



NeXt generation Techno-social Legal Encryption Access and Privacy nextleap.eu
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DELIVERABLE D6.5

PRELIMINARY EDUCATION PLAN

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Beneficiaries:

IRI (lead), CNRS, UCL, INRIA

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Workpackage:

D6.5 Preliminary Education Plan and Draft Net Rights

Description:

This Preliminary education plan presents our strategy in terms of Education topics, events and materials, within a double-entry methodology: 1) from digital organology to its social and political impact, 2) from Internet Rights (legal organology) back to a re-interpretation, reconfiguration and new implementation of decentralization and crypto-based technologies. The complete version of this education plan including the results of the online categorization (D 6.6) is due on Month 24.

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1. Objectives

Education can be considered the development of what Amartya Sen calls one's "capabilities." In the context of an education on the subjects of decentralization and secure communication, it means that in order to maximise one's liberty of choice in the digital environment one has to develop one's capacity to choose among different kinds of communication systems. This exercise of freedom requires the use of decentralized systems, which ideally would be cryptographically secured communication. Following Sen's theory, identifying the different technical options allow the communication and production of common knowledge, understanding the difference in their functionalities and then learning how to maximize the combination of those differences is beneficial. This is an alternative methodology to both pure utilitarianism or pure libertarianism. For example, this liberty of choice which is visible in the ongoing discussion between "opt-in" and "opt-out" in relationship to Web services that uses personal data currently. Foundational to all these arguments is an analysis of the question of Net rights. We do not intend to address these rights from a legal perspective but rather in the context of a contributory debate and categorization on what are the capabilities at stake.

In accordance with this global and generic perspective, the education and exploitation plan of the NEXTLEAP project is following a dual perspective:

- From a *digital organology*¹ to social and political impacts

Our first goal in term of education is to "open the black-box" of Internet technologies in order to provide a sound and detailed awareness of decentralization to the general public. Inspired by the concept of general organology proposed by Bernard Stiegler² (where "general organology" is defined to take into account the multiple interlocking biological, social, and technological system), we advocate for an education on how algorithms modify our day-to-day life. We will organize educational seminars in conjunction with events and conferences in order to spread awareness of The result of these events will produce educational materials that analyze decentralized and cryptographic technologies and their social and political impact. This research will be conducted within the philosophical context of four main organological questions supported by decentralized and cryptographic systems: 1) individuation and the question of capacitation (for instance in the debate over confidentiality, public/private dynamic design, group design, production of commons), 2) categorization and the question of knowledge (i.e which new categories are produced by decentralized systems and how they can be controlled) , 3) communication, social networking and the question of trust (for instance how certain P2P systems rely on trust and contribute to its production), 4) certification and the question of "truth" (i.e how decentralized certification and blockchain-based systems produce new veridiction regimes in the sense of Michel Foucault).

¹"Organology" is a philosophical concept related to the idea that with each different set of (technical) organs comes a whole new set of psycho-somatic organs, and social organizations.

²Digital Studies, Organologie des savoirs et technologies de la connaissance, Fyp 2013

- From a *legal organology* of Net Rights towards a digital hermeneutics of decentralized and cryptographic systems

The second and concurrent plan should start with a crowd-sourced critique and categorization of current and future Net rights propositions in order to analyze how they may justify a new interpretation and implementation of decentralized protocols. This will be conducted on a dedicated text annotation system and a forum for argumentation. These questions are directly related to annotated-video education materials from the seminars and require a platform for categorization, critique and design propositions.

Exploitation will be the purpose of another deliverable (D6.8, due M36) which will focus on the development of sustainable business models in the context of the economy of contribution that take decentralization, the social good (non-GDP measures), encryption, and privacy into account.

2. Key Questions for Education

What is collective intelligence? Can collective processes be attentive to individual contributions? What is the influence of communication technologies on the production of collective knowledge? In the context of the public debates following the wake of Assange and Snowden, it is important to better understand the inner workings of communication and knowledge production not only of decentralized, but of their relationship to cryptographic systems. How does this larger general organology define what is private and what is public, as well as what are the choices and rights citizens may have to use these systems? In order to develop our education and digital literacy plans, we would like to analyze a range of *functions* that decentralization may impact across several interdisciplinary fields in order to build a transdisciplinary understanding:

I - Individuation and the function of capacitation

Related issues: autonomy, attention, commons, privacy

Questions to be raised:

- An exploration of the frontier between the individual and the group, between the private and the public and how cryptography may help or prevent the transition from an individual to a collective individuation (the formation of individuals);
- Trying to better understand how collective knowledge (*savoirs*) is related to individual skills (*connaissances*);
- Explaining differences between collaboration, contribution and cooperation and their relation to decentralization and individuation;
- Exploring how decentralized technologies support autonomy and control over attention via changing and developing capacities;
- Asking what is the capacitation impact of decentralized systems, and the relationship and differences between capacitation and empowerment.
- The relationship between capabilities and fundamental (human) rights
- The use of encryption and other technologies in enforcing those rights

II - Categorization and knowledge production

Related issues: epistemology and hermeneutics

Questions to be raised:

- Do technologies lead to new forms of extended knowledge, building from cognitive extension.
- Showing how decentralized technologies can be categorized produce new categories;
- Showing how those new categories impact epistemology not only in the academic field but in day-to-day practices;
- Showing how the Internet opens a new field of decentralized web hermeneutics insofar as may be considered as a new form of writing;
- Investigating the needs of privacy regarding indexing and categorization methods;
- A better articulation between calculus and intuition as regards tasks which may be automated and tasks which may not in terms of knowledge;
- Measuring the impact of decentralization on the future of work in a context of unemployment.
- Can open source methods influence the development of decentralized communication systems and vice versa?
- Is decentralization a way to create future “cooperative knowledge” in the form of the commons?

- Showing how decentralization may impact the development of new forms of urban and rural territories.

III - Communication, social networking and the function of trust

Related issues: trust, social constructivism, network theory

Questions to be raised:

- Evaluating the importance of trust in digital communication systems and how transparency and anonymity impact this trust, particularly as regards high-risk activists;
- What is the role of social relationships in constructing trust, such that is it possible to have 'trustless' systems?
- What is the relationship of technical architectures to the social construction of trust?
- How can one tell if software to be downloaded and installed is trustworthy?
- How does usability effect the take-up of decentralized systems?

IV - Certification and the function of “truth”

Questions to be raised:

- How decentralized certification and blockchain-based systems produce new veridiction regimes?
- What is the relationship between trust and credit and how do blockchain systems manage this relation beyond virtual currencies like bitcoin?
- How can technology counter to the spread of false information (“fake news”)?
- Asking how collective dynamic certification systems can be deal with and how top/down and bottom/up certification processes can be articulated;
- Exploring how algorithmic “black-boxes”, i.e closed and proprietary systems, introduce short-circuits in the certification chains?
- How opening and verifying the source code can help us understand these systems?

3. Education Seminars

In the context of the NEXTLEAP, our goal is to bring a deeper understanding of digital social issues but also of the epistemological and political consequences of decentralized and crypto-based architectures and services. According to the Virtru Blog³ - a for-profit company selling secure e-mail and file protection – schools and universities need encrypted communication most urgently. While this commercial argument may be valid for for-profit enterprises like lawyers, financial institutions and lawyers – domains we will target in our exploitation plan (D6.6) – education on net rights like privacy is not just of interest to governments and corporations, but to the general public, including commons-based sectors. Our communication will be targeted to these sectors, and, we want to mobilize as many people as possible in a series of seminar sessions to aim for an online course in 2018.

3.1 NEXTLEAP Seminars 2017: Decrypting Algorithms

Digital networks, empowered by the Internet, are disrupting public space from the bottom up, first and foremost because they utilize *publishing technologies* that completely reshape the relationship between public and private, in every sense of the term. In so doing, these technologies redefine from their very roots the questions, paradoxes and aporias that positive law – from ancient Greece and

³<https://www.virtru.com/blog/5-professions-need-email-encryption/>

through Rome, canonical law, the Napoleonic code, and all the theories and philosophies of ‘natural law’ from the classical age to modern and contemporary critiques of law – has always sought to resolve in social terms.

Positive law – that is, founded on political and republican principles in the Kantian sense – is a body of social rules through which the relationships between psychic individuals and collective individuals are regulated within a framework that, in the changeable conditions defined by various political regimes, allows the *transindividuation of the multitude*. It is *precisely* and *uniquely* within this framework that such a transindividuation can be declared *legal*, that is, as possessing the *force of law*.

Such a legality, however, is possible only thanks to the *publication of the laws, through which* public space can be constituted. Nevertheless, such a space is public in this sense only if:

- firstly, the citizens who thus compose what we call ‘the public’ can legally *change the body of laws*;
- secondly, these citizens are formed and trained so as to possess the *capacity to effect* such modifications;
- finally, citizens are guaranteed the ability to *unconditionally maintain their private life and personal convictions*, so long as they respect public life and its inviolable rules.

In fact, however, what Antoinette Rouvroy has called ‘algorithmic governmentality’ *disintegrates* (in the *literal* sense of this verb developed in Stiegler's book *Automatic Society*) these three conditions of the possibility of law.

Here, a particularly important and singularly complex point lies in the *question of transparency of secrecy, and therefore of cryptography, so that intimacy must remain within a legal regime* in the positive sense defined by philosophies of law since the origin of *politeia* – failing which law becomes *totalitarian*.

Digital and computational technology has made it possible to greatly expand the spheres of publication, and hence of transparency – as for example with open data. In this respect, it has enabled *democratic safeguards* to be strengthened, such as those that depend upon the publication of government data and facts, and the requirement to publish this data and these facts in accordance with legal obligations.

