding the impact of the "network effect" on human societies and organizations, as for technological, economic, social & environmental aspects;
- provide concrete incentives for academic institutions and individual researchers to conduct studies across multiple disciplines, in the form of online journals, conferences, workshops, PhD courses, schools, contests, and open calls.

1.1.3. Results

The Nexa Center is actively involved in 3 Joint Research Areas (JRAs) of EINS:

- *Governance, Regulation and Standards*, especially contributing to the mapping of new participants in standard making from civil society, in the framework of a wider participation to standardization activities;
- *Internet Privacy and Identity, Trust and Reputation Mechanisms*, with a specific focus on the possible ways to improve privacy-oriented solutions suitable for social networks, also considering the massive collection of personal data realized by social networks and its implication on social control and predictive power.
- *Virtual Communities*, mainly exploring the relationships between the Internet and democratic participation of citizens, under a multi-disciplinary approach covering social sciences and information sciences; a further focus may be represented by the role played by communities of 'civic hackers' reusing public sector information in a transparency-oriented perspective.

In the first months of activity, thematic working groups have been established in order to produce tangible achievements on the selected research threads. Two collective works have been produced and opened to external contributions, covering surveys of the current and future Internet Science research trends.

6.2. **University and Cyberspace: Re-thinking the University's Role**

Re-thinking the University's role in Society in the Networked Age

For most of the academic year, Nexa co-director Juan Carlos De Martin has researched a book on university in the Internet age, which he has begun writing.

For more information, refer to...

nexa.polito.it/cyberuniversities

6.1.1. **Background**

This research originated in particular from the intuitions of Prof. Charles Nesson of the Berkman Center of Harvard, who clearly saw – several years ago – the challenges and the opportunities that the cyberspace posed to universities, also in terms of their civic role.

From an operational point of view, this activity started on a small scale during the second year of activity of the Nexa Center, through the work of the COMMUNIA project on the Wheeler Declaration and the Open University project (see *Nexa Annual Report 2009*). The first tangible result of the University and Cyberspace research thread was the international conference *University and Cyberspace: Reshaping Knowledge Institutions for the Networked Age* (Torino, June 28th-30th, 2010). The conference was organized by the Nexa Center together with the Berkman Center of Harvard and also represented the last public event of the Communia European Thematic Network on the Digital Public Domain.

6.1.2. **Objectives**

This research explores the role of Universities in the Internet age. Universities are entrusted with the increasingly important responsibility of creating, sharing, and fostering the use of knowledge, and thus are the recipients of tremendous investments of time, money, space, and authority. As we progress further into a networked age, our knowledge institutions are challenged by society to become a driving force to create and disseminate knowledge, using innovative approaches derived from and for the networked world.

6.1.3. **Results**

One of the tangible outputs during the reporting period was the “Fred Friendly” Seminar “*The Fate of Civic Education in a Connected World*” held on December 5th, 2011 at the Berkman Center at Harvard University and featuring Professor Charles Nesson as *provocateur* and Ellen Condliffe Lagemann (Bard College), Peter Levine (Tufts University), Harry Lewis (Harvard SEAS), Elizabeth Lynn (Project on Civic Reflection) and Juan Carlos de Martin (Nexa Center and Berkman Center) as participants. Please, see <http://cyber.law.harvard.edu/events/2011/12/civiceducation>.

6.3. Outlook

The EINS project will enter a very active phase during the forthcoming reporting period. The Nexa Center is especially involved in three Joint Research Areas of EINS: *Internet Privacy and Identity, Trust and Reputation Mechanisms*, under the coordination of Nexa faculty fellow Alessandro Mantelero; and *Governance, Regulation and Standards* and *Virtual Communities*, where the specific research activities of the Center will be better defined during the next months.

As far as the University and Cyberspace project is concerned, Juan Carlos De Martin is expected to continue to research his book on university in the Internet age, which he has begun writing.



7. PROJECT PROPOSALS

This section contains the description of some project proposals that the Nexa Center initiated or joined and which were submitted during the reporting period.

7.1. *LAPSI 2.0: European Thematic Network on the Legal Aspects of Public Sector Information*

The LAPSI 2.0 thematic network aims to contribute to achieving the Digital Agenda's objective to create sustainable and economic benefits by increasing access to content, particularly with regard to public sector information and open data. LAPSI 2.0's objective is to identify the remaining legal barriers and obstacles to access and re-use of public sector information (PSI) on the European content market, and to provide measures and tools to overcome or reduce these barriers and to stimulate the progress of the European market towards open data. It will build on the results of and lessons learned in the existing LAPSI thematic network, and consolidate LAPSI's position as the forum par excellence for consensus building on legal aspects relating to PSI and open data. It will also assess how legal barriers are influencing, or are in their turn influenced by, technological, social and economic developments, and examine how legal instruments and tools can be used to stimulate a pan-European PSI market.

If approved, the project will span other two years and will feature several thematic meetings, four 'hands on' workshops, and two conferences. The consortium holds 23 partners from 15 EU Member States and CIP countries, coordinated by the Interdisciplinary Centre for Law and ICT of the Katholieke Universiteit Leuven .

As an ordinary member (but with an influential pedigree, having coordinated the first LAPSI project), the Nexa Center will just receive a limited funding essentially aimed at supporting the trips of its researchers.

7.2. *Share-PSI 2.0: European Thematic Network for Shared Standards for Open Data and Public Sector Information*

Coordinated by the W3C and proposed for funding under the CIP-ICT PSP Call 6, Share-PSI 2.0 is a Thematic Network bringing together leaders in the Open Data standards and interoperability space, with a particular view toward Public Sector Information. It aims to become the meeting place for European conversations about interoperability and standards for Open Data, covering topics such as metadata about data sets and vocabularies, data catalogue federation and ontological description of public sector sphere of activities. Additionally, the project will bring nascent pre-standardization initiatives to the standards and road-mapping table. The project will further build connections for these conversations across Europe and beyond, organizing a series of three workshops over a period of 18 months.

Share-PSI 2.0 brings together standards development organizations and public sector, academic (including the Nexa Center), civil society organizations, and data re-users, from a total of 23 countries, among these 20 of the 27 EU member states. Several of the proponents already cooperated within the Share-PSI.eu initiative (see *Nexa Annual Report 2011*, § 3.5, and <http://share-psi.eu/>).

7.3. **PROSA: European Coordination Action providing Policy Recommendations for Open Science and open Access**

PROSA (Policy Recommendations for Open Science and open Access) is a policy support project proposed within the FP7 Science-in-Society call 2012 (thread: *Scientific data: open access, dissemination, preservation and use*).

Open Scientific Data (i.e. scientific data made available as open data) promise to deliver major changes and progress, including opening new avenues to research and new forms of investigation, overcoming the excessive specialization of scientific fields and enabling a better and wider re-use of scientific results.

PROSA aims at coordinating and supporting European efforts to make scientific data more widely disseminated, effectively preserved, and re-used for the benefit of science and society.

The key objectives of PROSA are:

- formulating **cross-disciplinary policy recommendations** based on a comparative approach on legal, technical and organizational issues of Open Scientific Data;
- enhancing international **exchange of good practices** for the defragmentation of current actions and to further exploit Open Scientific Data both

The project proposal drafting was coordinated by the Nexa Center for Internet & Society (representing a broad group of experts at Politecnico di Torino, including also the Library System and the Department of Control and Computer Engineering) and gathered 7 partners within an heterogeneous consortium including not-for-profit organisations (EOS, Open Knowledge Foundation and Communia Association), an SME (Sopinspace) and research centers (Fondazione Bruno Kessler and Biotechnology Institute Vilnius).

7.4. **AGCOM SCREEN: Italian Proposal (approved – in standby)**

AGCOM, the Italian Communications Regulatory Authority, issued a call for proposals concerning the analysis of markets for digital services and contents in Italy. The Nexa Center submitted a joint proposal with the Department of Informatics of University Federico II of Naples and the Bocconi University of Milan, Center for Research on Entrepreneurship and Entrepreneurs and the Center for Research on Social Dynamics.

The proposed project would analyze the technological, juridical and economic context of the markets for digital services and contents in Italy. The aim of the analysis is to draw scenarios for the evolutions of markets, such as the one of search engines, over-the-top operators and relational agents. All that in order to provide a theoretical and empirical support for the regulatory activities of AGCOM.

7.5. Smart Cities PRIN (Italian National Project): Smart Knowledge

The Nexa Center, together with other research groups of the Department of Control and Computer Engineering (DAUIN) of the Politecnico, joined the Italian national project proposal “*Smart Cities Aid: Adaptive Innovation For Development*”.

The proposal, coordinated by prof. Pagani of the Faculty of Architecture of the Politecnico di Torino, involves several research units, including the Polito_I one, coordinated by prof. Mezzalama and including the Nexa Center.

The proposal was submitted by a large network, including most of the Italian leading Universities, such as Politecnico di Torino , Politecnico di Milano , Università di Genova , di Udine , di Ferrara , di Trieste, di Parma , di Bologna , di Firenze e di Bari . Cities involved included Genova , Torino , Milano , Bologna , Udine, Trieste, Firenze e Bari . The project also has several industrial stakeholders, such as ABB, ENEL, Fincantieri, IBM, Siemens, Telecom .

The Polito_I Research Unit will concentrate its activities on the Smart Knowledge/Network “focus” of the project. The task of the Unit is to investigate Information and Communication Technologies (ICT) related issues, which play a strategic role in the implementation of modern (smart) cities.

The Nexa Center will lead the research activity labeled “*Modern information exchange: 'smart networks' and 'smart knowledge'*”, concerning the analysis of the flows of information that make cities smart; the Center will also be involved in the research concerning “*Managing large data sets*” and including the open data perspective.

In the second phase of its activity, the Unit will also mix various existing components to build a simple demonstrator, which will A) use data related to buildings and energy consumption/generation (or other relevant available data, e.g. traffic data); B) make these data available as "open data" on a cloud infrastructure; C) elaborate and visualize these data. The Nexa Center will focus its contribution on point B), also investigating other streams of data, e.g. coming from social networks.

7.6. Smart City Proposal for the City of Turin

The Nexa Center joined CSP – Innovazione nelle ICT, Fondazione ISI and the Top-IX consortium in drafting a proposal that will be submitted to the City of Turin. This “Progetto Speciale Smart City” sketches a living lab providing a platform for experimenting various ICT solutions for Torino Smart City, including the deployment of various sensors and the analysis of their outputs adopting a “big data” approach.

The role of the Nexa Center will focus on open data related issues and, more generally, on bringing an open point on view on the design of the platform.

8. TEACHING

There are several links between the activities of the Center and the teaching activities of the co-directors, faculty fellows and other fellows of the Center, including Marco Ricolfi, Juan Carlos De Marting, Ugo Pagallo, Alessandro Mantelero and several other fellows (e.g. Cristiana Sappa, Giancarlo Frosio, Federico Morando, Massimo Travostino, etc.), teaching - for instance - within the Master of the World Intellectual Property Organization in Turin.

Only the Digital Revolution undergraduate course at Politecnico di Torino is described here in detail because of its strong affinity with the Center both in terms of topics and people involved (from the professor to the teaching assistant, going through many guest lecturers).

8.1. “Digital Revolution”: an Undergraduate Course at Politecnico di Torino

A Politecnico di Torino course – trying to understand the times we are living

“Rivoluzione Digitale” (Digital Revolution) is a Politecnico di Torino course that aims to contribute to the education of future engineers and architects as digital individuals. The course is an elective one for the first year of the Bachelor in engineering or architecture. The course lecturer is prof. Juan Carlos De Martin, assisted by eng. Simone Basso (as teaching assistant) and Eng. Giuseppe Futia (who helps with video and audio recording).

