**NeXt generation Techno-social Legal Encryption Access and Privacy** nextleap.eu / Grant No. 688722 Project Started 2016-01-01. Duration 36 months



# DELIVERABLE D6.9 YEARLY TECHNICAL AND DISSEMINATION ASSESSMENT 3

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Beneficiaries: IRI (lead), INRIA

Work-package: D6.3 Yearly Technical and Dissemination Assessment 3

**Description:** Third yearly update on technical progress and dissemination, focus on the secure address book usecase. Technical progress and dissemination reports will be delivered yearly and the dissemination plan will be updated if necessary. It will include all presentations, papers, videos, and all other outreach material to be archived - as well as links to any running code, demos, and in-depth technical analysis of the primary challenges and next steps. This will include the advise of the advisory board and an updated communications strategy that takes into account whether the previous technical and dissemination objectives were met or not, and how they can be achieved in the next period. Dissemination and technical progress in each of the appointed sectors will be tracked against objectives and goals.

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# 1. Executive summary

This third dissemination report describes the dissemination activities carried out by the NEXTLEAP project partners during the third year of the project (2018). Note that the first six months of 2018 were also described in the second year review, which was in 2019, but we maintain the reporting period in order to accurately capture the PKIs for the end of the NEXTLEAP project. First, we describe dissemination activities such as conferences, seminars and workshops focused on different targeted audiences: citizens, Collective Awareness Platforms projects, standards, Internet governance and academia (including a list of publications by the members of NEXTLEAP consortium in academic journals and proceedings). We also provide a list of press interviews, blog posts, and press articles about NEXTLEAP and its partners. Finally, we provide a table of the KPIs to measure the advancement and the impact of the NEXTLEAP project in its final reporting period.

## 2. Introduction

This deliverable is the third of a series of dissemination reports that outline the significant achievements in dissemination and communication by the NEXTLEAP project. This report follows the structure of the Dissemination Plan approved by the advisory board (D6.2) and includes the final measurement of the project's success against the KPIs given in the project proposal for the third year.

As stated in more detail in the Dissemination Plan (D6.2), the purpose of dissemination for this project is: first, to provide all stakeholders outside the consortium with access to a reasonable level of details on the project, so they can anticipate the impacts of the project; and second, to allow the NEXTLEAP partners to benefit from interaction with external audiences, both in order to solicit their input and to maximise the impact of the results of the project. This process of knowledge transfer and exchange with the general public of concerned citizens and parties who could not be full partners (but who may have interest in the results of the project) plays a key role for the achievement of the overall objectives.

# 3. Dissemination Activities

The activities of dissemination are focused on particular target audiences in order to maximise the impact of the project and its benefit to the greater social good by going outside the "usual" activities. Please note that not every event directly needed financing from NEXTLEAP's budget for their organisation in terms of travel, publication, or other forms of support, but every event was done by researchers in the project who are directly funded by NEXTLEAP. Dissemination activities are classified below by type of target audience. The dissemination activities are given in tables per dissemination channel following each target group, with each activity sorted by date.

## 3.1 Citizens

As stated in the Dissemination Plan, the term "citizen" refers to groups of ordinary people (including, but not limited to, activists and human-rights-defenders) concerned with fundamental rights and the Internet. Listed below are the events in which NEXTLEAP partners have brought educational and scientific guidance to citizens interested in the shifts privacy and decentralisation. In these events – which are currently ongoing – issues related to decentralised networks, net rights and privacy were presented and discussed, not only as technical issues but as social issues of primary importance. In 2018, the focus of NEXTLEAP continued, with increased focus on workshops with at-risk activists in Ukraine, support of the Internet Science 2018 conference, and even a high-level public debate on encryption and fundamental rights between Alexander Dugin, an advisor to Putin, and NEXTLEAP coordinator Harry Halpin (Inria) in Moscow. The closing event of NEXTLEAP at the Surveillance, Resilience and Privacy Conference (UTC, Paris) was also be open to the public to disseminate the final results, including an industry round-table involving Cryptpad.fr and Consensys in addition to panels crossing disciplines.