The transparency of rules, data and facts, however, should in no case mean the elimination of the secret. On the one hand, public rules and public data are in fact themselves never ‘transparent’: they must be interpreted. On the other hand, the revelations of Edward Snowden have made it obvious that transparency conceived as the transgression of all limits and the elimination of all secrecy would constitute a fundamental violation of the very possibility of law, namely, the *legitimate* possibility of *secret deliberation*, whether this is a matter of:

- an public figure of authority who, either individually or collectively, deliberates in secret as part of a negotiation (that is, of a *balance of power*), this being the framework that *perpetually* constitutes *political life*, given that the latter consists in authorizing peaceful conflicts, that is, the diversity of opinion, but where this also applies to economic conflicts, that is, legitimate competition;

- or an ordinary person who, in a lawful state, has the right to cultivate feelings and ideas that he or she prefers to keep secret – a *right to secrecy* that is the *condition of possibility of any singularity whatsoever, and of every protection of what, as singularity, is the guarantee of the possibility of a future*, that is, of a *capacity to transform the law* in the course of a process of psychic and collective individuation in which the psychic individual can and must differentiate and individuate itself, and for which the legal collective individuation codified by law constitutes, *precisely in that*, its legality.

Based on these premises, NextLeap will organize a seminar intended to provoke a more general discussion over decentralization, encryption, user rights and surveillance. This discussion should be understandable to a broader audience outside academia.

This NEXTLEAP seminar will consist in 5 projected sessions in 2017, including a NEXTLEAP launch event, and will be entitled: ‘Decrypting Algorithms’. Starting with an analysis of encryption and how it impacts several applications and systems (P2P communication, instant messaging, certification, virtual currencies, etc.), the goal is to study the social, philosophical and political consequences of decentralized systems and more generally of alternative architectures producing negentropy. Each partner involved in this seminar will run a seminar session of 3 hours, in their city and with the speakers they have chosen and invited. Each seminar session will be live-streamed, video-recorded, annotated by the audience and published on the NEXTLEAP website. The recorded and annotated video will provide material for an online course that will be given in 2018.

Session 1 – directed by Francesca Musiani

Location: ISCC (CNRS/Paris-Sorbonne/UPMC), Paris

Date: March 28, 2016, 2pm–5pm

Title: **What is ‘good encryption’? A pragmatic turn from a tool-centered to a user-centered approach**

Synopsis of the session:

An important body of work in the field of science and technology studies (STS) in the last forty years has addressed the ‘making of’ systems of classification, categorization and measurement as a crucial component of human interaction and governance processes (e.g. Bowker and Star, 1999) in a variety of fields. Our current research within NextLeap shows that fierce debates – exemplified by the ongoing revisions of the Electronic Frontier Foundation’s Secure Messaging Scorecard – are taking place on what makes a reliable secure messaging application, and what constitutes a ‘good’ measurement system to assess (usable) security and encryption, able to take into account all the ‘relevant’ aspects – not only technical but social and economic. Drawing on this context, this session of the NextLeap seminar will discuss how actors in the field of secure messaging, from developers to users, define ‘good encryption’ from a pragmatic standpoint. In particular, we will examine how this definition increasingly often uses as a starting point not the tools themselves, but users and their contexts of use: e.g., for a journalist working in conflict zones, WhatsApp will be deemed as insufficiently protective and qualified as ‘bad’ encryption, while for a design firm employee whose first preoccupation is to avoid targeted ads, the very same tool will provide ‘good’ encryption. On its end, the EFF proposes a standard set of requirements constituting the core of good encryption: open-source, end-to-end, and peer-reviewed code, and advise users on what could be the best-adapted tool for their needs, provided that it satisfies these basic requirements. The talks will provide several

examples of this ‘pragmatic turn’ in the assessment of the quality of encryption. In presence of and with the help of practitioners, we will discuss this dialectic between standard and ad-hoc configurations, and how standardized tools such as guides can be produced in such an articulate and varied landscape of tools and practices.

Speakers:

- Ksenia Ermoshina (CNRS)
- Francesca Musiani (CNRS)
- Mykola Kostynyan (Ukrainian Security Trainer)

Session 2 – directed by George Danezis

Location: UCL, London

Date: April 26, 2017 (TBC)

Topic: **Carnival of Decentralization and Privacy**

UCL will host an all-day event on the theme of anonymous communication, privacy and decentralization, as part of our involvement in the EU wide projects NEXTLEAP and PANORAMIX. The event is open to all, and free of charge. The focus on this event will be a detailed analysis of anonymity. This event in London will complement the work done in Paris.

Speakers:

- Aggelos Kiayias (University of Edinburgh)
- Carmela Troncoso (IMDEA)
- Claudia Diaz (Katholieke University Leuven)
- Matthew Hodgson (Matrix.org)

Session 3 – NEXTLEAP Launch Event directed by Harry Halpin (INRIA)

Location: Centre Pompidou – Petit Salle, Paris

Date: May 5, 2017

Title: **The Political Significance of Cryptography**

Collocated with EuroS&P- EuroCrypt 2017, Paris, France, 30 April - 4 May

Although historically cryptography has been restricted to government and industrial use, there has recently, after revelations of mass surveillance by Snowden, been increased interest in securing the everyday communications of citizens: Applications such WhatsApp, Telegram, Silence, Crypto.cat, Signal, and even PGP all claim to use end-to-end encrypted messaging to secure the content of communication. There has been discussion in France after the Bataclan attacks of banning end-to-end encryption, and in recent weeks, political parties have declared their desire to keep end-to-end encryption legal but have a backdoor or passwords available to the government. Rumors of hacking now dominate the news, and are claimed even influence elections. Given that cryptography has moved from an obscure branch of mathematical number theory to a real-world problem, the NEXTLEAP project is drawing together an interdisciplinary group of cryptographers, activists, and philosophers to discuss the political significance of cryptography.

Speakers:

- Bernard Stiegler (IRI)
- Slim Amamou (Alixsys, NEXTLEAP Advisory Board)

- Daniel J. Bernstein (University of Illinois)
- Phil Rogaway (UC Davis)
- Tanja Lange (Univ. Eindhoven)
- Moti Yung (Snapchat).

Session 4 – directed by Bernard Stiegler

Location: Centre Pompidou – Salle Triangle, Paris

Date: May 25, 2017

Title: **Decentralized systems and new urban territories**

Synopsis of the session:

This session is dedicated to examining the ways digital organology may re-invent territories as local open systems in a contributory economy and then as ‘neganthropic’ communities producing ‘neganthropic’ value in the struggle against the tendencies of an Anthropocene that is first and foremost an Entropocene. Decentralized and crypto-based technologies (architecture, protocols, data and metadata formats, communication systems, certification systems, blockchain systems) are raising important questions that will be confronted in the context of the Plaine Commune territory (Paris North), in an attempt to evaluate capacitative technological solutions with and for citizens. How should the global dimension of Internet communication be combined with the needs of local communities within the context of open communication systems in a way that provides clear rules for decision making and traceability of exchanges? Do decentralized systems show evidence of a new articulation between top-down and bottom-up knowledge production that could open the way to a new democratic context? How can decentralized systems help to build a new contributory economy for the benefit of local communities and contributory democracies, for example, by initiating debate concerning the definition of economic value and the context of the future of work in the age of a generalized automation of jobs and a massive decrease of employment?

To understand the prospect of *decentralized*, and therein *singularly localizable*, *digital network architectures*, we must start from the question of the right to secrecy evoked in the introduction, and of the ‘locality’ of singularities that this assumes. And it is from the same starting point that we must understand the necessity of the ability to access *encryption technologies*, for all groups gathered together within a process of collective individuation and gathered by the sharing of rules that are specific to them and thereby singular, but that are also preserved within the framework of legal rules. Through this, collective abilities can be cultivated: the capacity to conduct singular interpretations of this legal framework, and, more generally, of the whole social context that enables its evolution in the form of all kinds of knowledge.

All these considerations mean that the digital should not just preserve the existing rights of citizens: it will eventually require *a redefinition of citizenship itself*, specifically requiring *new understandings of the notions of public, private, transparency and secrecy*.

In the space of less than three decades (since the advent of the World Wide Web), digital networks have become the infrastructure of the ‘data economy’ and brought about the widespread, massive and permanent production of data by everyone, ultimately leading to an intensification of control, surveillance, espionage and manipulation within what Gilles Deleuze had in 1990 already described as ‘control societies’.

All this unfurled in the context of a glorification of the idea of transparency, and by positing in principle that the latter is the fundamental condition of a fully democratic life of citizenship. Yet it is equally true that the condition of citizenship is secrecy, the protection of intimacy and the preservation of the private, fragmented and heterogeneous spaces through which the diversity of viewpoints is constituted. Hence the demand for a right to encryption is indeed essential for the establishment of a true political community of citizens in the age of digital reticular societies. But this requires, in addition to an organology of encryption, a *general organology of law* and of its *technical instruments of encoding, decoding, reading and writing*, that is, *of interpretation*, and therefore of *judgment*.

This also presupposes the possibility of *engramming the incalculable* – for there is secrecy only if *no calculation* can ‘break’ the secret, and where the most secret and most essential secret (referred to by Heraclitus when he writes *phusis kruptesthai philei*) remains inaccessible even to the one who carries it.

In this seminar, we will address these questions from the standpoint of a theory of law that we will call neganthropic. Neganthropy is the path by which the exosomatic living thing preserves its opportunities for individuation against its own anthropic tendencies, which are self-destructive in that they generate negative externalities that are both physical and symbolic – resulting in particular in our own epoch from the *submission of all symbolic realities to calculation*, which leads to the *disintegration of all forms of knowledge*.

In the juridical field, positive law, derived from the Greek concept of citizenship (*politeia*), preserves the *heterogeneity* and the *opacity* of citizens (their incalculable singularity) by inscribing into law the irreducible dimension of the *hermeneutic*, and therefore of that *deliberation* whose counterpart is the singularity of each of us. It is this of which Hermes and Hestia were in ancient Greece divine figures.

These very general principles lead to defining a right to the secret as, more generally, a right to the plural individuation of those psychic individuals and collective individuals gathered together in the city as a *space homogenized by the sharing of a code* – but where this code, inasmuch as it is designed to accommodate the heterogeneity of singularities that are themselves neither encodable nor calculable, is *itself interpretable*.