For more info, refer to...

<http://rivoluzionedigitale.polito.it/>

8.1.1. Objectives

The course contribution to students' digital education is both theoretical and practical. On the one hand, lectures provided the multidisciplinary knowledge (technical, legal, etc.) required to understand the multiple aspects of the digital revolution. In this respect, indeed, technological skills alone are not sufficient sufficient to understand a change of this magnitude. Digital revolution effects are so deep and lasting, and range from business activities to culture, from politics to everyday life, that the traditional education of engineers and architects has to be complemented with selected legal, economic, historical and social knowledge, under a strong multidisciplinary approach.

On the other hand, students were also taught practical skills specifically related to the online realm, such as creating and maintaining a blog, properly interacting within a mailing list, and microblogging using Twitter and/or similar services. Therefore, at the end of the course students will not only understand the main reasons why the digital revolution represents a discontinuity with the past, with related problems and opportunities, but they will also acquire the practical skills necessary to develop their own advanced and conscious online presence.

8.1.2. Methodology

The course methodology consists of traditional classroom lectures and online activities. Classroom lectures will be mostly traditional, albeit interactive and with frequent guest lecturers. Questions and comments will be encouraged, and, when needed, there will be "break out" sessions for group-based work and discussion.

Online activity is different from traditional workshop and laboratories. Instead, the course hands-on part will consist of a mixture of three components: blogs, mailing lists and twitter.

Blogs will be maintained by a group of 3-4 student. At the beginning of the course students will be divided into groups, and each group will choose a topic related to the course program and open a blog. Group members will post (and sign with their name) reflections, links, photos, video, audio, etc., related to the chosen subject. Blogs will be available under a Creative Commons license and may be promoted, linked and/or advertised on Twitter, Facebook, Google+, YouTube, Flickr, etc.

The professor and its assistant will follow the evolution of blogs, whose content (frequency, relevance, quality) and success (ability to elicit comments, reblogs and links, etc..) will be an important component of the final evaluation. To encourage mutual learning, cross-comments, links, reblogs and, more generally, mutual attention between groups

will be positively evaluated as well (of course, provide that it is relevant and meaningful).

Groups are encouraged to produce and publish their own content and return something valuable to the Internet community. In particular, groups will be encouraged to choose topics that lead to interview people directly affected (or expected to be touched soon), in one way or another, by the effects of the digital revolution. Among the many possible examples: libraries, music stores, newsstands, etc.

Another positively-assessed valuable contribution is the Italian translation of documents of general utility for the course. This is not limited to text documents but encompasses also Italian subtitling of Internet-related videos, and, more generally, all the activities aimed at increasing the number and quality of Italian resources available for course participants and Italian online public at large.

Finally, any Italian-or-English Wikipedia edit that passes the scrutiny of Wikipedians will be much appreciated and positively evaluated. In this respect, each blog shall create a page listing successful Wikipedia edits by members of the group, providing all the details.

The second component of the course hands-on activities will be the course mailing list. All students are required to register and use it. In addition to learning how to follow discussions and contribute to a mailing list, students also need to understand when to use the blog, when the mailing list and when twitter.

The third and final online-activity component is the use of a twitter account. Each student will use its own account, and the group shall create and use a group account as well (eg., "@FutureOfTheBook"). Hence, students will also understand when to use their own account and when it's better to tweet using the group one.

Learning will be evaluated by averaging the evaluation of each student's online production and the evaluation of a final (individual) essay. Evaluation of the online production is conducted during the entire duration of the course (that is, until June 15th, 2012), and will amount to 60% of the final grade. The final essay will consist both of "closed" and "open" questions, to assess, respectively, learning of notions and concepts, as well as the student's communication and reasoning skills.

The course's best students (identified as such by the free judgement of the Professor) will be eligible for special forms of recognition, including:

1. being flagged to the Berkman Center for Internet & Society at Harvard University for an internship in the summer of 2013 (with part of the costs possibly covered by a Nexa Center's grant - to be confirmed);
2. being flagged for a stage / internship at the Nexa Center for Internet & Society at Politecnico di Torino;
3. being flagged for inclusion in prof. De Martin's mentorship program, which will be launched later this year (3 students per year, totaling 15 students);
4. being eligible to write their MSc thesis under the supervision of prof. De Martin.

8.1.3. Results

Here follows the list of guest speakers that provided lectures for the course, 3 weeks before the end of the course: prof. Angelo Raffaele Meo, free software as both a result and a fostering factor of digital revolution; prof. Marco Ricolfi, on the four determinants: code, law, social norms and individual behaviors; prof. Maurizio Ferraris, digital revolution as an epiphany of the human being to himself; dott. Stefano Quintarelli, economic

drivers of digital revolution; dott. Marco Zamperini, digital revolution and social experiences; prof. Mario Calderini, on digital revolution and innovation; dott. Anna Masera and dott. Luca De Biase, on digital revolution and journalism. Forthcoming guest lecturers will be prof. Carlo Olmo and prof. Charles Nesson. Guest lecturers videos are available online, on the public web site of the course <http://rivoluzionedigitale.polito.it>.

135 students were enrolled to the course, and 29 blogs were opened by 107 students. At the moment of writing this report, 3 weeks before the end of the course, there are 28 active blogs (managed by 99 students).

8.2. Outlook

The “Rivoluzion Digitale” undergraduate course will be held also in the next reporting period, of course with some modifications and taking advantage of the intense experimentation that characterized the first edition of the course.



9. FUNDING, ORGANIZATION, RELATIONSHIPS & COMMUNITY

This section provides some financial and budgetary information, some details about the internal functioning of the Nexa Center and a synthesis of the relationships of the Center with its community and with other institutions.

9.1. Budget Summary

The following table summarizes the total costs of the Center in 2011:

Research personnel		87,000 €
Other personnel		107,000 €
Other costs		123,000 €
event organization and communication	45,000 €	
travels (Nexa)	37,000 €	
travels (guests/speakers)	21,000 €	
equipment	5,000 €	
functioning costs (heating, phone, cleaning, etc.)	16,000 €	
Total costs		273.000 €

The “research personnel” entry does not include the cost of tenured personnel working for the Center (e.g. the co-directors).

“Other personnel” includes administrative personnel (Selina Fenoglietto and Maria Crea), personnel dealing with events and communication (Giuseppe Futtia), technical personnel (Luca Leschiutta) and an estimate of the cost of other managerial activities, which are not directly related to research (e.g. half of the cost of the managing director, Federico Morando).

The next table provides some estimates of the receipts that the Nexa Center will receive during 2012 and 2013 from its ongoing projects (expected funding is based on relatively conservative assumptions: funding related to ongoing relationships and agreements is listed there, even if there is not strict legal obligation to provide this funding, for instance because it is subject to the discretionary evaluations of some funding institutions, such as Regione Piemonte, but no funding is listed in case of simple submitted and unapproved project proposals):

9.Funding, Organization, Relationships & Community

Project	2012	2013
Nexa grant - Regione Piemonte	75,500 €	75,500 €
EINS Network of Excellence	33,600 €	67,200 €
Open-DAI	26,700 €	53,500 €
Google grant	12,500 €	13,000 €
EVPSI	42,200 €	
LAPSI	85,400 €	
Past projects leftover	47,500 €	15,800 €
SCREEN	24,700 €	
Total	348,100 €	225,000 €

The contribution of the Nexa Center to the budget of the Politecnico di Torino (though the quotas of some of its funded projects which are automatically held by the central administration or the DAUIN) is also increasing: it was just 5,260 € (with a small contribution of 900€ to the budget of our Department) in 2011, but it will be of at least 18,200 € (5,300€ of DAUIN quota) in 2012, while the current estimate for 2013 exceeds 22,700 € (5,700€ for the DAUIN).

9.1.1. Private Funding - Accountability and Transparency

The Nexa Center is aware of the importance for a research center of being and being perceived as independent and *super partes*. During the previous reporting period, the Nexa Center committed to the following guidelines concerning private funding:

1. the funding coming from each private entity should not exceed 5% of the receipts of the Center in a given year: this percent will be reexamined at each annual meeting of the Board of Trustees of the Nexa Center;
2. the relationship with private funders will explicitly provide that the Nexa Center accepts to undertake a certain research activity without being constrained by any previous indication or directive from the funder, apart from agreeing on the definition of the field of research;
3. the existence and the nature of private funding will be published on the website of the Nexa Center.

The guidelines have been carefully respected as far as point 2. and 3. above are concerned. About point 1., during 2011, the Nexa Center spent about 2,500 € of the total funding amounting to 12,500 € granted by Google in the context of the “Freedom of Expression Online in Italy” project. Thanks to a renewed agreement, the Nexa Center will spend in 2012 the leftover and in 2013 it will spend about 13,000 €. Hence, private funding remained below the 5% cap (implying a maximum funding of about 15,000 and 17,000 € in 2011 and 2012 respectively).

9.2. **Organizational Structure**

As far as the **internal management** of the Center is concerned, **the reporting period did not introduce major discontinuities**, for instance, the monthly steering meetings (involving the co-directors, the managing director and the administrative manager) continued to take place regularly, with a minor innovation represented by several online meetings when one of the co-directors, Juan Carlos De Martin, was visiting at the Berkman Center at Harvard University. At the same time, **a relevant addition to the staff of the Center reinforced the overall robustness and flexibility of internal management**: At the beginning of 2012, Raimondo lemma, a researcher with multidisciplinary interests and project management experience who already collaborated with the Center in the past, joined the staff. His entry created a certain degree of **redundancy with respect to some core research, management and policy support skills and competences** and made it possible, for instance, to submit some new project proposals, including a major one coordinated by the Center (i.e. the PROSA proposal, p. 83), or to gain new degrees of freedom with respect to the possibility of taking part in meetings, conferences and policy support initiatives at the national and international levels.

During the year of reference for this dossier, there were **only minor changes in the core staff of the Center**. The new administrative assistant, Maria Crea, left the Center after the end of the bulk of the Communia final reporting activity, but the administrative manager, Selina Fenoglio, was able to directly manage all the ongoing work (proving once again the importance of her contribution to the working of the Center). Moreover, Giuseppe Futia, who joined the Nexa staff at the beginning of 2011 with a part-time position as events and communications manager, became a full time member of the staff at the beginning of 2012.

9.2. **New Trustees**

During the reporting period, no new Trustees joined the Board of the Nexa Center for Internet & Society. However, three distinguished academics joined the Board toward the end of the previous reporting period, so that it's appropriate to mention them again in the report at end.

Prof. Urs Gasser is the Berkman Center for Internet & Society's Executive Director and he collaborated with the Nexa Center both in this capacity and before, as Faculty Director of the Research Center for Information Law at the University of St. Gallen.

Prof. Jean-Claude Guédon, Université de Montréal, joined the Board of Trustees after having spent three intense months as a visiting scholar at the Center. Before that, he already had strong relationships with the Nexa Center, in particular bringing his unparalleled knowledge about Open Access issues.

Prof. David Post, I. Herman Stern Professor of Law at the Beasley School of

Law at Temple University, also joined the Board. He inspired the fellows of the Nexa Center with his writings, most recently with his book *In Search of Jefferson's Moose: Notes on the State of Cyberspace* that he discussed during a Nexa seminar.

For all the bibliographies of the Trustees of the Nexa Center, please see below at p.106.

9.3. **Fellowships 2012**

A list of the Fellows of the Center is available at page 116 ff. of this Report.