In this regard, we will start from Lawrence Lessig’s text ‘Code is Law’, in order to evaluate the stakes and the limits of a decentralized conception of data architecture and of a right to secrecy founded on the secret of code itself.

Law as code is what enables psychic and collective individuation as the metastable composition of singularities and the groups within which they locally aggregate and individuate themselves – insofar as *any neganthropy constitutes a locality* both virtual and actual. This is why these questions, inasmuch as they arise in an Anthropocene that is also an Entropocene, will be investigated from the perspective of a *microcosmology* and a *macrocosmology* conceived in close relation with Yuk Hui’s reflections on *technocosmology*, and with the general organology and pharmacology that they presuppose.

Speakers:

- Bernard Stiegler (IRI)
- Yuk Hui (Leuphana University, *Digital Studies Network*, tbc)

- Gerald Moore (Durham Un., *Digital Studies Network*) (confirmed): ‘Benjamin Bratton, certification and the university of amateurs’
- Geert Loevink (Institute for Networked Culture, tbc)

Session 5 - directed by Christian Fauré

Location: Centre Pompidou – Salle Triangle, Paris

Date: June 28, 2017

Title: **Decentralized certification and blockchain systems**

Synopsis of the session:

Certification is a key issue in information systems but is also raising important epistemological questions since any knowledge needs to be confronted with the question of truth or more precisely of different regimes of *veridiction* in Foucault's sense. This philosophical question, the ‘truth’ of the digital, will be analyzed in the context of decentralized certification, where there is no top-down or natural concept of truth but a dynamic elaboration of it. In the context of such ‘decentralization of truth’, the goal of this session is to analyze the tradeoffs between transparency and certification at the microlevel of a blockchain or at the upper level of decentralized education and knowledge production.

Speakers:

- Christian Fauré (OCTO Technologies, Ars Industrialis)
- Clara Drevet (IRI).
- Vincent Bontems (CEA)
- Jacques Favier (La voie du Bitcoin)

We are hoping for other sessions to be organized in conjunction with NEXTLEAP partners, other CAPS projects, and may do other seminars on ad-hoc basis depending on the availability of speakers. As vacation commences in July and August, we will commence to take stock of our current seminars, their successes and problems, and revise a schedule for the fall of 2017 and spring of 2018.

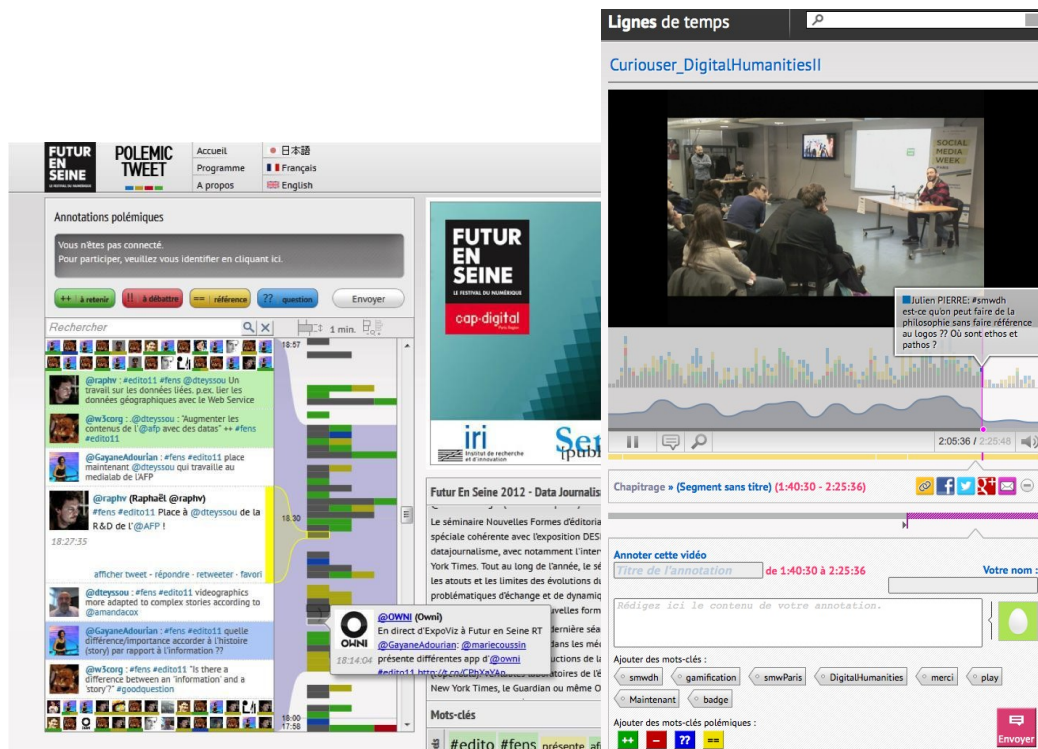
4.2. MOOC development (2018)

The annotated videos from the seminars in 2017-2018, as well as the text of the lectures given will provide us with material for a course on decentralization and user rights that will be produced by IRI in autumn of 2018.

Video annotation will be proposed for the seminars and every additional education events, in two steps:

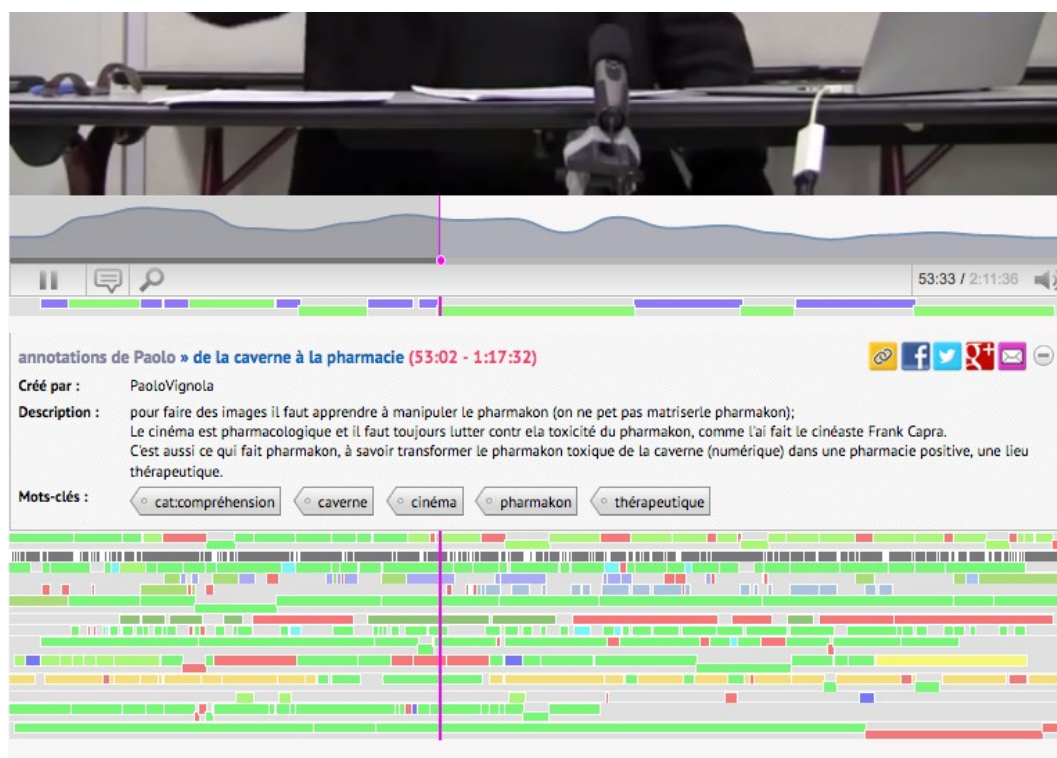
- 1) For larger events, there is the live video annotation system using Twitter (Polemictweet) (fig 1.)
- 2) an asynchronous video categorization system using Lignes de Temps

Here is an overview of both programs They have been used for IRI seminars since 2011.



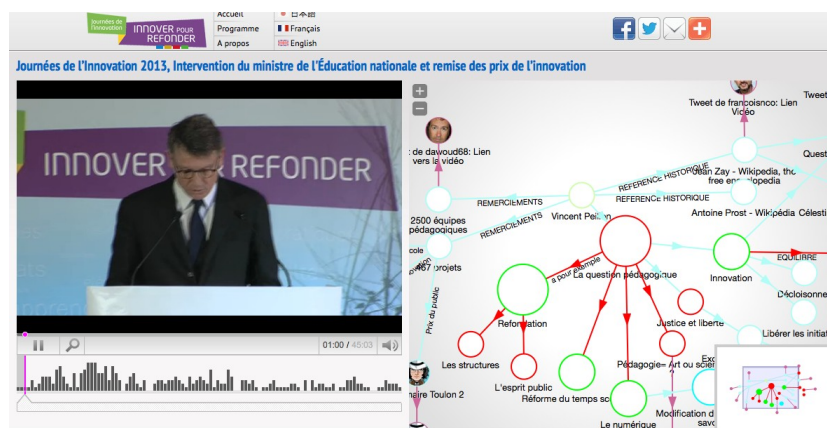
Live annotation in the polemictweet contribution system with crowd-sourced categories (red: disagree, green: agree, blue: question, yellow: reference) (1) Tweets synchronized with video for category-based navigation and further annotation (2)

Afterwards, video recordings and synchronized tweets are published in a player dedicated to annotation and visualization of contributions: “Lignes de temps”.



Categorized contributions on Bernard Stiegler online courses using Lignes de temps (green: understanding, red: trouble, blue: comments, yellow: keywords)

Then, the texts from the crowdsourced discussion over Net Rights, the annotated videos from the educational seminar will be aggregated and linked via the study of semantic relationships between concepts and resources. For instance, in order to access public data, a link can be drawn between a textual contribution on the Net Rights Forum and a video segment from one session of the awareness seminar.



Mindmapping texts, videos and web resources using Renkan

Based on the collected material, live or recorded MOOC sessions will be organized in order to fully explain the material. We will aim to make the MOOC focus not just on theoretical issues, but on practical ones. For example, in a MOOC session on security, people will interactively test their level of security and be routed to the appropriate tutorials regarding their specific security/privacy flaws on their on computer. One inspiration for this session is the website www.howsmyssl.com where users can directly assess the state of security of their browser regarding SSL/TLS. People will also be taught how to use different kinds of programs such as browser add-ons that allow to explore and raise awareness on privacy leaks while browsing.

4.3. Other Events

4.3.1. Les Entretiens du Nouveau Monde Industriel (ENMI) - Centre Pompidou

www.enmi-conf.org

Organized by IRI and Ars Industrialis.

This is the main education venue for IRI with high visibility for NextLeap issues. These events are organized by IRI with the Paris Cluster Cap Digital. Start-ups, entrepreneurs and researchers from different disciplines gather every year to study long-term prospects in the field of digital technologies. The topic of the 2017 edition will be “**The new artificial intelligence**”, including questions relating to the function of knowledge in the context of decentralized and crypto-based systems. We will try to deepen our understanding of the differences between analytic and synthetic functions from the point of view of fundamental epistemology, and relying on A. N. Whitehead’s interpretations of Immanuel Kant. In the NEXTLEAP context, the algorithm constitutes an automation of the analytic function of the understanding, preserving the power of the synthesis of reason and its “regulative ideas”. We will investigate these questions in the practical fields of *savoir-vivre*, that is to say moral philosophy, anthropology and the general ethnology of social sciences; and in relation to *savoir-faire* that is now in need of reevaluation vis à vis the development of a new open source industry and the industrial consequences of the so-called “Maker Movement”. More broadly, the reevaluation of employment and work competences, tradesmanship, the professions and know-how, which raise questions about the differences between employment and work especially in the context of a software cooperatives.

The 2018 edition will tackle the question of the **entropic nature of digital systems**, the blockchain probably being the archetypal case. Knowledge is not information: information, in the form it takes in the information industries, is just one stage of exosomatization – and a strict distinction must be established between this notion and the concept of information as it is used in physics and biology. On the one hand, we will try to theorize the relations between information and knowledge through the informational and digital characteristics of the contemporary era, that is to say through a digital organology of the interfaces and architectures of data, the organizations of networks, and algorithmic functioning. On the other hand, we will try to formulate a theory of what we call ‘neganthropogenesis’, by showing that it is not possible to import the biological concepts of negentropy, negative entropy, and anti-entropy as a whole into a theory of information, without reworking them in relation to exosomatization. A theory of exosomatization, understood as a process that is both ‘anthropic’ and ‘negentropic’, is ultimately what we are aiming at here. Exosomatization consists in a historical process that constitutes the production of artificial organs. These artificial organs are what we call *pharmaka*, in the sense employed by Socrates in *The Protagoras* and later *The Phaedrus*, that is to say, meaning simultaneously poison and cure, with the potential to increase both entropy and negentropy. This leads in turn to questions regarding the criteria of choice and selection in exosomatization, with different artificial organs giving rise to different forms of knowledge and politics. All of this work has an immediate practical import for the questions tackled by NEXTLEAP, since we are looking to rethink architectures of information in order to place them in the service of knowledge in all its forms (conceptual knowledge, *savoir-vivre* and *savoir-faire*), and to question the macroeconomic models that automation imposes. These multiple forms of knowledge can serve to *de-automatize* (and to de-proletarianize) the apparatuses of the automated society, thereby preserving the prospect of developing negentropic, or life-enhancing, modes of production, and limiting entropic forms of production. This may serve as the closing event of NEXTLEAP.

4.3.2 Collaboration with Hacker spaces

Some hacker spaces and cultural venues have previously organized workshops open to wide range of audiences. Such events are small but fundamental contributions to the emergence of a digital literacy build upon an organic decentralized network of grassroots knowledge. Workshops organized by Mains d’Oeuvres (Saint-Ouen) in order to promote and teach programming with Arduino and physical sensors are the first step for a public understanding and debate around the relationship between the Internet of Things and everyday ethical problems. Mains d’Oeuvres already have a strong policy of building relationships between its own space and the urban surroundings: its public, Saint-Ouen, the city, Plaine Saint-Denis, the district, neighbors and temporary inhabitant such as the continuous flow of migrants characteristic of poor parts of spacial segregation.

We are going to discuss with them the possibility to organize an action-research festival about cryptography and self-representation/protection in the era of pervasive data shadow as an interdisciplinary encounter between scientists of NEXTLEAP project, artists and local actors. In this context, we also plan to contact people from Le Loop (historical hacker space located in the center of Paris, <http://leloop.org/>) or similar open-minded spaces (Fabelier, Carrefour du Numérique).

We also plan to join existing meetups about dissemination of general knowledge about digital protection such as “crypto parties” organized by café-vie-privée.fr and as organized by CNRS researcher Ksenia Ermoshina with the theme “Trancyberian.”

5. Augment Net Rights understanding with crowdsourced contributions

For this task, our goal is at this stage to analyze how they may be re-interpreted and modified by decentralized and crypto-based systems. To achieve that aim, we will set up a contributive categorization on Net Rights and augment existing corpus with links to related technologies and experts point of views. After this is complete, in the next deliverable on Net Rights we will deliver a synthesis of these rights.

Our plan is thus to experiment with a contributive Forum over Net Rights and related Decentralized and crypto-based systems using text annotation, categorization protocols and contributive mindmapping. The first step is to collect previous contributions on Net Rights and related systems, annotate them, and then in the next deliverable synthesize them and expand on them after going through a crowd-sourcing process.

5.1 Previous Net Rights initiatives

The protests and uprisings which took place in the Middle East and in North Africa in 2011 heavily relied on the Internet and the many devices interacting with it for their organization and planning. Those events raised the question of whether or not Internet access is or should be a civil or human right. In June 2011, the United Nations published a report stating that Internet access was a human right. The idea of the Internet being an enabler of rights, or a right in itself is still disputed. Internet access could also be seen as a *civil* right; that is to say a right conferred to citizens by law, but not intrinsically granted to all human beings. A right defined as such would be akin to that of “universal service” — i.e. the idea that telephone service (but also electricity and now broadband Internet access) must be accessible to each citizen in every region.

Moving away from the issue of access, we now raise the fundamental question of the nature of the technology itself. A New York Times article published in 2012, provocatively entitled “Internet Access is Not a Human Right” (Vinton G. Cerf), underlined the fundamental problem concealed behind the issue of Internet access. The author thus reminded us of “the responsibility of technology creators themselves to support human and civil rights”, and stressed the “tremendous obligation” for engineers to “empower users”, but also “to ensure the safety of users online”. This article promotes an idea that will form the basis of several initiatives in the years to come: “it is engineers — and [their] professional associations and standards-setting bodies like the Institute of Electrical and Electronics Engineers — that create and maintain these new capabilities.” He also pointed out, importantly, that the internet is not a human right as it involves technology that may change (i.e. a civil right) while human rights should be transcendental. In response in 2012, NEXTLEAP project co-ordinator Harry Halpin and the inventor of the Web Tim Berners-Lee wrote a rejoinder stating that Internet Access should be a fundamental right, as access to the Internet enables other rights and also has special characteristics (such as net neutrality) that are not sufficiently taken on board by existing rights. Further, they imply that ultimately all rights are historical.

However, it is not a matter of leaving technical questions to engineers. In order to exercise their responsibilities, those engineers need to exchange, discuss and debate with all stakeholders in society. Several initiatives from civil society on the topic of Net Rights have emerged, which we will briefly review:

5.1.1 Internet “bills of rights” around the world in the 2010’s

First of all, the **Internet Rights and Principles Dynamic Coalition** has worked on translating existing Human Rights to the internet environment. The outcome of this collaborative work, which involved individuals and organisations coming from different perspectives (grassroots groups, international NGOs, researchers, activists, lawyers, businesses, internet and mobile phone service providers, technical communities, government representatives, and intergovernmental organisations) is the *Charter of Human Rights and Principles of the Internet* (<http://internetrightsandprinciples.org/site>), last edition: January 2015). This Charter is comprised of 10 Rights and Principles meant to ensure that the Internet operates and evolves in ways that fulfil human rights to the greatest extent possible. The IRP Coalition drew a relevant distinction between “rights” and “principles” which can prove useful for NextLeap’s reflection.

Indeed, according to the IRP Coalition, “Human Rights” are the equivalent of international human rights directly translated to the internet, while “Principles” are internet policy principles or implementation principles describing the features of the system required to support human rights.

The ten rights and principles defined by the IRP Coalition in the Charter are about Universality and Equality; Rights and Social Justice; Accessibility; Expression and Association; Privacy and Data Protection; Life, Liberty and Security; Diversity; Network Equality; Standards and Regulation and Governance.

Beyond the conventional rights that are expanded and reaffirmed “in the online environment”, including the “freedom from surveillance, the right to use encryption, and the right to online anonymity”, we find the definition of the principles describing the technical systems necessary to ensure the respect of human rights such as the principles regarding “Standards and regulation”: “The Internet’s architecture, communication systems, and document and data formats shall be based on open standards that ensure complete interoperability, inclusion and equal opportunity for all.” In addition, the issue of governance is highlighted by the IGF which states the importance of “principles of openness, inclusive participation and accountability”.

The Internet Governance Forum has launched two other “dynamic coalitions” which are focused on specific technologies: one on blockchain technologies and one on platform responsibility. The purpose of the first coalition is to address “blockchain policy issues through a multi-stakeholder approach”, as well as “to educate, inform and disseminate information on current trends and policy developments with regards to blockchain development and regulation.” Ultimately, this coalition will attempt to elaborate what they call a “model framework” on blockchain technologies. The purpose of the second coalition is to produce “model contractual provisions, which can be incorporated in Terms of Services in order to provide intelligible and solid mechanisms to protect platform-users’ human rights and foster platform providers’ responsibility”. Francesca Musiani, partner of the NEXTLEAP project is a member of these two coalitions. They have not published documents yet. The NEXTLEAP project will closely follow the work and the reports published by these two coalitions over the next two years.