Since its creation, the Nexa Center took advantage of the cooperation of a group of more or less strictly connected fellows, who provided countless insights and enriched the knowledge-sharing activity of the Nexa Center. The explicit model for this kind of interaction was the network of fellows of the Berkman Center for Internet & Society at Harvard Law School, obviously with several adaptations and on a smaller scale.

While the Fellows of the Nexa Center typically contribute *pro bono* to the activities of the center, some of them, the “Research Fellows”, perform a research specifically for the Nexa Center as a Ph.D. Student or with some kind of research grant (e.g., as “assegnisti di ricerca”). Finally, “Faculty Fellows” are tenured professors of the Politecnico di Torino or of the Università di Torino, which are the two universities forming the academic constituency of the Nexa Center.

Formally becoming a Fellow of the Nexa Center implies the membership in a closed mailing-list devoted to the Fellows, the possibility of taking part to internal “closed-doors” meetings at the Center (for instance, brainstorming sessions, but also the meeting of the Board of Trustees) and, of course, the possibility of publicly using the title of Fellow of the Nexa Center for Internet & Society, and of appearing as such on the website of the Nexa Center. On top of that, depending on their research proposals, fellows may receive a limited amount of financial support (defined on a case by case basis) and reimbursement for travel and similar expenses related to their approved projects related to the Center.

9.4. **Alliances and Cooperations**

Starting from April 2011, the Nexa Center for Internet & Society at Politecnico di Torino entered a Cooperation Agreement with the Berkman Center for Internet & Society at Harvard University. The agreement aims at creating a network among the parties to facilitate further cooperation, which will focus on projects of mutual interest on a case-by-case basis. At least one joint activity per year is foreseen and the agreement explicitly mentions potential cooperation in research projects, exchange of research scholars and joint executive education programs. Upon agreement by all the parties, the Agreement is open to additional members. The initial term of the agreement, which can be indefinitely renewed, is August 31st, 2015.

In April 2012, the Nexa Center for Internet & Society at Politecnico di Torino also announced the signing of a partnership agreement with the Internet & Society Lab at Keio University (Tokyo, Japan). The agreement provides for the development of joint research projects, seminars, conferences, courses as well as the exchange of researchers between the two research centers. The signing was preceded by the appointment in June 2011 of prof. Juan Carlos De Martin, co-founder and co-director of the Nexa Center, as Keio Senior Visiting Researcher. Furthermore, in early December 2011 prof. De Martin visited Keio University, giving a lecture to Japanese students and meeting with prof. Jun Murai, director of Internet & Society Lab, as well as Dean of the Faculty of Environment and Information Studies at Keio.

Further agreements are under negotiation at the international level (see below, p. 94).

Also at the national level the Nexa center has strategic partnership agreements, in particular, since May 2010, an agreement has been signed with the *Istituto di Informatica e Telematica* (IIT) of the Italian National Research Council (CNR di Pisa). This collaboration agreement is broad and flexible, but its main focus is related with the organization of the Italian Internet Governance Forum (see above, p. 63).

Other, less formal, cooperations concerning specific projects are ongoing, for instance with Lettera27 Foundation for Creative Commons Italia project (see above, p. 37) and with the During the last reporting period, the Nexa Center welcomed Felipe Busnello and with the WIPO LLM in Intellectual Property Law (organized by the University of Turin and directed by Marco Ricolfi), that already offered to three of its brilliant students an opportunity to spend some months as interns at the Nexa Center (see below).

9.5. *Visitors at the Nexa Center and “Nexians” Abroad*

During the reporting period, as part of the Nexa-Berkman collaboration, prof. **De Martin spent five months at Harvard as Berkman Center faculty fellow**. Also prof. **Alessandro Mantelero**, faculty fellow at the Nexa Center, has spent a month at the Berkman Center.

At the beginning of 2012, the Nexa Center also welcomed Felipe Busnello and Jesse Kim, two interns from the WIPO LLM in Intellectual Property Law (organized by the University of Turin and directed by Marco Ricolfi), who researched on (linked) open data related topics.

9.6. *Outlook*

About private funding (see above, § 9.1.1. *Private Funding - Accountability and Transparency*) the Center was able to respect the strict 5% cap that it decided to self-impose to its budget two years ago; however, these first two years of experimentation suggest a potential need to review the definition of the cap. In fact, a

strict 5% capping of private funding – depending on the amount of the yearly budget of the Center – could be insufficient to cover a single full time junior research assistant position (costing about 23,000 € per year). A more flexible and adaptive approach to the cap could be represented by the following rule (which will be discussed at the 2012 Board of Trustees): “the funding coming from each private entity should not exceed the highest of the following amounts: 5% of the receipts of the Center in a given year or the cost of a single full time junior research assistant position”.

The Fellowship program of the Nexa Center will continue during the next reporting period. The relationship between the Center and its cloud of fellows will remain very flexible, but we expect to make some efforts to explicit some of the goals of each fellow during the forthcoming period; at the same time, fellows will be asked to provide a short abstract of their activities during each reporting period, to the benefit of the rest of the Nexa community.

The Nexa Center also has a rich network of contacts with other academics, which are not as directly linked with the Center as the faculty fellows based at the Politecnico or at the University of Turin, but which are definitely part of the nexian community. The explicit awarding of a series of “Faculty Associate” titles during the forthcoming reporting period could help in increasing the connections within this network and with the rest of the community of the Center.

Finally, some developments are expected in the domain of international alliances and cooperation: in particular, the discussion to create a network of Internet & Society centers is ongoing and already involving institutions such as the current partners of the Nexa Center as the Berkman Center at Harvard University and the Internet & Society Lab at Keio University, but also - amongst others - the Institute for Internet and Society in Berlin, the Oxford Internet Institute and the MIT.



10. OUTREACH

This section summarizes the activities of the Nexa Center aimed at increasing awareness about the Center and its main fields of research. Notice that some project-specific activities of this nature have been described in previous sections.

10.1. Introduction

The outreach activities of the Center aims at implementing the suggestions emerged during the fourth meeting of the Board of Trustees. In that occasion it was stressed the importance to increase awareness of policy makers on the activities of the Center. As one of the consequences of that discussion, the Nexa Center has improved and translated in Italian the policy-makers guide “How the Internet Works” published by EDRi (European Digital Rights), an international advocacy group whose members have joined forces to defend civil rights in the Information Society.

For more information, refer to...

<http://nexa.polito.it/newsroom>

<http://nexa.polito.it/press-releases>

The agreements with the Berkman Center for Internet & Society at Harvard University and the Internet & Society Laboratory at Keio University have also increased the perception, in Italy, of the strong international vocation of the Nexa Center.

10.2. 3rd Annual Conference

For additional information (in Italian), including the biographies of all the speakers, see <http://nexa.polito.it/conf2011>.

On December 17th, 2011, the third yearly Nexa Conference on Internet & Society took place. The Conference presented the main results and themes of the Center in an accessible manner. It gathered more than 120 people interested in the Internet and related topics, including researchers, professionals and other experts.

One of the most important session of the Conference featured a keynote speech from Carlo Mochi Sismondi (ForumPA president) offering a strategic vision for ideas and projects to reform public administrations and to spread e-Government opportunities.

A lightning talks session was then used to present ideas for interesting projects and initiatives, and more generally to propose and discuss ideas with the community of friends and fellows of the Nexa Center (incidentally, this was the first experiment of this kind of format for the Center and it gave satisfactory results).

Finally, the last session described the state of the art of Creative Commons in Italy in 2012 (see p. 37 and www.creativecommons.it/CCIT2011).

10.3. Nexa Wednesdays

An established tradition of continuing innovation and exchange of opinions!

Since September 2008, the monthly meetings open to the public called Nexa Wednesdays have become customary for the Nexa Center fellows and friends. At the time of finalizing this report, forty-two Nexa Wednesdays have taken place (and one more is forthcoming before the Board Meeting). The regular time for the meetings is the second Wednesday of each month, from 18:00 to 20:00, and it is possible to follow all the meetings live over the Internet by streaming video (see <http://nexa.polito.it/upcoming-events>). A list of the Nexa Wednesdays meetings is available at <http://nexa.polito.it/mercoledì>.

Attendance at Nexa Wednesday as a rule exceeds 20 and sometimes 30 participants (thus, attendance frequently almost saturates the physical capacity of the Center's meeting room).

The purpose of these meetings is to promote an interdisciplinary exchange and to introduce new people to the discussion of issues related to Internet and Society. This is why, during these public meetings, Nexa Center staff and fellows devote specific attention to avoiding unnecessary technicalities and theoretical strictures.

This is a short summary of Nexa Wednesdays and related topics:

- **32nd Nexa Wednesday - To be or not to be (anonymous)? Reflections on surveillance and freedom:** June 8th, 2011; guest: **Silvia Bisi**.
- **33rd Nexa Wednesday: The Internet of everyone. The role of governments and civil society in the governance of the Network:** July 13th, 2011; guests: **Stefano Trumpy** and **Arturo Di Corinto**.
- **34th Nexa Wednesday: The next steps of the Nexa Center:** September 14th, 2011.
- **35th Nexa Wednesday: IGF 2011, the future of the Internet starts from Nairobi:** October 13th, 2011; guest: **Luca Belli**.
- **36th Nexa Wednesday: Update on the Nexa Center's reply to the AGCOM consultation on copyright:** November 9th, 2011; guests: **Marco Ricolfi**, **Carlo Blengino**, and **Alessandro Cogo**.
- **37th Nexa Wednesday: Urban Sensing, the life in cities in real time:** December 14th, 2011; guests: **Salvatore Iaconesi** and **Simone Arcagni**.
- **38th Nexa Wednesday: Open Cinema, the Web as platform for film production:** January 11th, 2012; guest: **Irene Cassarino**.
- **39th Nexa Wednesday: Risks and opportunities of Big Data phenomenon:** February 8th, 2012; guests: **Leonardo Camiciotti**, **Andrea Casalegno** and **Alessandro Mantelero**.
- **40th Nexa Wednesday: The "Digital Revolution" at the Politecnico**

di Torino: March 14th, 2012; guest: **Juan Carlos De Martin**.

- **41st Nexa Wednesday: The state of the art of computer and new technologies law:** April 11th, 2012; guests: **Massimo Durante** and **Ugo Pagallo**.
- **42nd Nexa Wednesday: Data Protection Today: Challenges and Perspectives:** May 9th, 2012; guests: **Eleonora Bassi** and **Maria Bottis**.

On top of the regular Nexa Wednesdays, the Center organized some additional seminars:

- Presentation of the book “**Abolire la proprietà intellettuale**”, with one of its authors, prof. **Michele Boldrin**: March 2nd, 2012.
- **Public Domain Day:** February 28th, 2012.
- Presentation of “**Liquidfeedback**”, the software used by the Pirate Party in Berlin (Germany) to define the political agenda for the elections of September 2011. **Carlo von Lynx**: April 11th, 2012.

For more information about seminars and other meetings, please see the page devoted to past events: <http://nexa.polito.it/past-events>.

10.4. Nexa Lunch Seminars

Since May 2012, the Nexa Center has launched a new series of meetings entitled “Nexa Lunch Seminar” that will ideally take place on the fourth Wednesday of the month, from 13.00 to 14.00. The first of these meetings was held on May 23rd: **# socialPA: forms and behaviors of public administrations on social media**; guests: **Giovanni Arata** and **Alessandro Lovari**.

The second meeting will be held on June 27th and will focus on a study concerning the environmental data of the City of Turin. The guests will be Alessandro Mantelero, fellow of the Nexa Center, Franco Tecchiati and Enrico Bayma from the Environment Department of the City of Turin.

10.5. New Website

A complete redesign of the Nexa Center's website (<http://nexa.polito.it/>) was deployed at the end of 2011. During the reporting period⁴ the website:

- has been able to collect a significant amount of traffic, with relevant indicators showing significant improvements since the previous report (about 22,600 visits – 12,200 unique – and 262,000 hits per month; while data for the previous year were: 14,300 visits – 3,500 unique – and 98,000 hits);

⁴ Unless otherwise stated the reporting period is May 2011 – April 2012 and the data are obtained analyzing our web server logs with an open source tool called webalizer <http://www.webalizer.org/>.

10. Outreach

- has been extensively linked on the Web; for instance, according to Google web-master tools, over 650 domains contain links to the Nexa Center's website (about 240 the previous year);
- had significant international exposure – during April 2012, about 84% of traffic came from Italy, about 3% from the US, about 2% from Germany and about 1% each from France, Belgium, Spain and Brazil.

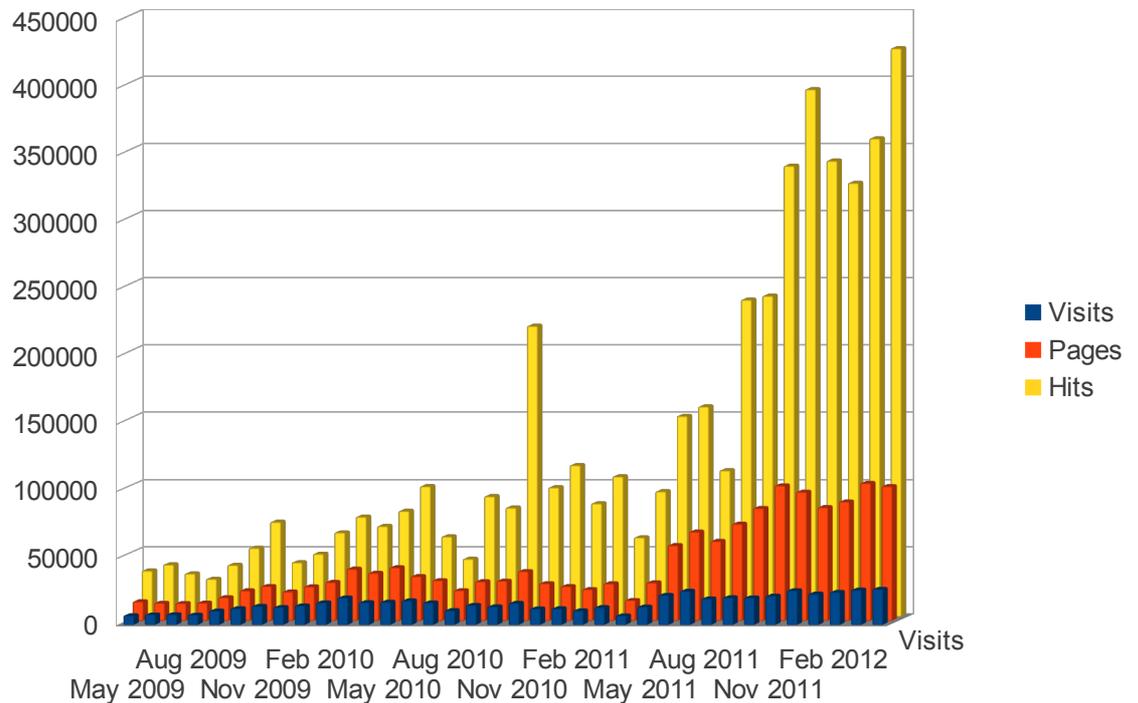


Illustration 3: Statistics of the Nexa Website since its creation

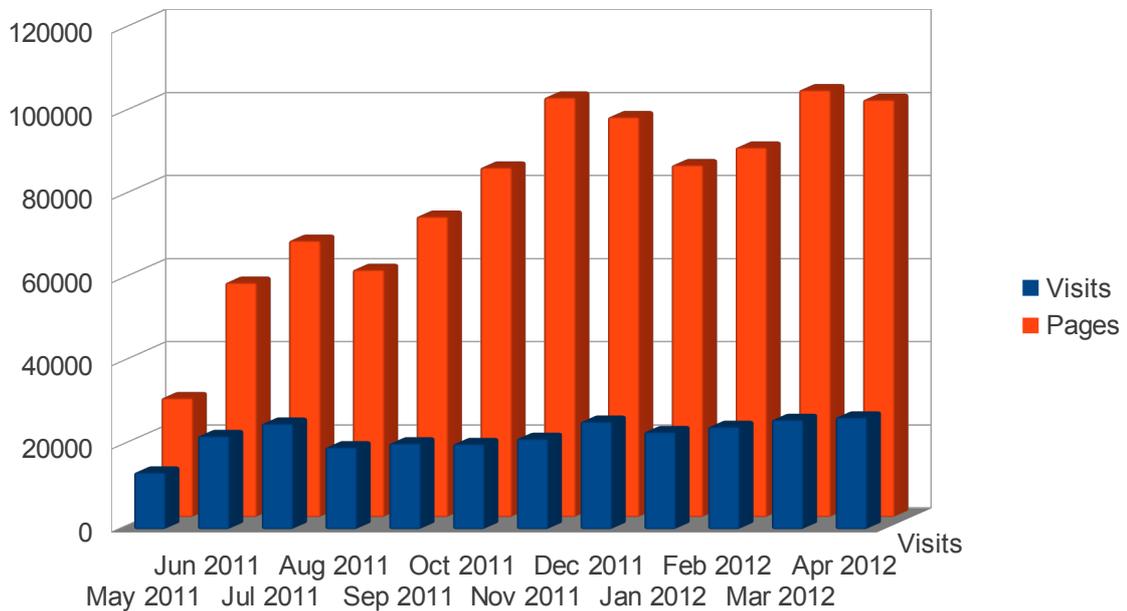


Illustration 4: Statistics of the Nexa website during the reporting period

The following graph depicts the Nexa web site page-views from October 2010 (beginning of measurements) up to now as registered by Google Analytics. The peaks are in conjunction with the annual conferences.



10.6. Media Exposure

The Nexa Center's press releases and news related to the center are spread by on-line newspapers and web radio, as well as traditional newspapers, such as “La Stampa”, “La Repubblica”, “Il Sole 24 Ore” and new journals such as “Il Fatto Quotidiano”. The co-directors of the Nexa Center gave various interviews to newspapers and radios (Rai Radio 3, Radio Radicale), both traditional and online. Also the Nexa Center fellows were often interviewed and some of them became contributors in blogs and online newspapers, addressing issues related to many research topics of the center. For example, the lawyer Carlo Blengino is now a blogger at “Il Post”, one of the most important online magazines in Italy (<http://www.ilpost.it/carloblengino/>). The co-director Juan Carlos De Martin continues his collaboration as op-ed contributor at “La Stampa”, confirming that

“Internet & Society” topic is becoming increasingly important in Italy. Some of the matters discussed in the editorials of prof. De Martin, including the appointment procedure of the executives of AGCOM (the authority for communications in Italy) have given rise to many discussions on social networks and on the Nexa mailing list. Many of discussions that took place in the Nexa mailing-list were also taken into blogs of prominent journalists such as Anna Masera (“La Stampa”) and Vittorio Zambardino (“La Repubblica”), extending the conversation beyond the list. (See <http://nexa.polito.it/newsroom>).

10.7. Mailing Lists and Social Media

To subscribe to the Nexa Center mailing-lists or access their archives, please visit <http://nexa.polito.it/mailling-lists>.

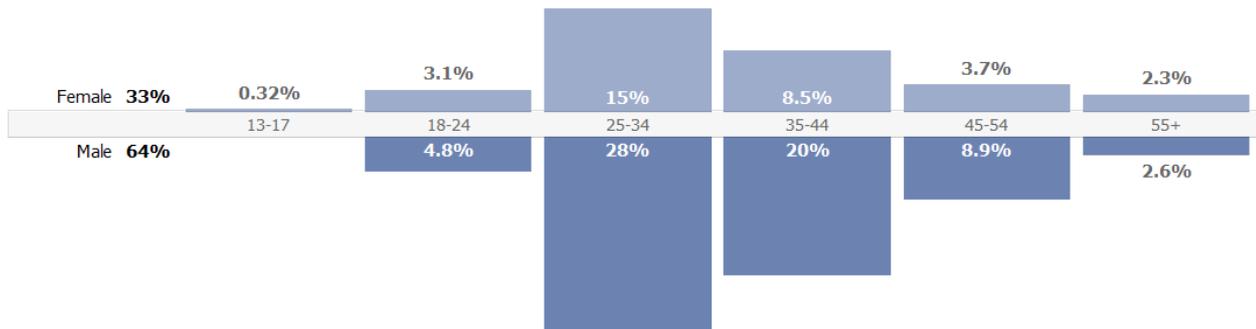
The Center has three main mailing-lists:

- the **Nexa-Fellows** mailing-list is a private list connecting the core Nexa Center collaborators; it is used for various purposes, including confidential communications and to coordinate the activities of the fellows on specific projects; the list has about 40 members (Nexa Center fellows and staff) and relatively low traffic (about 150 messages since April 2010);
- the **Nexa** mailing-list is used to inform all the fellows and friends of the Nexa Center about the events and publications of the Center, and to circulate information regarding books, reports and other materials about “Internet & Society” in general; the list is open to anybody, upon subscription, and all the members can both read and post new messages; the list has about 416 members (326 one year ago) and collected almost 2,200 posts since May 2011 (in the previous reporting period they were about 2,000);
- the **Nexa-Announce** mailing-list is a low traffic list used to spread information about Nexa Center public events and publications; it is open to anybody, upon subscription, in read only mode.

The Center also uses various internal mailing-lists to connect the members of the staff and/or some sub-sets of them working on specific projects. The general internal mailing-list of the staff of the Center saw about 700 posts since May 2011.

During the reporting period, the Center also increased the use of other on-line tools for its communications, such as the social networks Facebook (facebook.com/nexa.center) and Twitter ([@nexacenter](https://twitter.com/nexacenter)).

On Twitter, the center has 559 followers (176 the previous year) while, the total number of fans on Facebook is 622 (458 the previous year), with the following distribution:



The fans of the page come mainly from Italy (451) and the US (32), but also from the UK (16), France (13), Spain (10), Germany (10), Belgium (6) and other European and non-European countries.

10.8. Outlook

While some kind of outreach activities – such as the Nexa Wednesdays and the Nexa Conference on Internet & Society – seem to be on track and have a quite stable format, overall the outreach tools of the Center experimented a process of tumultuous innovations during the past reporting period and may need some fine tuning and a consolidation process. This process will include the systematic review of the website of the Center and the making available of some more pieces of content, including several videos. (Incidentally, the preparation of some other tools, such as paper and report templates to provide a uniform “brand image” of the Center, is also ongoing and will support this consolidation process.)

The Nexa Center is also considering the publication of a periodic newsletter. Another activity under consideration is the publication of a public version of this Report, in the form of a shorter and agile document (which could be prepared on the basis of the one at hand and published during the Fall, for instance in occasion of the annual Nexa Conference).

Finally, notice that in 2012 the annual Conference of the Nexa Center will not take place as an independent event; instead, it will be merged with the 2012 edition of the Internet Governance Forum Italia, taking place in Turin, October 18th-20th, 2012.

ANNEX I – NEXA PEOPLE

Some pieces of biographical information about the co-directors, staff, trustees and fellows of the Center follow.