Another significant initiative on Net Rights arose in France: the Digital Committee of the French National Assembly published an information report in 2015 about their “reflection and proposals on the rights and freedoms in the digital age”. Based on the idea that “a new industrial age calls for a new

democratic era”, the purpose of the report was “to build a new democratic ecosystem in order to avoid that the digital revolution is left to the law of the strongest or the loudest”.

The authors of the report, which lays out 100 recommendations, put emphasis on five key issues: Freedom of expression and right to access public information (right to know); Balance between right of expression and protection of copyright; Protection of personal data; Right to access Internet, the preservation of Net neutrality, the development of user autonomy and accountability; The production of commons. NEXTLEAP member Francesca Musiani contributed to this report.

French government also initiated an open consultation in 2014 about their *République Numérique* (*Digital Republic*) project (<http://republique-numerique.fr>). The citizens were invited not only to comment but also to add new parts to the text or remove controversial one through an augmented forum system. More than 4000 contributions were submitted. Several subjects were related to privacy, rights to crawl data for scientific uses or the necessity for the government to adopt open data policy ; showing an appeal for such topics in the public sphere. They used a proprietary web services provided by Cap Collectif, a French company, but all data are still available and a hackathon was organized to help community have a grasp of it.

Italy also produced a *Declaration of Internet Rights* written in collaboration with Italian citizens. The draft of the Declaration of Internet Rights was published online by the Italian Chamber of Deputies in October 2014. It was available for comments until March 2015. The technology used was **Co-Ment**, the open-source platform for text annotation and collaborative writing that NextLeap will also use to collectively discuss Net Rights. The aim was to achieve a document “to protect Internet as a platform, not only for the economic development, but also for the exercise of fundamental human rights.” It is important to note that several other European institutions have been moving in the same direction. At the end of 2013, the Speaker of the UK House of Commons set up a commission on digital democracy. In February 2014, the German Bundestag laid the foundation for a standing parliamentary commission on the "Digital Agenda". In April 2014, the Council of Europe published a guide of human rights for Internet users.

In Latin America, Brazil was one of the first countries to work collaboratively on Internet Rights, which led to the ***Brazilian Civil Rights Framework for the Internet*** (*Marco Civil da Internet* in Portuguese). In reaction to allegations of NSA monitoring of Brazil's telecoms networks, the Brazilian government has made passing the *Brazilian Civil Rights Framework for the Internet* a priority. The first draft phase of the collaborative process took place in October 2009. It involved more that 800 contributors. Following the first round of discussions, the draft was published for public comments, through a collaborative process. The debates of the second phase took place in 2010. The draft bill was finally approved by the Executive Government in Brazil and Congress in August 2011. The text lays down the principle of net neutrality, the protection of personal data and the protection of privacy. (http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2014/lei/112965.htm)

Finally, the ***Magna Carta Initiative*** has been launched in 2015 by the Web We Want Foundation, following Tim Berners-Lee's call for an “Internet Bill of Rights”. In June 2015, the British Library started a crowdsourced contribution aimed at young people proposing ten top rights (<http://www.bl.uk/my-digital-rights/vote-now>).

In Germany, journalists, writers, philosophers (including Jürgen Habermas) and politicians (including EU parliamentarian president Schulz) announced a suggestion for a "digital rights" charta

(<https://digitalcharta.eu/>). This was recently announced in German newspapers: <https://www.heise.de/newsticker/meldung/Sascha-Lobo-Juli-Zeh-und-mehr-Prominente-setzen-EU-Digitalcharta-auf-3521504.html>

Other sparse related to Net Rights are expressed by the Mozilla Foundation (Mozilla Learning) or by local citizen groups expanding Free Software principles to Internet rights (i.e. <https://chatons.org/charte-et-manifeste>).

5.2 Theoretical issues on Internet Rights

5.2.1 Issues related to the law

The fundamental question relating to a possible regulation of the Internet is that of the very definition of the Internet, which in an *organological* approach means considering it through its technical and social modes of existence and even through its “naturalness”⁴. Indeed, just like water or air, the Internet may be regarded as a common good and therefore, in the context of an economy of commons it can be opposed to or articulated with the current privatization of the Internet operated by the platforms. According to Francesca Musiani in *The Internet Bill of Rights: A Way to Reconcile Natural Freedoms and Regulatory Needs?*, key contributions to this debate came from Jack Balkin on freedom of expression, John Palfrey on access and Lawrence Lessig on the delicate balance between innovation and control. Musiani’s article also raises the epistemological question of the production and sharing of knowledge since access for all and transparency also allows for widespread control. This epistemological question relies on what Musiani calls “appropriate instruments” related to rights such as: right to privacy, right to be online in the first place (freedom of access and use), right to create and share knowledge, freedom of expression (including through avatars), right of protection on personal data (including right to have them rectified according to Article 8 of the Charter of Fundamental Rights of the European Union). The importance of institutions guaranteeing these rights is emphasized but should be backed by an *Internet Bill of Rights* (IBR) raising above national jurisdictions, as we develop within the NEXTLEAP project.

Finally, Musiani questioned the possibility of a unique extra-national IBR but also its influence on national laws (multi-stakeholder approach) and even the need for it in a libertarian or self-organizing vision. An IBR may even not be suitable due to the large amount of legal systems already encompassing them which may announce the era of decentralization in the legal domain.

Bibliography:

- Francesca Musiani, *The Internet Bill of Rights: A Way to Reconcile Natural Freedoms and Regulatory Needs?*, 2009 <https://script-ed.org/wp-content/uploads/2016/07/6-2-Musiani.pdf>
- Stefano Rodotà, *Data Protection as a Fundamental Right*, 2009 http://link.springer.com/chapter/10.1007/978-1-4020-9498-9_3

5.2.2. Philosophical issues: Ars Industrialis contributions

Source: The Ars Industrialis Online vocabulary (<http://arsindustrialis.org>)

⁴The examination of the exosomatisation process and how it is interpreted by transhumanism towards a new kind of naturalness will be one of the topics of ENMI 2016 (<https://enmi-conf.org>).

Access for all, which came through the World Wide Web architecture based on HTML hyperlinks, which made the Internet and the infrastructure through which all aspects of our lives as human beings are now reorganized. As stated by Lawrence Lessig in the early 2000s, "code is law": digital coding and algorithms are conditions of possibilities for rights. And as he pointed out, since 1993, the Web - and more generally the Internet now accessible through other platforms - has profoundly changed in nature. Initially designed to reconstruct the symbolic exchanges that mass media tended to eliminate, the Internet and the Web were progressively turned back to primary control vectors of audiences and behaviors through both the data economy and the intelligence services.

If code conditions law, then a right to change the existing architecture must be given to individuals and groups. Moreover, political and economic powers must recognize their duty to encourage civil society's responsibility in this momentum. Indeed, the recent evolution of the Web and of the Internet re-appointed them to what constituted the main feature of the mass media, which, homogenizing viewpoints and lifestyles, accelerated catastrophically entropic trends that dominate the *Anthropocene*.

Faced with the challenges posed by this new geological era, in which the main challenge is to reintroduce negentropy, changing the architecture of digital networks has become a right and a duty that everyone should feel entrusted with in order to increase the negentropic capacity against the current entropic trends of network practices. This implies a *disruption* of the relationship between law and technology and obligations in terms of public and private funding of research.

The primary issue when envisioning any "Constitution of the Internet" is how to enforce it. So many empty words have been spoken in declarations over human rights and the Internet that the entire concept of "rights" risks becoming simply "hot air", another form complicit in the power of domination. Yet even today, the "real" constitution of the Internet is not just any set of words - but the protocols themselves. Snowden himself provided a crucial insight in how to transform a "formal" constitution of mere words into a "material" constitution that can inform the Internet itself: these rights must be inscribed in the protocols of the Internet itself.

It is then imperative to build these principles into the protocols of the Internet via standardization bodies such as the IETF and W3C. This could be done by establishing an "ethics" review for protocols, to make sure these rights and protocols are not only discussed in governmental bodies, but also amongst coders, entrepreneurs, and hackers – as well as ordinary citizens. It is not only about human rights, but rather about the "Net" rights of an extended human-technological system, as Andy Clark put it. Their investigation needs to be carefully conducted in order to create not only the "Web We Want" but the "World We Want" through the creation of rights in a world where the pre-Internet notion of rights from the Enlightenment are in danger of being left to forces such as the NSA.

The unprecedented act by which Julian Assange, Chelsea Manning and Wikileaks overturned the planetary geopolitics opened the era of "whistleblowers" - from Edward Snowden revealing the practices of NSA and platforms to Antoine Deltour and Raphael Halet revealing the tax evasion organized by the French state - so many other initiatives that have multiplied in a context characterized by the exacerbation of inequalities and asymmetries. With them, the question of the regimes of truth and of the forms of verification posed by Michel Foucault appears in entirely new terms. Alerts and revelations reactivate the paradoxes and stakes of transparency and secrecy, power and knowledge, asymmetry of information and constitution of public affairs, honesty of debate and confidence. That is to say of security, 'hacking' and the conditions of possibility of political life at the time of the data economy.

By allowing capitalism, which has become purely computational, to impose its formats and criteria for the selection and publication of traces which are practices of dissimulation and annihilation in the service of automated nihilism, the permanent and widespread reticulation has established what Antoinette Rouvroy called algorithmic governmentality. It redistributes the most elementary conditions of power and knowledge by speeding up law in the sense of jurists and legislators, but also in the sense of philosophers and scientists who study and transform the world into right not only in fact. With justice in which laws of all disciplines are enunciated, the algorithmic governmentality, intrinsically disruptive, ruins the regimes of truth without which there can be neither legitimacy nor peace. Due to this reason, Ars Industrialis also recently published a letter of support to whistleblowers.