1.1. Directors

Juan Carlos De Martin - Founder and Co-Director



Associate Professor at the Politecnico di Torino's Information Engineering School, where he leads, together with Prof. A.R. Meo, the Internet Media Group, he previously spent several years at Italy's National Research Council, two years as Visiting Scholar at the University of California, and two years in Dallas as Texas Instruments technical staff member and as adjunct professor at the University of Texas (2000) . Since 2005 he has been leading the Creative Commons Italy project, which he had co-founded in 2003, and in 2006 co-founded the Nexa Research Center for Internet and Society at the Politecnico di Torino.

Juan Carlos De Martin was the coordinator of COMMUNIA, the European Thematic Network on the digital public domain (2007-2011). In October 2007 he has been appointed Dean of the Libraries of the Politecnico di Torino. Juan Carlos De Martin is Faculty Fellow 2011-12 at the Berkman Center for Internet & Society at Harvard University and Senior Visiting Researcher at Keio University. Juan Carlos De Martin also serves as member of the Scientific Board of the Institute of the Italian Encyclopedia Treccani and of the Biennale Democrazia. He is a frequent op-ed contributor to "La Stampa", one of the Italian leading newspapers. He is also a IEEE member and author, or co-author, of over ninety international scientific publications.

Marco Ricolfi - Founder and Co-Director



Prof. Ricolfi, was born on 19.7.1952, received his degree at the Faculty of Law of the University of Turin on 1974. Master of Laws, Yale Law School, 1975-1976. He currently is professor of Intellectual Property Law at Turin Law School, where he also teaches Business Law. He is Director of the LL M in Intellectual Property, organized by Turin Law School together with WIPO and ILO.

I.2. Trustees

Phillip Aigrain



Dr. Philippe Aigrain was trained as a mathematician and theoretical computer scientist, and holds a Doctorate and a "Habilitation à Diriger les Recherches" qualification from University Paris 7. From 1972 to 1981, he worked in software engineering research labs of software companies. He was a research fellow at U.C. Berkeley in 1982. Since then, and before joining the European Commission in 1996, he headed research teams in the field of computer processing, indexing, retrieval and user interface for audiovisual media (video, music, still images). He is author of more than 50 research and technology assessment papers.

He is presently CEO of Sopinspace, Society for Public Information Spaces, a company founded by him in 2004. Sopinspace develops free software and provides commercial services for the organisation of public debates and collaborative work over the Internet. In parallel, he is active as an analyst of the stakes of the information revolution and engaged in actions for the reform of intellectual rights regimes. This is part of a long commitment to the development of technical tools, processes and social environments that help everyone to be more creative, more capable or critical thinking and constructive exchanges with others. He has authored two books on the information commons and related policy issues: *Cause commune: l'information entre bien commun et propriété*, Fayard 2005 (translated in Italian and Arabic), and *Internet & Création: comment reconnaître les échanges sur internet en finançant la création* (English update and translation, *Sharing: Culture and the Economy in the Internet Age*, forthcoming in 2011). His books and numerous papers about information commons, access to knowledge and intellectual rights are accessible under CC licenses on his blog.

Yochai Benkler



Yochai Benkler is the Berkman Professor of Entrepreneurial Legal Studies at Harvard, and faculty co-director of the Berkman Center for Internet and Society. Before joining the faculty at Harvard Law School, he was Joseph M. Field '55 Professor of Law at Yale. He writes about the Internet and the emergence of networked economy and society, as well as the organization of infrastructure, such as wireless communications. In the 1990s he played a role in characterizing the centrality of information commons to innovation, information production, and freedom in both its autonomy and democracy senses. In the 2000s, he worked more on the sources and economic and political significance of radically decentralized individual action and collaboration in the production of information, knowledge and culture. His work traverses a wide range of disciplines and sectors, and is taught in a variety of professional schools and academic departments. In real world applications, his work has been widely discussed in both the business sector and civil society. His books include *The Wealth of Networks: How social production transforms markets and freedom* (2006), which received the Don K. Price award from the American Political Science Association for best book on science, technology, and politics, the American Sociological Association's CITASA Book Award an outstanding book related to the sociology of communications or information technology, the Donald McGannon award for best book on social and ethical relevance in communications policy research, was named best business book about the future by Strategy & Business, and otherwise enjoyed the gentle breath of Fortuna. In civil society, Benkler's work was recognized by the Electronic Frontier Foundation's Pioneer Award in 2007, and the Public Knowledge IP3 Award in 2006. His articles include *Overcoming Agoraphobia* (1997/98, initiating the debate over spectrum commons); *Commons as Neglected Factor of Information Production* (1998) and *Free as the Air to Common Use* (1998, characterizing the role of the commons in information

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production and its relation to freedom); *From Consumers to Users* (2000, characterizing the need to preserve commons as a core policy goal, across all layers of the information environment); *Coase's Penguin, or Linux and the Nature of the Firm* (characterizing peer production as a basic phenomenon of the networked economy) and *Sharing Nicely* (2002, characterizing shareable goods and explaining sharing of material resources online). His work can be freely accessed at benkler.org.

Maurizio Borghi



Maurizio Borghi, Degree in Economics, second degree in Philosophy, PhD in Economic and Social History, is Research fellow at Bocconi University of Milan, where he teaches Cultural history and Philosophy. His recent research activity focuses particularly on intellectual property rights in historical and philosophical perspective. He is also developing research programs on history of philosophy, with special regards to phenomenology and hermeneutics, as member of a research group on translating Martin Heidegger's works in Italian. He has published a book on the history of copyright and of the book trade in Italy (*La manifattura del pensiero: Diritti d'autore e mercato delle lettere in Italia (1801-1865)*, Franco Angeli: Milan 2003) and some articles and papers on related subjects.

Mario Calderini



Mario Calderini has a PhD in Economics from the University of Manchester and he has a BSc and an MSc in Mechanical Engineering from Politecnico di Torino.

He teaches Management of Innovation and Technology Strategy at undergraduate, master and postgraduate level and in the Alta Scuola Politecnica. Mario sits in the scientific committee of the PhD program in Economics and Management of Technology at Politecnico di Torino and University of Bergamo and of the PhD program in Economics of Institutions and Creativity at University of Torino.

His main research interest is in the Economics and Management of Innovation. His numerous publications in international journals cover research and innovation management issues, technology policies and empirical studies on the determinants of innovative activity.

He has been involved in several research projects and his research has attracted funds and sponsorships to Politecnico di Torino from several Institutions such as the European Commission, the Italian Ministry for Research, the Italian Ministry of Industry, the Italian Authority for Communications and several research foundations, private consultancy companies, banks and industry associations. Mario Calderini is the delegate for Public Policies of the Fondazione COTEC per l'Innovazione Tecnologica, under the Honorary Presidency of Giorgio Napolitano, President of the Italian Republic. He is the co-director of Fondazione Rosselli's Laboratorio di Economia dell'Innovazione "Franco Momigliano" and has a permanent cooperation with Fondazione Giovanni Agnelli. He is currently a member of the Intellectual Property Rights Commission at Politecnico di Torino and a member of the Dean's board for Politecnico's Fourth Faculty of Management. Mario Calderini is also a member of the Scientific Committee of "Quaestio", the Lombardy Region System for Research and Technology Transfer Centres Evaluation, and sits in the permanent product liability working group established by the European Community in order to monitor the impact of Directive 85/374/CE on liability for defective products. In 2005 he joined the expert group of the United Nations Conference on Trade and Development (UNCTAD) with the task of peer reviewing the UN's World Investment Report 2005. In 2006 he was nominated by the Italian Delegation as an expert to the Administrative Council of the European Patent Office (EPO).

In the recent past, he was a member of the National Physics of the Matter Institute International

Evaluation Panel and the national representative in the European Commission's Board for Regional Technology Advisor Centre.

Luca De Biase



Luca De Biase is a journalist and writer. He is the founder and editor of Nòva, the science and technology crossplatform section at Il Sole 24 Ore. He is the president of Fondazione Ahref, which is meant to research and help improve the information ecosystem emerging in the social media. He is author of *Economia della felicità*, *Il mago d'ebiz*, *In nome del popolo mondiale* and *Cambiare pagina. Per sopravvivere ai media della solitudine*. He blogs at blog.debiase.com and lucadebiase.nova100.il-sole24ore.com. He edited with Giorgio Meletti *Bidone.com*. He contributed to the project and implementation of various initiatives, such as

Skillpass, ScienceXpress, I nonni raccontano, EquiLiber, Reporters Online. He teaches Journalism and social media at Iulm in Milan. He teaches Social media and international policy at Sciences Po, Paris.

Giulio De Petra



Giulio De Petra received his degree in Economics from the University of Siena, Italy. He worked in the service organization of BNL (Banca Nazionale del Lavoro) as expert in software design methodologies and in database administration. Later, he moved to the consulting division of IPACRI (Istituto per l'Automazione della Casse di Risparmio Italiane), where he was in charge of the research activities and projects. It has been senior consultant for the RSO Institute and it was for several years ICT advisor for the major of the city of Rome. He then became first executive manager in AIPA (Autorità per l'Informatica nella Pubblica Amministrazione) - public local administration division and later director-general for eGovernment at the Prime Minister's department of Public Administration where he promoted the first national plan for eGovernment. He then joined CNIPA (Centro Nazionale per l'Innovazione della Pubblica Amministrazione) leading as a director the public local administration department. Giulio De Petra then became general executive manager for Innovation before for the Autonomous Region of Sardinia and later for the Calabria Region and since 2010 he has been working at Informatica Trentina, as executive manager. It has been member of the Prime Minister's Committee for the Statistical Information Assurance and he was vice president of ASSINTER (National association of the regional public administration companies working in the ICT field).

Giulio De Petra founded and supported many national associations working on political and social issues related to technological innovation, including "ICT for Democracy", "Network", "The Net-Century – for a Free Knowledge Society".

Giulio De Petra founded and supported many national associations working on political and social issues related to technological innovation, including "ICT for Democracy", "Network", "The Net-Century – for a Free Knowledge Society".

Josef Drexl



Professor Dr. Josef Drexl, LL.M., graduated from the University of Munich and holds a Ph.D. degree (1990) and a habilitation degree of the same University, in addition to an LL.M. degree from the University of California at Berkeley.

Josef Drexl worked as a law professor at the Universities of Würzburg and Munich from 1997 to 2006; he continues to be a honorary professor at the University of Munich. Since 2002 he has been a director of the Max Planck Institute for Intellectual Property and Competition Law

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in Munich. In 2003, Professor Drexl was elected the first chair of the Academic Society for Competition Law (ASCOLA). As the Chair of the Managing Board of the Munich Intellectual Property Law Center (MIPLC) he is responsible for an internationally renowned LL.M. program in IP. He acted as a visiting professor at Oxford University, LUISS University (Rome) and New York University. He regularly teaches in the LL.M. program in EU law at the University of Paris 2 Panthéon-Assas. Professor Drexl is an expert in international and European competition law, intellectual property law, consumer law and WTO law.

Urs Gasser



Urs Gasser is the Executive Director of the Berkman Center for Internet & Society at Harvard University. He teaches at Harvard Law School, at the University of St. Gallen (Switzerland) and Fudan University School of Management (China). He is a visiting professor at KEIO University (Japan) and a Fellow at the Gruter Institute for Law and Behavioral Research.

Urs Gasser has written several books, is the co-author of "Interop: The Promise and Perils of Highly Interconnected Systems" (Basic Books, 2012, with John Palfrey) and "Born Digital: Understanding the First Generation of Digital Natives" (Basic Books, 2008, with John Palfrey) that has been translated into 10 languages (including Chinese), and has published over 70 articles in professional journals.

His research and teaching activities focus on information law and policy issues. Current projects, several of them in collaboration with leading research institutions in the U.S., Europe, and Asia, explore policy and educational challenges for young Internet users, the regulation of digital technology (currently with focus on cloud computing), interoperability, information quality, the law's impact on innovation and risk in the ICT space, and alternative governance systems. He graduated from the University of St. Gallen (J.D., S.J.D.) as well as Harvard Law School (LL.M.) and received several academic awards and prizes for his research.

Jean-Claude Guédon



Jean-Claude Guédon began his career at Glendon College (York University) in Toronto, Ontario in 1970 and has been a professor at the Université de Montréal since 1973, first in the Institut d'histoire et de sociopolitique des sciences, and, since 1987, in the Département de littérature comparée. He is a long-time member of the Internet Society serving as co-chair of the program committee in 1996, 1998 and 2000, and member of the same committee in 1997, 1999 and 2002.

In 1991, with Bill Reading and Walter Moser, he launched the first electronic scholarly journal in Canada: *Surfaces*. Between 1998 and 2003, he was Chair of the Advisory Board for CNSLP (Canadian National Site Licence Project, now known as CRKN (Canadian Research Knowledge network). From 2002 until 2006, he was a member of OSI's Information Program sub-board. Between 2003 and 2007, he was a member of the Advisory Board of eIFL (Electronic Information for Libraries). In 2006 he was elected (until November 2008) Vice-President of the Canadian Society for the Humanities and Social Sciences.

He has advised numerous governmental bodies, including the Ministère de la Recherche (France) for their e-publication project in the humanities and the social sciences; the Agence de la francophonie for matters pertaining to new technologies; the Quebec Minister of Communication in

charge of the information highway; and the Quebec Ministry of education for the integration of the new technologies into the curriculum. He regularly acts as expert for the European Commission. He is also on the editorial board of several journals, and his three books are all available in Italian.

Anna Masera



Anna Masera graduated in History at Yale in 1983. In 1984 she was awarded a master degree in journalism from the Columbia University. In 1986 she started to work as journalist for Italia Oggi, an Italian daily newspaper. Then she worked for the press agency Reuters and later for Mondadori, writing for two monthly magazines: Fortune Italia and Espansione.

In the meantime she was also a consultant for the talk show Milano, Italia of the Italian public broadcaster. She started to work for Panorama "life and style" section in 1994 when Internet started to gain widespread diffusion.

Since then she is following the development of new media: first she founded Panorama Web, then she was hired by La Stampa in 1999 to launch their website. She is currently deputy editor and blogger for LaStampa.it and she also blogs on the Guardian.

Angelo Raffaele Meo



1961-1969 Assistant Professor of Electrical Engineering at Politecnico di Torino.

1970- Full Professor of Computer Science at Politecnico di Torino.
1970-1999 head of "Centro per l'Elaborazione Numerale dei Segnali" CNR.

1979-1985 director of the "Progetto Finalizzato Informatica", CNR.

1991-1996 scientific director of "Centro di Supercalcolo Piemonte".

He has published more than one hundred papers dealing with computer science. In particular, he investigated switching theory, hardware design, signal processing, speech analysis and synthesis, and pattern recognition. He has coordinated many academic and industrial national research projects on computer science. He was president of the Academy of Sciences of Torino. In 2002 he was called by the Italian Minister of Technology to preside at a Commission entrusted with the task of promoting open source in the Italian Public Administration.

Charles Nesson



Charles Rothwell Nesson is the William F. Weld Professor of Law at Harvard Law School and the founder of the Berkman Center for Internet & Society and of the Global Poker Strategic Thinking Society. He is author of Evidence, with Murray and Green, and has participated in several cases before the U.S. Supreme Court, including Daubert v. Merrell Dow Pharmaceuticals. In 1971, Nesson defended Daniel Ellsberg in the Pentagon Papers case. He was co-counsel for the plaintiffs in the case against W.R. Grace that was made into the film A Civil Action.

Nesson attended Harvard College as an undergraduate, and then Harvard Law School where he joined the list of only a handful of people in history to have graduated summa cum laude. Nesson was a law clerk to Justice John Marshall Harlan II on the United States Supreme Court, 1965 term. He then worked as a special assistant in the Department of Justice Civil Rights Division. His first case, White v. Crook, made race and gender-based jury selection in Alabama unconstitutional. Nesson joined the Harvard Law School faculty in 1966, and was tenured in 1969.

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He is "currently leading a project to reify university as a meta player in cyberspace, to legitimize and teach poker and the value of strategic poker thinking, and to advance restorative justice in Jamaica". In 2006 he taught *CyberOne: Law in the Court of Public Opinion* with Rebecca Nesson and Gene Koo. He teaches courses in the law and practice of Evidence (how to prove the "truth"), Trials in Second Life, and a reading group with Fern Nesson on Freedom.

Michelangelo Pistoletto



Michelangelo Pistoletto was born in Biella in 1933. He began to exhibit his work in 1955 and in 1960 he had his first solo show at Galleria Galatea in Turin. An inquiry into self-portraiture characterizes his early work. In the two-year period 1961-1962 made the first Mirror Paintings, which directly include the viewer and real time in the work, and open up perspective, reversing the Renaissance perspective that had been closed by the twentieth-century avant-gardes. These works quickly brought Pistoletto international acclaim, leading, in the sixties, to one-man shows in important galleries and museums in Europe and the United States.

The Mirror Paintings are the foundation of his subsequent artistic output and theoretical thought.

In 1965 and 1966 he produced a set of works entitled *Minus Objects*, considered fundamental to the birth of *Arte Povera*, an art movement of which Pistoletto was an animating force and a protagonist. In 1967 he began to work outside traditional exhibition spaces, with the first instances of that "creative collaboration" he developed over the following decades by bringing together artists from different disciplines and diverse sectors of society. In 1975-76 he presented a cycle of twelve consecutive exhibitions, *Le Stanze*, at Galleria Stein in Turin. This was the first of a series of complex, year-long works called "time continents". Others are *White Year* (1989) and *Happy Turtle* (1992).

In 1978, in a show at Galleria Persano in Turin, Pistoletto defined two main directions his future artwork would take: *Division and Multiplication of the Mirror* and *Art Takes On Religion*. In the early eighties he made a series of sculptures in rigid polyurethane, translated into marble for his solo show in 1984 at Forte di Belvedere in Florence. From 1985 to 1989 he created the series of "dark" volumes called *Art of Squalor*. During the nineties, with *Project Art* and with the creation in Biella of *Cittadellarte - Fondazione Pistoletto* and the *University of Ideas*, he brought art into active relation with diverse spheres of society with the aim of inspiring and producing responsible social change. In 2003 he won the Venice Biennale's Golden Lion for Lifelong Achievement. In 2004 the University of Turin awarded him a laurea honoris causa in Political Science. On that occasion the artist announced what has become the most recent phase of his work, *Third Paradise*. In 2007, in Jerusalem, he received the Wolf Foundation Prize in the Arts, "for his constantly inventive career as an artist, educator and activist whose restless intelligence has created prescient forms of art that contribute to fresh understanding of the world."

David Post



David Post is currently the I. Herman Stern Professor of Law at the Beasley School of Law at Temple University, where he teaches intellectual property law and the law of cyberspace. He is

also a Fellow at the Center for Democracy and Technology, a Fellow of the Institute for Information Law and Policy at New York Law School, an Adjunct Scholar at the Cato Institute, and a contributor to the influential Volokh Conspiracy blog.

Professor Post is the author of *In Search of Jefferson's Moose: Notes on the State of Cyberspace* (Oxford, 2009), a Jeffersonian view of Internet law and policy. He is also coauthor of *Cyberlaw: Problems of Policy and Jurisprudence in the Information Age* (West, 2007), and numerous scholarly articles on in-

lectual property, the law of cyberspace, and complexity theory. He has been a regular columnist for the American Lawyer and InformationWeek, a commentator on the Lehrer News Hour, Court TV's Supreme Court Preview, NPR's All Things Considered, BBC's World, and recently was featured in the PBS documentary The Supreme Court.

After receiving a Ph.D. in physical anthropology, he taught in the Anthropology Department at Columbia University before attending Georgetown Law Center, from which he graduated summa cum laude in 1986. After clerking with then Judge Ruth Bader Ginsburg on the DC Circuit Court of Appeals, he spent 6 years at the Washington D.C. law firm of Wilmer, Cutler & Pickering, after which he then clerked again for Justice Ginsburg during her first term at the Supreme Court (1993 - 1994), before joining the faculty of the Georgetown University Law Center (1994 - 1997) and then Temple University Law School (1997 - present). Professor Post's writings can be accessed online at www.davidpost.com.

Stefano Quintarelli



Stefano Quintarelli is a serial entrepreneur (and prolific blogger), who pioneered the commercial development of Internet in Italy.

He graduated in IT science at the University of Milan. In 1989 he founded MI.NE.R.S. (Milano Network Researchers and Students), the student telecom association that developed the first e-mail independent system in Italy.

In 1994, he was one of the founder of I.NET, the first commercial ISP in Italy for professionals, that hosted the Milan Internet Exchange (MIX), the first and most important exchange point of ISP traffic in Italy, he also contributed to the birth of AIIP the Italian association of Internet Providers.

He was one of the founding members of: CLUSIT, Italian association for IT security; AIPSI, Italian association of professionals of IT security (Italian division of ISSA.org); Equiliber, Association for balanced information on technology innovation; VoIPex, consortium for interoperability, quality and transparency of IP services.

He has been a supporter of civic IT backing the first civic networks in Italy (e.g. RCM the civic network of Milan and ONDE - Online Desenzano). He promoted the birth of DMIN.IT, the forum on digital media development in Italy, coordinated by Leonardo Chiariglione (the president of MPEG).

He is a supporter of network neutrality and knowledge sharing and he sustained since the beginning the activities of Condividi la Conoscenza, the conferences organized by sen. Fiorello Cortiana and in 2005 he introduced in Italy the network neutrality topic in a congress with Lawrence Lessig and in other occasions.

He is author of many books and papers on Internet published on the most important Italian newspapers and he is scientific coordinator of updating workshops on technological topics for the Italian finance community.

He chaired the Italian ISP association (AIIP) till January 2007, he is a member of the Programming committee of Federcomin (innovation services of the Italian federation of industry)

He has been awarded by Corriere della Sera - Economia as one of the 30 most innovative Italian entrepreneurs.

Stefano Rodotà



Stefano Rodotà is Professor of Civil Law, University of Rome; Chairman of the Italian Data Protection Authority; Former Chairman of the European Group of the Data Protection Authorities Chairman of the Commission on Genetic Testing and Counselling; Member of the European Group on Ethics in science and technologies, Member of the Convention drafting the Charter of Fundamental Rights of the European Union (2000); Former Member of the HUGO Ethics Committee (1997-2000); Member of the Ethics Committee of the National Research Council; Work in the field of the legal and social effects of scientific innovation (1972-2000); Important work in the field of bioethics (1989-2000); Author of several books and editor of a number of periodicals; Member of the Italian Parliament (1979-1994); Vice-President of the Chamber of Deputies (1992); Member of the Parliamentary Assembly of the Council of Europe (1983-1994); Member of the European Commission's Group of Advisers on the Ethical Implications of Biotechnology (1994-1997); Member of the European Group on Ethics (since 1998); Chairman of the European Group of Authorities for the Protection of Privacy (1999-2000).