It is these questions that a true policy, bearing a new right, demands to be treated today to reconstitute the public at the time of the societies of hypercontrol where the disruptive strategies dig systematically and methodically exploit the legal and theoretical holes. In February 1984, Foucault warned us, by taking the example of Solon, that *parrhesia* is a form of the true saying brutal and even violent: It practices the *ubris* (the excess). In the 21st century, revelations destabilize the asymmetric practices of information without which, however, no power can be exercised: the approach proceeds from a libertarian vision in which there is a threat to the political and institutional legitimacy that constitutes any *res publica*.

The secret that protects privacy as well as the impartiality of juries and the diplomatic negotiation processes are essential to the certification procedures establishing the regimes of truth. Yet these are much more challenged by technologies of hyper-control, replacing deliberation by big data, more so than by the revelations of whistleblowers. This is why the *parrhesia* of these whistleblowers is salutary: it forces us to take up these questions in terms of data and network architectures which we want to be the basis of the exercise of economic as well as political power based on shared knowledge processes. From this crisis that Ars Industrialis called the *blues of the Net* can emerge a new economic and political thought, putting at the heart of its principles the "pharmacological" dimension of digital technologies of power and knowledge. Algorithms and data architectures are what from Socrates to Derrida, is called *pharmaka*: poisons and remedies, and new forms of writing for and through which is required a new right, ie a constitutional reconstitution of the public thing without which there is no *res publica*.

It is in the public sphere that is treated and debated in issues related to public affairs (also common thing, through the use of Reason, also critical function, for it is the function of reason to allow critical thought). Although our collective critical function is presently diminished and the Enlightenment obscured (this is what Jürgen Habermas was worried about) in advanced industrial societies due to their systems of power, in front of the imbalance between political and citizens' issues, confronted with economic and commercial advertising, Habermas wrote that the "decomposition of advertising which penetrates the ever wider spheres of society, but at the same time loses its political function, which is to subject to public control the states of things made public. " Why can not the actual important issues be public, as opposed to mere advertising? Faced with this issue, and with the truth as a condition of a social as well as moral contract, Ars Industrialis supports the actions of the whistleblowers in the spirit of a reconstruction of public life, through a reconstruction of publication and right.

IRI wishes to contribute to the invention of a hermeneutic web, (re) constituting an advertising and publication inseparable from procedures of interpretation, discussion, argumentation, controversies, validation and certification. And thus, restoring its vivacity and power to the function of reason, as reasoning in opposition to understanding alone, and capable of raising and reinvesting the meaning and necessity of "public opinion" as knowledge derived from judgment forming a justice, and a vector of democracy. Defending that it is through publication that rational knowledge is developed, that is to say, exposed to critique, and that this critical capacity is necessary in a democratic and industrial society. These annotation and indexing languages aim at making the criteria and standards of digital technologies public, explicit, open to critique and contribution within an international industrial framework and international rights.

The "ways of democracy", using the words of William Burroughs in *The Electronic Revolution* - a text alluding to Watergate, whose revelations of the listening practices of the US secret services forced the resignation of President Nixon, an historic example of which we should take the measure (or *démessure*) announce the current democratic regression. The organs of power and their representatives and managers (if automatism and algorithmic governmentality have not yet disintegrated them) not being alarmed, but the whistleblowers are only accused, prosecuted and judged as "outlaws" - we are entering a disruption, but also a readjustment and re-constitution of the system, with new rules in a new public space, for a new regulation of public and private, communication and secrecy, freedom and control that is against all forms of appropriation and hegemony and all fencing devices and from a perspective of openness and justice. Ultimately, at the level of a truth of digital data is related to individual and collective lives.

5.3. List of net rights for online contribution

The proposed typology in order to expose a list of rights for crowdsourcing is partly inspired by the 10 topics proposed by the French Parliament Digital Commission (FPDC) and by the IRP (internet Rights and Principles Coalition). The source/inspiration is cited for each listed right. There are 100 propositions (recommendations) of the FPDC (www2.assemblee-nationale.fr/static/14/numerique/numerique_rapport.pdf). Here we propose a selection of certain rights which are relevant to NEXTLEAP in the context of decentralization and encryption.. The proposed template for crowdsourcing is meant to get people involved in discussion/propositions. For each right, IRI attempted to annotate the right with the annotation template as follows:

#
Type of right (legal category)
Title
Source/inspiration
Description
Other References
Interest for decentralized systems
Interest for encryption
Other technologies of interest

Communities involved
Tags

Annotated Net Rights:

#	1
Type of right (legal category)	Fundamental right to access public interest information
Title	Right to adjust the level of confidentiality attached to personal data when they are of public interest
Source/inspiration	French Parliament Digital Commission (FPDC), Reco 3
Description	This right may apply in priority on Politician's private informations
Other References	<ul style="list-style-type: none"> - UK FOI (public interest test on Parliament invoices) - Serge Daël (FPDC audition, July 9, 2014)
Interest for encryption	This right raise the question of control over level of confidentiality or flexible confidentiality
Other comments	<ul style="list-style-type: none"> - More generally the necessary balance between open data and protection of personal data is often raised (FPDC, Reco 4). - In Sweden, any citizen may request free access to a copy of the wage of any member of the government.
Tags	confidentiality, privacy, publicization, flexible confidentiality

#	2
Type of right (legal category)	Managing rights related to public information
Title	Right to access public information documented and "understandable"
Source/inspiration	French Parliament Digital Commission, Reco 7
Description	This recommendation raises the question of "understandability". By who or by which kind of algorithms?
Other technologies of interest	Knowledge engineering, deep learning and other knowledge extractors.
Tags	understandability, deep learning

#	3
Type of right (legal category)	Managing rights related to public information
Title	Right to request personal access to public information upon request
Source/inspiration	French Parliament Digital Commission, Reco 8
Description	This type of personal access on-demand is usually reserved to exceptional cases, for instance when cost, data state or the necessity to include information from the recipient prevent to perform a public access.
Interest for encryption	yes, since information from the requester may be included.
Other technologies of interest	security
Other comments	There is currently no obligation for French public administration to open access to public data.
Tags	open data

#	4
Type of right (legal category)	Reinforce the protection of whistleblowers
Title	Right for whistleblowers to use secure communication vector
Source/inspiration	French Parliament Digital Commission, recommendation 13
Description	Recommendation 13 suggest to set up a secured communication vector/channel for whistleblowers allowing them to contact an independent body in order to protect them.
Other References	<ul style="list-style-type: none"> - William Bourdon audition (Sept 25, 2014) - Ralph Nader, Peter J. Petkas, Kate Blackwell, <i>Whistle Blowing</i>, Bantam Press, 1972 - Résolution 1729 (2010) « Protection of whistleblowers, adopted on avril 29, 2010 by the EU Council. - James Dunne (Qosmos case)
Interest for decentralized systems	This recommendation tends to recreate centralized and potentially weak (or target of attacks) administrations. Decentralized protection of whistleblowers maybe an interesting topic for research.
Interest for encryption	This is typically a context for design and development of encrypted secured systems at the International or local level.
Communities involved	http://support-antoine.org http://lemurdesinsoumis.fr
Tags	whistleblowing

Side note: it would be important to propose a contribution on what is public information: information for public administration, information which is not private, information already published, information considered as a common good.

#	5
Type of right (legal category)	Technological neutrality (application of all rights to any technology)
Title	Right to use a pseudonym on Internet
Source/inspiration	French Parliament Digital Commission, recommendation 18
Description	More in Part III
Other technologies of interest	anonymization

#	6
Type of right (legal category)	Press/media freedom
Title	Transparency on content removal by hosting platforms using a database dedicated to content removal
Source/inspiration	FPDC, R25
Description	This type of database is requested to be in open access but certain content removal may request to remain confidential
Other References	<ul style="list-style-type: none"> - EU directive on electronic commerce 2000/31/CE of June 8, 2000 introducing a low responsibility of Hosting platforms (compared to publishing platforms) for the management of illicit content - French LCEN law (art 6-I-7) introduce the obligation for Host platforms to give Internet Users ways to report illicit content. This is a way to prove responsibility of the host in case illicit content is not deleted - Social networks and eCommerce platforms are recognized as hosts and not as publishers - Google search engine is recognised as publishing (TGI, Nov 6, 2013) - Google Adwords is recognized as hosting (Court of Appeal, April 9, 2014) - Google responsibility for personal data management has been reinforced by EU Justice court, May 13, 2014 - FPDC denies that digital platforms should be entitled a new right between publishing and hosting as proposed by other courts or by French ministry of culture.
Interest for decentralized systems	Alternatives to Centralized (PHAROS platform in France) or platform-controlled database for content removal should be

	explored.
Interest for encryption	Certain removed information may request encryption and people requesting content removal may request access to confidentiality
Other technologies of interest	<ul style="list-style-type: none"> - fingerprinting - automatic and preventive detection of illicit content

#	7
Type of right (legal category)	Press/media freedom
Title	Obligation to judges to get education to digital rights
Source/inspiration	FPDC, R37
Description	This recommendation may lead to specific education plans for NEXTLEAP and other EU projects in this domain.

Note that a better and dynamic definition of what is public and private (R38) is of high interest.

#	8
Type of right (legal category)	Private life protection
Title	Right to extend the limits of anonymization
Source/inspiration	FPDC, R48, R49
Description	Extension of personal data to traces and any elements that may be aligned directly ou indirectly to individuals including pseudo (R48). Promotion of robust anonymization technologies through quality labels and Research.
Other References	<p>Several studies show that protection of personal data is valuable even if people usually do not read web sites legal provisions.</p> <p>(1) Alessandro Acquisti, Laura Brandimarte, George Loewenstein, « Privacy and human behavior in the age of information », Science 30 January 2015, vol. 345, n° 6221, pp. 509-514.</p> <p>(2) Laura Brandimarte, Alessandro Acquisti et George Loewenstein, « Misplaced Confidences: Privacy and the Control Paradox », 2010.</p> <p>(3) Frederik J. Zuiderveen Borgesius, « Consent to behavioural targeting in european law - What are the policy implications of insights from behavioural economics? », 2013.</p> <p>(4) Antonio Casilli, « Quatre thèses sur la surveillance numérique de masse et la négociation de la vie privée », in Conseil d'État, op. cit., pp. 423-434.</p> <p>(5) Antoinette Rouvroy et Thomas Berns, « Le nouveau pouvoir statistique », Multitudes n° 40, pp. 88-103, 2010 ; CNIL, Cahiers Innovation et prospective n° 1, « La "dictature" des</p>

	algorithmes : demain, tous calculés ? », pp. 18-20.
Interest for encryption	This large interpretation of personal data opens new application for encrypted protection.
Other technologies of interest	Extension of anonymization (R49) entails “robust” methods with necessary investment in Research.