Sacha Wunsch-Vincent



Dr. Sacha Wunsch-Vincent is Senior Economic Officer in the Office of the Chief Economist of the World Intellectual Property Organisation in Geneva. Before joining the WIPO, he was Co-Leader of the Innovation Strategy at the Science, Technology and Industry Directorate of the Organization for Economic Co-operation and Development (OECD) in Paris. Previously, he was a Swiss National Science Fellow at the Berkeley Centre for Law & Technology (University of California) and at the Institute for International Economics, in Washington, D.C.. He also worked as economist at the International Trade Center (UNCTAD&WTO). He publishes and works on newer generation trade and technology issues and serves as an advisor with a number of institutions such as the World Economic Forum, the UN ICT Task Force, and the World Bank. He teaches international trade at the Institut d'Etudes Politiques de Paris (Sciences-Po) and at the World Bank Institute. Sacha holds a Masters of International Economics (MER-IT, University of Maastricht) and a PhD in Economics (University of St. Gallen).

1.3. Staff

Federico Morando - Managing Director & Research Fellow



Federico Morando is an economist, with multidisciplinary research interests focused on the intersection between law, economics and technology. He also teaches intellectual property law at Bocconi University in Milan and is an associate editor of the IJCLP. He holds an undergraduate degree in Economics from Bocconi Univ., a M.Sc. in Economic theory and econometrics from the Univ. of Toulouse and a Ph.D. in Institutions, Economics and Law from the Univ. of Turin and Ghent. He joined the Nexa Center since the beginning of its activities. From Dec. 2008, he is the first managing director of the Center.

Raimondo Iemma - Staff Research Fellow



Raimondo Iemma holds a master's degree in Industrial engineering from the Politecnico di Torino. Prior to joining the Nexa Center in 2012, he worked as researcher at Fondazione Rosselli and as project manager at Cotec, an Italian think tank on innovation policy. He has been involved in several EU projects in the fields of economics of science / technology foresight and, since 2009, in EVPSI. His research activity at the Nexa Center covers the assessment of costs and economic and social impact of Open Data models, also applied to Public Sector Information, from a multidisciplinary 'Internet Science' perspective. In particular, Raimondo contributes to the ongoing projects of the Nexa Center, and in particular to the research carried out within EVPSI (economic aspects), Open-DAI (data assessment and sustainability models) and the network EINS.

Selina Fenoglio - Administrative Manager



Selina Fenoglio joined the Nexa Center for Internet & Society in May 2009 as administrative assistant. She holds a Bachelor degree in Economics from the University of Torino and her former experiences include the administrative management of projects funded by the European Commission, the World Bank and the Italian Foreign Office. From December 2010, she is the administrative manager of the Center.

Luca Leschiutta - IT Manager



After graduating in Electronic Engineering, he pursued a PhD in Information Technology at Politecnico di Torino, where he currently is a post-doc researcher in the Internet Media Group. His preferred fields have always been image compression and wireless networking. He also teaches programming and networking courses, and in the past he worked at Alenia Spazio, where he was mostly involved in the ISS project.

Giuseppe Futia – Communication Manager



Giuseppe Futia joined the Nexa Center for Internet & Society in February 2011. He holds a Master Degree in Cinema and Media Engineering in 2011 and from 2008 he collaborates regularly with La Stampa daily newspaper. In Nexa he is in charge of communication and press office. More specifically, Giuseppe's main responsibilities consist in keeping contact with media and following Nexa's Image.

I.4. Fellows

Ugo Pagallo - Faculty Fellow 2011-2012



Ugo Pagallo is a Full Professor in Philosophy of Law at the University of Torino, Law School, since 2000, Faculty at the Center for Transnational Legal Studies (CTLS) in London, U.K., and Visiting Professor of Comparative Privacy Law at Georgetown Law School in Washington, D.C. He is editor of the Digitalica series published by Giappichelli in Turin and co-editor of the AICOL series by Springer. Since 2008 he is member of the Programme Committee of ETHICOMP. In addition to numerous essays in scholarly journals like *Journal of Business Ethics*, *AI & Society*, *Journal of Information, Communication and Ethics in Society*, *Hobbes Studies*, *Journal of Chinese Philosophy*, *Apuntes filosóficos*, and so forth, he is the author of eight monographs. His main interests are AI & Law, Network theory, Robotics, and Information Technology Law (specially data protection law and copyright).

Alessandro Mantelero - Faculty Fellow 2011-2012



cloud computing.

Alessandro Mantelero is Confirmed Assistant Professor at Politecnico di Torino, Fourth School of Engineering Management and Industrial Engineering, where he teaches Private Law. He graduated cum laude in Law at the University of Turin on 1998. Ph.D. in Civil Law from the same University. Alessandro is author of numerous publications, among which are the following: *Attività di impresa in Internet e tutela della persona*, CEDAM, Padova, 2004, and *Il costo della privacy tra valore della persona e ragione d'impresa*, Giuffrè, Milano, 2007. He is currently focusing his studies on data protection, ISP liability and legal implications of

Simone Basso – Research Fellow 2011-2012



Simone Basso received the Bachelor and the MoS in Computer Engineering from Politecnico di Torino, in 2006 and 2009 respectively. He joined the Nexa Center for Internet & Society as a fellow in November, 2009. His research interests include traffic management, network neutrality, peer to peer networks, streaming, kernel-level programming, and wireless transmission and drivers. He currently is a PhD student in Information and System Engineering at Politecnico di Torino with the Internet Media Group and the Nexa Center.

Federico Cairo – Research Fellow 2012



Federico Cairo, graduated in Philosophy at the Collegio Superiore of University of Bologna (2005) and in Media Engineering at Politecnico di Torino (2008), is currently a Ph.D. student at the Interuniversity Department of Regional and Urban Studies and Planning (DIST) of Politecnico di Torino. His research mainly focuses on Semantic Web technologies for digital libraries and ontology-based search engines. After collaborating as an ontology engineer with CSI-Piemonte and CELI on the projects CoOPERARE (2010), dati.piemonte.it (2010), OPSA (2011), he was awarded a “Working Capital - Premio Nazionale Innovazione” by

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Telecom Italia for the project TellMeFirst (2011), an ontology-based document enhancer. He is now a research fellow at the Nexa Center for Internet & Society, working on Open-DAI (2012) and other projects about Linked Open Data publication and reuse.

Andrea Cairola - Research Fellow 2011



Andrea Cairola is a journalist, a video maker and an expert in international cooperation in the field of media development and promotion of press freedom. Recently, he produced and hosted a current-affairs TV series about investigative journalism for Current Tv Italy and launched the proposal to create in Italy a Center for Investigative Reporting. In the past, he produced video contributions aired on Report, prime-time investigative programme on the Italian public broadcaster; cooperated with Italian national newspapers La Stampa and Il Fatto and other news-magazines. He also collaborated with other publications about

comparative media law and freedom of information. Furthermore he authored documentaries for international broadcasters, such as *Citizen Berlusconi*.

From 2003 to 2008 he joined the UNESCO, with the mandate to promote free flow of information and freedom of expression. In the meantime, he dealt with international cooperation to develop pluralist, independent, professional media in conflict/post-conflict environments (e.g. Afghanistan, Kazakistan, Central African Republic, Balkans, etc.). He has also supervised the editing of publications about comparative media law and freedom of information.

Andrea Cairola holds a degree in Economics at the Bocconi University of Milan, a MA in International Journalism from the City University of London and a diploma as Media Law Advocate by the Programme in Comparative Media Law and Policy of the Oxford University.

Elias Carotti - Research Fellow 2011-2012



Elias S. G. Carotti received the Master's degree in Computer Engineering in 2000, and the PhD degree in computer engineering in 2004, both from the Politecnico di Torino, Turin, Italy. In 2003 he was a Visiting Researcher at the Electrical Engineering department, Penn State University, State College, PA, where he worked on joint source channel decoding for predictively encoded sources. He is currently a PostDoc researcher at the Politecnico di Torino. His main research interests are image and video coding (especially focusing on lossless coding) and biomedical signal coding and more recently online social networks.

Corrado Druetta – Research Fellow 2011



Corrado Druetta joined the Nexa Center in March 2009 as intern, working on Communia Project. Holding a Bachelor degree in International and Public Law and a Master's degree in Law from the University of Turin (Italy), he is attending the Certificate of Transnational Law program at the University of Geneva (Switzerland).

His research interests are focused on the impact of new technologies on both public and private law.

Giancarlo Frosio – Research Fellow 2011-2012



Giancarlo Frosio is a qualified attorney with a law degree from Università Cattolica in Milan, an LLM in information technology and telecommunications law from Strathclyde University in Glasgow and an LLM with emphasis in intellectual property law from Duke University in Durham, NC. He is currently completing his doctoral degree in intellectual property law at Duke University Law School under the supervision of Professor J. H. Reichman. His doctoral research focuses on copyright law, public domain, Internet and user based creativity. He is also author of numerous legal articles and publications. In March 2010, Giancarlo joined the Communia project as chief editor of the Final Strategic Report on the digital public domain in Europe.

Cristiana Sappa – Research Fellow 2011-2012



Dr. Cristiana Sappa holds a degree in Business Law, a post-graduate diploma in Intellectual Property and New Technologies and a PhD in Private Law, major Intellectual Property Law and Competition, which are now her main research fields, with a particular interest in digitization related legal issues. She is currently project manager of two public sector information related projects: the LAPSI European thematic network and the EVPSI regional research project.

Mauro Alovisio – Fellow 2012



Mauro Alovisio graduated in Law at the University of Turin, Italy. He has specialized in Defense of Privacy, Personal Data and New Technologies Law. Currently he is working at the Legal Office of the University of Turin. Mauro is author of scientific articles published in Italian journals and co-author on law books. He is a member of the Scientific Committee of the "Centro Studi di Informatica Giuridica" and of the "Commissione Informatica del Consiglio dell'Ordine degli Avvocati di Torino". As part of his Nexa fellowship, Mauro will focus on research topics related to personal data in the EVPSI project and within the implementation of pilots in the Open-DAI project, also touching other issues related to public administrations in digital environment.

Claudio Artusio - Fellow 2011-2012



Claudio Artusio graduated in Law at the University of Turin in 2009. He started collaborating with the Nexa Center during the spring of 2010, collecting material and news to post on the Creative Commons Italia website. He is currently managing the contents of the EVPSI Research Project website along with the contents of the LAPSI Thematic Network website. Furthermore, he is involved in the EVPSI Research Project studying the potential connections between distinctive signs (in

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particular, but not only, Trademarks) and Public Sector Information.

Eleonora Bassi – Fellow 2012



Eleonora Bassi holds a Degree in Law (cum laude) and a PhD in Philosophy of Law and Legal Theory (University of Turin). Her main research fields are legal theory, privacy and data protection law and fundamental rights. She has been involved in the EVPSI project and in the LAPSI Thematic Network studying privacy issues related to open data policies. As part of her Nexa fellowship, Eleonora will contribute to the drafting of the policy recommendations related to data protection of the LAPSI project and she will also support the development of some pilots that require the treatment of personal data in the Open-DAI project.

Lorenzo Benussi - Founding Fellow



Lorenzo Benussi, Master's degree in Communication Sciences and PhD in Economics of Innovation, is Business Developer at the TOP-IX Consortium where he is appointed to support the development of innovative projects and research fellow of the Nexa Centre. Prior to joining TOP-IX, he was research fellow at the University of Turin and the University of Manchester where he taught and conducted researches on the economics and management of innovation and he was co-director of OpensourceLab. His main interest, both as professional and researcher, is the evolution of ICT due to the pervasive diffusion of digital

networks.

Enrico Bertacchini – Founding Fellow



Dr. Enrico Bertacchini graduated in Economics at the University of Turin and holds a Master in Economics from CORIPE – Collegio Carlo Alberto and a Ph.D. in Institutions, Economics and Law from the Universities of Turin and Gent. He is a researcher at the Department of Economics at the University of Turin. His main interests within the “Internet & society” field concern Internet as an infrastructure for the production of and access to information goods and the economic analysis of the information society. He has multidisciplinary competences concerning the economics of culture and the economic analysis of intellectual property and on the , with a particular focus on the dynamics of production of and access to information goods.