#	9
Type of right (legal category)	Private life protection
Title	Measures in favor of personal data management and Certification of data protection technologies
Source/inspiration	FPDC, R50
Description	<p>This recommendation is backed by Francesca Musiani , audited by the FPDC on the question of supporting research and development towards personal data management (1) (privacy by design and privacy by default) including a legal framework for technology certification. Protection of personal data is either based on a minimization of collected data or on the capacitation of users using decentralized systems (2), encryption, secured p2p computing, homomorphic calculation and other certified technologies. Certification of data protection technologies must be accessible to small companies and free software communities with:</p> <ul style="list-style-type: none"> - clear definition of encryption standards - encryption over all the communication chain without breach, which if occurring, should be notified to the user (R 52) - education to encryption - user control over his own keys and accountability of companies processing data (R53)
References	(1) George Danezis, Josep Domingo-Ferrer, Marit Hansen, Jaap-Henk Hoepman, Daniel Le Métayer, Rodica Tîrtea, Stefan Schiffner, « Privacy and data protection by design – from policy to engineering », in ENISA Report, dec 2014.
Interest for decentralized systems	(2) http://web.media.mit.edu/~guyzys/data/ZNP15.pdf : decentralized data protection using technologies like BlockChain
Interest for encryption	Encryption for minimizing data storage risk.
Other technologies of interest	<p>Homomorphic calculation on encrypted data.</p> <p>Data management awareness tools :</p> <ul style="list-style-type: none"> - Cookieviz (CNIL) - Lightbeam

	<ul style="list-style-type: none"> - Panopticlick <p>Contributive system for ranking personal data management on web sites:</p> <ul style="list-style-type: none"> - ToS;DR <p>Data Preference display:</p> <ul style="list-style-type: none"> - Do Not Track <p>Cookies management. Data reversion : Mes infos (Fing), My Data</p>
Other comments	Use of cryptography is authorized in France since 2004 (2004-575, June 21, 2004, Article 30) with provisions on accessibility to Justice for fighting against illicit content.

#	10
Type of right (legal category)	Individual autonomy (III, B)
Title	Right for individuals to control their personal data (R58) including control over technologies (R49)
Source/inspiration	FPDC, R58
Description	FPDC recommend that each individual has a right of auto-control its personal data (auto-determination) but without privatization/exploitation by individuals of their personal data. Prior consent (opt in) for each transaction is impossible, authorization to collect personal data may be given for all transactions on a given site but some cases (balance of power, frequent requests, impact on relatives) should be excluded from this scheme (4) and require specific consent and certain authorizations should be prohibited for instance on DNA information (5)
Other References	<p>(1) Y. Pouillet et A. Rouvroy, « Le droit à l'autodétermination informationnelle et la valeur du développement personnel. Une réévaluation de l'importance de la vie privée pour la démocratie. », in État de droit et virtualité, K. Benyekhlef et P. Trudel (dir.), Montréal : Thémis, 2009</p> <p>(2) Ruth R. Faden et Tom L. Beauchamp, A history and theory of informed consent, OUP USA, 1986.</p> <p>(3) Christophe Lazaro, Daniel Le Métayer, « Control over personal data : true remedy or fairytale? », Scripted, vol. 12, n° 1, juin 2015</p> <p>(4) The Future of Privacy Forum, op. cit., pp. 5-6.</p> <p>(5) Frederik J. Zuiderveen Borgesius, « Consent to behavioural targeting in european law - What are the policy implications of insights from behavioural economics? », 2013</p>

Interest for decentralized systems	These recommendations lead to more transparency and information on the adapted level of security according to each services and actual capacity to exercise choices and rights (effectivity principle and accessibility principle, R60).
Other comments	These recommendations raise the need for standardization of the information related to personal data.
Tags	effectivity, accessibility

#	11
Type of right (legal category)	Individual autonomy (III, B)
Title	Right of dereferencing and right to request information removal from search engines
Source/inspiration	FPDC, R63
Description	FPDC recommend that this right should be moderated by contradictory process, possible justice decision, use of territorial courts, fast legal process, possible access after dereferencing.
Other References	<ul style="list-style-type: none"> - EU Justice court - EU data protection authorities, article 29 (G29) of 26 nov 2014

#	12
Type of right (legal category)	Individual autonomy (III, B)
Title	Right of data portability
Source/inspiration	FPDC, R65
Other technologies of interest	The right of portability of personal data could use an open and protected standard.

#	13
Type of right (legal category)	Individual autonomy (III, B)
Title	Right against performative and even predictive algorithms
Source/inspiration	FPDC, R66
Description	This right against profiling raise again the issue of effectivity, transparency and non-discrimination (R66)

#	14
Type of right (legal category)	Individual autonomy (III, B)
Title	Whistleblowing right dedicated to employees of data processing companies
Source/inspiration	FPDC, R67
Description	This right could be performed directly to the national Data protection authority (CNIL in France)

#	15
Type of right (legal category)	Individual autonomy (III, B)
Title	Right to use a permanent collective action dedicated to personal data
Source/inspiration	FPDC, R67
Description	This right would be reserved to groups, associations, collectives.

#	16
Type of right (legal category)	Protection against surveillance (III, C)
Title	Necessary time limitation for storing communication technical data
Source/inspiration	FPDC, R76
Description	Limitation of State or Military inquiries. Right to signal illegal practices dedicated to public employees. Strong limitation of police authority (R77). Prohibition of large exploitation of data from surveillance (R78).
Other References	- Invalidation of EU directive 2006/24/CE, March 15, 2006 by EU Justice Court

#	17
Type of right (legal category)	Internet Access right (IV, A)
Title	Fundamental Right to access Internet
Source/inspiration	FPDC, R79 & R80
Description	Access to the Internet must be ensured by Social Internet fare, Public digital spaces, measures for persons in difficulties or with handicap.

Other References	Directive 2009/140/CE modifying directives 2002/21/CE relative to regulation of networks electronic communication services, and 2002/19/CE relative to communication networks access, related resources and their interconnexion, and 2002/20/CE relative to communication services authorization
Interest for decentralized systems	A right to digital literacy and education is emphasized and could be focused on decentralized and encryption systems (R80)
Other comments	In Finland, ISP must provide a “universal service” with minimum rate of 1 Mbs

#	18
Type of right (legal category)	Net Neutrality (IV, B)
Title	Equality to access Internet
Source/inspiration	FPDC, R82 & 83 & 84 & 85
Description	This Right extends the right to choose network technologies for end-users (R82). Strong restriction to traffic limitation/privatization (R83) or “specialized services” (R84) or it must be performed within transparency. R85 suggest accessibility to a “trustful terminal” preferably based on free software or european technologies.
Other References	ARCEP, sept 2010
Interest for encryption	the trustful terminal should be fitted with encryption technologies
Other comments	R85 mention support to Commons, support to EU publishers, interoperability rules for public services
Tags	trustful terminal, net neutrality

#	19
Type of right (legal category)	Platform Loyalty (IV, C)
Title	Right to access loyal information on internet platforms (information with transparent publication, collection, processing rules) without discrimination.
Source/inspiration	FPDC, 88-91
Description	These recommendations suggest to extends the Net neutrality principle applicable to IAP to service providers (platforms).
Other References	French National Digital Council, Neutrality of platforms, may 2014

Interest for decentralized systems	This set of recommendation encourage protection of platform-dependent services but surprisingly do not raise decentralized systems alternative.
Lobbies	<ul style="list-style-type: none"> - Open Internet Project (EU publishers) support specific regulations against platforms like Google - Thierry Pénard & Winston Maxwell refuse regulation

#	20
Type of right (legal category)	Property & Commons
Title	Right to easily use Free licenses (like Creative commons) and to exercise non-commercial activities
Source/inspiration	FPDC, R 97
Description	<p>This right relies on legal measures to overcome property obstacles but without clear option between:</p> <ul style="list-style-type: none"> - non-commercial p2p exchange, - decentralized systems for file transmission, - independence towards commercial file sharing companies, - overcome copyright exceptions by giving cultural rights to individuals, - reinforce copyright exceptions for any devices, in libraries, cultural education
Other References	<ul style="list-style-type: none"> - G. Hardin, « The Tragedy of the Commons», Science, 13 December 1968, vol. 162, no 3859, pp. 1243 – 1248 - E. Ostrom, Governing the Commons : The Evolution of institutions for Collective Action, op. cit., pp. 30 et s. - R. Wade, « The management of common property resources : collective action as an alternative to privatization or state regulation », 11, Cambridge Journal of Economics, 1987, pp. 96 et s.; D. Feeny and al., « The tragedy of the Commons : Twenty-Two Years Later », Human Ecology, vol. 18, n°1, 1990, p. 3. - E. Ostrom, « Reformulating the Commons », Swiss Political Science Review 6(1), pp. 29-30. Voy. R. Wade, op. cit., pp. 96 - B. E. Burke, « Hardin Revisited : A Critical Look at Perception and the Logic of the Commons », 29, Human Ecology, n°4, 2001, p. 453 : « The biophysical characteristics of a resource can create a commons despite societal attempts to privatize that resource, such as with large bodies of waters, rivers, fish, and other wildlife and air. Their fluidity makes it difficult to divide these into parcels with distinct bundles of property rights ».