Silvia Bisi – Fellow 2011-2012



Silvia Bisi joined the Nexa Center for Internet & Society as a fellow in January 2010. She's a lawyer, with a Post-graduate Master of first level in IT Law and Legal Informatics and a PhD on the same subject from the University of Bologna. Her research interests are mainly focused on data protection issues and, more generally, ICT and fundamental freedoms issues. Her research project at Nexa is about anonymity of Internet users and aims to analyse the consequences on privacy, fundamental freedoms, innovation and business models of a duty to identify users and track their on-line activities.

Carlo Blengino – Fellow 2011-2012



Carlo Blengino is a lawyer and a partner of the legal firm “Studio Legale Catalano Penalisti Associati” in Turin. He deals exclusively with criminal law cases, with special reference to culpable crimes, professional liabilities, economics criminal laws, intellectual property rights, crimes involved with IT and new technologies, defense of privacy and personal data. Since the early nineties, he has debated in law courts the main issues of copyright, from CDs rental to campaigns for file sharing (among his many defenses, the one in the well-known sentence on downloading -Cass.149/07- and the defense of many users in the Peppermint case).

He thus gained a concrete experience of sanctions in the area of copyright law. He is a member of the IT Commission within the Bar Council of Turin. He contributes to several on-line magazines, to the magazine *Diritto dell’Informazione e dell’Informatica* of the Calamandrei Foundation and his works are published by Giappichelli Editore, UTET Giuridica and EGEA.

Nicola Bottero – Founding Fellow



Nicola Bottero is a practicing lawyer with a degree in Law from the University of Turin with a thesis on comparative law. He also graduated in the Intellectual property Specialization Course jointly organized by the University of Turin and the WIPO Academy. On top of practicing private law, industrial law and commercial law, works with the Chairs of Commercial and Industrial Law at the Law Faculty of the Universities of Turin and of Eastern Piedmont. He also teaches industrial law within some master degrees. He has been a member of the working group of Creative Commons Italia since its beginnings in 2003.

Irene Cassarino – Fellow 2011-2012



Dr. Irene Cassarino holds a degree in Management Engineering a PhD from the Polytechnic of Turin. She also studied at the ARC Centre for Innovation in Creative Industries in Brisbane, Australia, at SPRU (Science and Technology Policy Research), University of Sussex, Brighton, UK, and the MIT Sloan School of Management in Boston. Her PhD dissertation discusses the impact of the Internet and of digital (re)production tools on industries, whose production model has been traditionally based on their control on the reproduction of creative works: music, literature, cinema. Her findings have been presented in journals and

conferences all over the world. She collaborated as a research assistant with the Dpt. of Production Systems and Business Economics of the Polytechnic of Turin, with the Oxford Internet Institute of the University of Oxford and with the Piedmont Regional Government in the policy advisory staff of the Ministry for Research and Innovation. She currently works as open innovation expert at Experientia, an international experience design consultancy based in Turin.

Marco Ciurcina – Founding Fellow



Marco Ciurcina is an Italian lawyer, working in the field of commercial and contract law, Information Technology law, Copyright, Patent and Trademark law. He teaches Law and ethics of communication at the Politecnico di Torino, Faculty of Information Engineering. President of the Associazione per il software libero (www.softwarelibero.it), member of Hipatia (www.hipatia.net) and member of the working group of Creative Commons Italia since its beginnings in 2003.

Alessandro Cogo – Founding Fellow



Dr. Alessandro Cogo received his degree at the Faculty of Law of the University of Turin on 2002. He holds a PhD in Intellectual Property Law from the Universities of Pavia and Munich. Author of essays, commentaries and case comments, he is currently focusing his studies on the management of copyright and related rights.

Deborah De Angelis – Founding Fellow



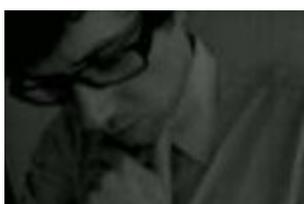
Deborah De Angelis has a degree in Law from Luiss University in Rome; in January 2000 she became a lawyer specialized in digital music law. In 2001 she founded the legal office DDA. She also authored various publications in matters relating to authors' digital rights and to the working of collecting societies. In May 2004 she became a member of the Creative Commons Italy working group. Since January 2008 she is the President of A-DJ, an international associations who cares legally protecting and promoting professional DJs.

Carolina di Vonzo – Fellow 2011



Carolina Cordero di Vonzo has a degree in law from the University of Turin and is currently working as an intern in a law firm. Some of her topics of interested within the "Internet & society" field concern: intellectual property rights on music and the activities of DJs; the Internet Bill of Rights and the problem of Internet Governance (including privacy related issues); the Copyright 2.0 issue and the evolution of copyright in general; web radios and web TV; social networks.

Thomas Margoni - Fellow 2011-2012



Thomas Margoni is currently holding a post-doctoral fellowship at the University of Western Ontario, where he also teaches in the field of law and new technologies. His research focuses in particular on intellectual property, information and technology law, and digital freedoms. Over the past year FLOSS and its adoption in both the public and corporate sector in Canada, and the issue of the so called Network Neutrality (especially in north America) have been the core of his activity. He is also a Nexa Research Fellow, and in particular he is the Operations Manager of the SeLiLi clinic on FLOSS and Open Content licenses.

Monica A. Senior – Fellow 2012



Monica A. Senior is a criminal lawyer, specialising in legal issues concerning digital and biometric forensics and data protection. Since 2002 she worked as external member for the Turin Bar Association. From 2004 to 2008 she was councillor of the "Camera Penale del Piemonte occidentale e della Valle d'Aosta" and she is currently a member of the Management Committee of the UCPI Territorial School, a school that promotes and cares the training of criminal lawyers. She contributes to

several on-line magazines, such as Medialaws.eu, Altalex.com and Penale.it. Her papers have also been published by Giappichelli, EGEA and UTET. As part of her Nexa fellowship, Monica will propose research topics related to computer forensics and fundamental rights from an “Internet & Society” perspective, while continuing to support specific activities of the Center, such as policy management related to personal information in Neubot project.

Massimo Travostino – Founding Fellow



Massimo Travostino has a degree in Intellectual Property and International Law from the University of Turin. He is a practicing lawyer at the independent law firm Studio Legale Pecoraro–Travostino. He taught in various graduate and undergraduate courses and authored articles on Italian and international journals. He is a member of the following boards: Commissione Informatica of the Turin Bar Association; Executive Committee of the International Association for Entertainment Lawyers; Scientific Committee of the Centro Studi di Informatica Giuridica. He is a member of the working group of Creative Commons

Italia since its beginnings in 2003.

Giuseppe Vaciago – Fellow 2012



Giuseppe Vaciago has been a lawyer of the Milan Bar since 2002 and for the last 10 years his primary focus has been IT Law with a focus on cyber crime. He has assisted many national and international IT companies. Academically, he received his PhD on Digital Forensics from Università di Milano and he is a lecturer at Insubria University (Varese and Como) where he holds a course on IT law. He recently attended Fordham Law School and Stanford Law School as a Visiting Scholar to expand his studies in his own particular research area. Giuseppe Vaciago is the author of many publications on cybercrime, including both scientific

journals and textbooks, which have been adopted by the University where he teaches. He has also delivered many lectures and presentations in both Italy and abroad. As part of his Nexa fellowship, Giuseppe will propose research topics related to computer forensics and fundamental rights from an “Internet & Society” perspective, acting at the same time as the coordinator of Nexa Center activities related to the Open Data policies in the City of Milan.

Valentin Vitkov – Fellow 2011



Valentin Vitkov has a degree in law from the University of Milan and works in an Italian law firm. His main interests concern the civil and economic liberties within a society that is deeply influenced by information and communication technologies, as well as the relationships between intellectual property rights, competition, innovation and public domain. He collaborates with the Law of Informatics Chair of the Milan State University.

ANNEX II – NEXA PUBLICATIONS

This section includes published articles, but also other products of the research of the Nexa fellows, encompassing reports and some selected blog-posts and presentations. Please, notice that the list is not comprehensive and just includes a set of contributions signaled by the Nexa fellows themselves.

- M. Alovio, Criticità privacy nel riuso dei dati pubblici, in *Informatica e Diritto*, 2012.
- M. Alovio, Le novità della legge di semplificazione sul codice di amministrazione digitale, in *Quotidiano Enti locali, Ipsoa*, 2012.
- M. Alovio, Criticità privacy nelle pubblicazioni sull'albo telematico, in *Quotidiano Enti locali, Ipsoa*, 2012.
- M. Alovio, Videosorveglianza in ambito pubblico, in *Videosorveglianza e privacy, Experta*, Forlì, 2011.
- E. Bassi, C. Dos Santos, M. Fernández Salmerón, Data Protection and Re-use of Public Sector Information: Towards a Possible Compromise?, 5th CPDP, Brussels, 2012 (forthcoming).
- E. Bassi, M. Alovio, Protezione dei dati personali e riutilizzo dell'informazione del settore pubblico, in *EVPSI volume*, 2012 (forthcoming).
- E. Bassi, U. Pagallo, Open Data Protection: Challenges, Perspectives and Tools for the Re-use of PSI, Amsterdam Privacy Conference, 2012 (forthcoming).
- E. Bassi, U. Pagallo, Open Data Protection: Challenges, Perspectives and Tools for the Re-use of PSI, Amsterdam Privacy Conference, 2012 (forthcoming).
- E. Bassi, Apertura dei dati pubblici e tutela dei dati personali, Workshop "Open Data nel contesto italiano", ITTIG-CNR, 2012.
- E. Bassi, C. Sappa, Data Protection and IP: Tools for Surveillance? An Open Data Analysis, 5th International Conference on Information Law and Ethics (Ionian University, Corfu, Greece), 2012.
- E. Bassi, PSI, protezione dei dati personali, anonimizzazione, in *Informatica e Diritto*, 2011.
- E. Bassi, U. Pagallo, The Future of EU Working Parties' "The Future of Privacy" and the Principle of Privacy by Design, in Maria Bottis (ed.), *An Information Law for the 21st Century*, Nomiki Bibliothiki Group, Athens, 2011, http://conferences.ionio.gr/isil2010/download.php?f=papers/pagallo_bassi_full.pdf
- E. Bassi, C. Dos Santos, C. De Terwangne, M. Fernandez Salmeron, K. Janssen, C. Otto, R. Polcak, P. Tepina, J. Valero Torrijos, B. Van Der Sloot, Policy Recommendation on Privacy and Data Protection, LAPSI meeting in Brussels, 2011.
- S. Basso, J.C. De Martin, M. Meo, A. Servetti, Estimating packet loss rate in the access through application level measurements, ACM SIGCOMM W-MUST (Workshop on Measurements Up and Down the Stack) 2012 (forthcoming).
- S. Basso, J. C. De Martin, A. Servetti, The hitchhiker's guide to the Network Neutrality Bot test methodology, Congresso AICA 2011, <http://nexa.polito.it/nexafiles/2011-aica-paper.pdf>
- S. Basso, J. C. De Martin, A. Servetti, The network neutrality bot architecture: a preliminary approach for self-monitoring of Internet access QoS, 2011, <http://nexa.polito.it/network-neutrality-bot-architecture-preliminary-approach-self-monitoring-internet-access-qos>
- E. Bertacchini, F. Morando, The Future of Museums in the Digital Age: New Models of Access and

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