	<ul style="list-style-type: none"> - C. Hess, « Mapping New Commons », presented at The Twelfth Biennial Conference of the International Association for the Study of the Commons, Cheltenham, UK, 14-18 July, 2008, p.13. : « (...) some commons are free and sometimes not. They are a birthright and the common heritage of humankind (the atmosphere and the oceans) but they are also local playgrounds or a condominium. They may be rival (roads, health care) or they may be non rival (public art, knowledge). They may be exhaustive (oil, biodiversity) or replenishable (gardens). They may be replaceable (hospital) or irreplaceable (landscapes). They may be global, local, or somewhere in between. And, commons like common-pool resources (economic goods), may have any combination of property rights » (cf. p. 37). - William W. Fisher III, Promises to keep : Technology, law, and the future of entertainment, Stanford University Press, 2004 - Philippe Aigrain, Sharing : Culture and the Economy in the Internet Age, Amsterdam University Press, 2012 ; - Marco Ricolfi, Copyright 2.0.
Interest for decentralized systems	<ul style="list-style-type: none"> - if the copyright exception for private copy could be extend to a full right of private copy, this could considerably extend the use of p2p file sharing systems
Other technologies of interest	<ul style="list-style-type: none"> - recommendation to consider legal: DC++, eMule, BitTorrent if not centralizing content and not using advertizing - larger use of interoperability and portability technologies
Other comments	According to R94, the Internet as whole should be considered as a common good which may refer to UNESCO Common heritage of humanity or Digital Public Domain. R95 re-emphasize the need to develop Open data.

#	21
Type of right (legal category)	Property and commons (V, C)
Title	Right for authors to exercise a secondary exploitation of their work and to develop free access to public-funded scientific publications with publication of anonymized data
Source/inspiration	FPDC, 99 & 100

#	22
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Type of right (legal category)	Universality and Equality
Title	Right to access the understanding of algorithms and to measure their effects on autonomy, transparency, group dynamics
Source/inspiration	Ars Industrialis
Interest for decentralized systems	This right raises the issue of how to visualize and monitor the impact of decentralized systems on capabilities
Tags	algorithms, autonomy, transparency, group dynamics

#	23
Type of right (legal category)	Expression and Association
Title	<ul style="list-style-type: none"> - Right to access metadata on resources - Right to access data sources and information on the way data are produced: appropriate description of methods and algorithms used to produce data published on the web should be included with data publications. - Right to annotate publicly all web resources, whichever annotation system is used. This recommendation includes the right and duty to republish web resources with the annotations created.
Source/inspiration	Ars Industrialis
Other References	W3C Web annotation
Tags	annotation, metadata

#	24
Type of right (legal category)	Governance
Title	Right to participate in Internet governance
Source/inspiration	IRPC
Other References	Multi-stakeholder governance/democracy discussions in Internet governance.
Tags	Internet governance

6. Methodology, tools, communication materials

6.1 Crowdsourcing methodology

Our goal is to implement protocols and tools for stimulating a crowd-sourced discussion on net rights. This can begin with the annotation of our education events recordings, and can later be augmented

with tools that use advanced data visualization, the organization of argumentation (argument mapping), and other discussion-oriented methods. Currently, we are exploring the various options for hosting the platform.

6.1.1 Text argumentation and annotation system

We plan to set up an open contributive platform for the discussion of net rights. We would like an easy to use system that includes categorization capacities (i.e. ability to perform and mark with colors different kind of comments such as “for” and “against” arguments) as well as for these comments to be synthesized. We would also like for the platform to have language-specific customization as we need the discussion to be multi-lingual.

In terms of discussion and argument mapping, one of the most easy-to-use platforms is Kialo, used by Harvard University's Berkman Center, which is suitable for small groups argumentation and discussion. Based on simple leading questions like “Should Anonymity Be a Right?,” it allows easy labelling of arguments as well as voting on arguments and consolidation. More information is at <https://kialo.com>. It is unfortunately not yet open-source and does not support annotations of text.

For annotation, there are two main options, but neither provide argumentation. One option under investigation is Co-Ment, a system developed by Philippe Aigrain (Co-founder of la Quadrature du Net). This platform has already been used for crowdsourcing of legal texts, charters, manifestos, and other documents but it is not under active maintenance, with information available here: <http://www.co-ment.com/>. IRI is running an instance of Co-Ment and has been contributing to its source code in the past. Another option is Hypothesis that has an easier-to-use and more modern interface but does not offer the same capabilities for complex annotation with hierarchical categories. It is available at: <https://web.hypothes.is/> but we do not currently run an instance locally.

The screenshot displays the Co-Ment web interface. At the top, the document title is "Hidetaka Ishida - This is not a book" with 33 comments and 2 versions. Below the title is a navigation bar with tabs: Text, Edit, People, Versions (2), Settings, Followup, and Embed. The main content area shows a text document with annotations. On the left, a sidebar lists annotations, including one by Kenta TANOSHIMA dated 2014-02-24. The main text area shows the document content with annotations in French and English. For example, an annotation in French discusses the impersonal and the infinitive, while an English annotation discusses the syntax of event and the infinitive. The interface also includes a search bar and a list of annotations on the left.

Annotation and track change in Co-Ment

In terms of data interoperability, IRI will try to use data formats produced by the W3C Web Annotation Working Group (<https://www.w3.org/annotation/>) which has recently published a data model, a lexicon and a protocol (Sept 6, 2016).

Other important Web annotation systems we have investigated include: Blerp (easily linked to social networks), Bounce (simple and adapted for small groups), Diigo (the most advanced archiving system), Draw Here, FloatNotes (Firefox with nice automatic duplication on all pages of a web site), Internote (Firefox add-on), MyStickies (stickers metaphor), Notable, Note anywhere (Chrome extension), QuickfoxNotes (Firefox add-on), and Annotator by the Open Knowledge Foundation. Most of them provide annotation tagging but none of them provides mature categorization systems and they are typically aimed at individual, rather than collective use in a forum.

6.1.2 Contributive Categorization on Net Rights

Two categorization schemas have been developed regarding decentralized systems and related Net rights. The first protocol consists in the use of a controlled vocabulary for the tagging part of the annotation. This may improve the quality and consistency of the crowd indexing (categories). The second one is related to “metacategories” intended for indexing not the text itself but the way it is perceived by the contributor. This second type of categorization may produce maps or data visualization on how contributors position themselves towards the text and consequently with whom they could enter in cooperation or in conflict.

Metacategories already tested in the context of courses or conferences:

- Understanding
- Trouble
- Question
- Bibliography
- Agreement
- Disagreement

Metacategories to be tested in our use case :

- Understanding (is the Right or the related technology clearly described and understandable)
- Crypto interest (is the Right related to cryptography and security?)
- Decentralization interest (has the right any interest in being confronted with decentralized technology)
- Question (question/problems raised by the listed right)
- Reference (legal, scientific or other sources to be connected to this right)
- ...

6.2 Communication materials

6.2.3 Publication of education event recordings (Video Forum)

After each event, the video recording will be published on the NEXTLEAP website in a video embedded player dedicated to annotation and visualization and connected to a discussion forum.

6.2.1 Flyers for seminars

Flyers will be printed for communication to the targeted audiences: academics, citizens, teachers and schools, museums, and related scientific communication centers.



Flyer sample

6.2.2 Announcements on project website and social media

Educational events will be announced through the NEXTLEAP web site, NEXTLEAP social media accounts (Twitter and Facebook group) and other major sites of the CAPS community. An effort will be made to provide a real-time accounting of major events by the way of live-tweets and collective hashtags.

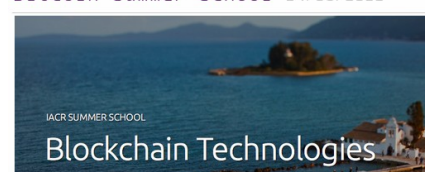
Summer school on real-world crypto
and privacy 05/06/2016



Summer school on real-world crypto and privacy, Carmela Troncoso (MDEA Software) June 5-10th, Šibenik Croatia <http://summerschool-croatia.cs.ru.nl/2016/> >>

event

Bitcoin summer school 29/05/2016

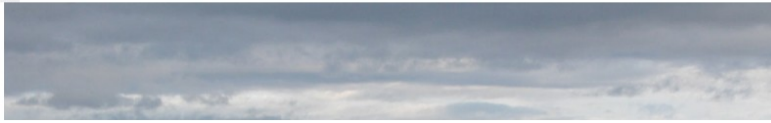


Announcement of Education events on the NEXTLEAP website.

Pharmakon.fr
Ecole de philosophie d'Epineuil-le-Fleuriel



Accueil Accueil Académie d'été hébergement Streaming Catégorisation contributive Académie d'été 2016 – REAPPRENDRE A VIVRE le cours le contact



forums

Guest

Forum » académie 2014 » académie 2014

Pages: [1]

	Topic	Started by	Replies	Views	Last post
	Subjectivité processuelle et devenir technique de l'imaginaire - Anaïs Nony	admin	1	476	Latest Post by admin on August 12, 2014, 07:55
	Faites vos jeux de projection: arche-cinéma comme antidépresseur - Riccardo Baldissone	admin	1	311	Latest Post by admin on August 11, 2014, 09:59
	Comprendre le processus d'individuation à la lumière des travaux de Carl Gustav Jung - Yves Chalmay	admin	1	314	Latest Post by admin on August 11, 2014, 09:36
	Pharmacologie du virtuel. Le numérique rêvé et ses limites - Paul-Emile Geoffroy	admin	1	311	Latest Post by admin on August 11, 2014, 09:33
	Le défaut d'origine comme double origine Recherche sur le matérialisme de Bernard Stiegler - Paul Willemarck	admin	1	298	Latest Post by admin on August 11, 2014, 09:30
	Cerveaux dans un (archi-)cinéma. Le rêve organologique et la déterritorialisation de la pensée - Paolo Vignola	admin	1	289	Latest Post by admin on August 11, 2014, 09:29

Example: Pharmakon summer school forum

6.2.4 Access to the Net Rights forum

From the NEXTLEAP website, reading access to the crowdsourced Net Rights will be open to everybody when the process of contribution and categorization is more mature. In order to prevent spam, editing and argumentation rights are granted upon request to users who create accounts.