#### 3.1.1 Public Conferences and Workshops

Name of the conference + weblink	Date & location	Partner	Short description
ELEVATE Festival 2018 Panel: Risk a Radical Shift (sustainability in decentralized communication infrastructure) (https://elevate.at/en/mediaarchive/ev ent/e18radicalshift/)	March 1st 2018 Graz (Austria)	holger krekel (merlinux)	This panel brought together technical experts and Internet freedom activists and invites to rethink political and technical meanings of decentralization. Holger Krekel participated in a panel on secure decentralized messaging, and discussed NEXTLEAP research results, Autocrypt and Delta. Chat developments with journalists and matrix.org, a new federated messaging platform. Among the questions discussed by panelists: How can we keep decentralized architectures — both in politics and in technology - scalable and sustainable? How can decentralization be helpful to communities at risk, and what risks does decentralization involve? Finally, if we talk "decentralized", what is this "centre" we're referring to? Does "decentralization" also involve questioning geopolitical power distributions and the digital divide it creates in the world?
Internet Freedom Festival (2018) https://internetfreedomfestival.org/sc hedule/  Autocrypt Workshop https://platform.internetfreedomfestiv al.org/en/IFF2018/public/schedule/cu stom/238	March 5th-9th 2018, Valencia (Spain)	Marios Isaakidis (UCL) and Azul (Merlinux)	IFF is a global conference of the Internet Freedom communities. The audience comes from different backgrounds: technologists, journalists, human rights defenders, security trainers etc. Among the workshops this year there was a session on the usability of Autocrypt. Introduction and practical demonstration to easy encrypted email with Autocrypt. This workshop includes opportunities to provide feedback to developers for future improvements. The session was a follow up from our 2h session at IFF 2017 where we collected and discussed with diverse attendees after we gave a UI demo about mail encryption. Our IFF 2018 session was rather a practical hands-on sessions where attendees learn how to use Autocrypt-enabled mail apps. In the second part of the session we emailed and messaged each other and explored usability and security issues. We wanted everyone to leave with a good understanding of how Autocrypt feels and works and also how to feed back issues into the various Autocrypt developments, including the shard Autocrypt specification itself.

Rightscon 2018 https://www.rightscon.org/community/	May 16 <sup>th</sup> - 18 <sup>th</sup> 2018	Harry Halpin (INRIA)	The conference covered a diverse range of the leading topics and challenges facing human rights in the
	Toronto (Canada)		digital age. More than 2000 participants had access to more than 450 sessions across 18 distinct program tracks, organised for attendees to more easily navigate the complex world of issues. Sessions took the form of strategy meetings, debates, initiative launches, high-level panel discussions, lightning talks, tech demos, networking events, and many more.
Congrès annuel de la SFSIC, MSH Paris Nord https://www.sfsic.org/	June 13th 2018, Paris (France)	Francesca Musiani (CNRS)	Francesca Musiani presented « Le chiffrement, un objet STS » participating at the « Architecture, design et algorithmes : demain, la créativité sous contrôle ? » panel. The event was organised by Guillaume Sire.
Séminaire Epistémologies et Pratiques des Humanités Numériques (EPHN) http://udpn.fr/spip.php?article272	June 15th, 2018 Paris (France)	Francesca Musiani (CNRS)	Francesca Musiani attended to the « Etudier la communication sécurisée : quelle interdisciplinarité possible ? » panel, organised by Suzanne Dumouchel and ISCC.

OPERANDI 2018: Open Day for Privacy, Transparency and Decentralization https://petsymposium.org/2018/work shop.php	July 23rd, Barcelona, (Spain)	Harry Halpin (INRIA), Francesca Musiani and Ksenia Ermoshina (CNRS) Bogdan Kulynych (EPFL) Wouter Lueks (EPFL) Marios Isaakidis (UCL) Carmela Troncoso EPFL	The annual Privacy Enhancing Technologies Symposium (PETS) brings together privacy experts from around the world to discuss recent advances and new perspectives on research in privacy technologies. PETS addresses the design and realization of privacy services for the Internet and other digital systems and communication networks. "Co- ordinating Developers and High-Risk Users", Harry Halpin, Francesca Musiani and Ksenia Ermoshina attended. Halpin presented their paper. Bogdan Kulynych and Wouter Lueks presented two posters with oucomes from NEXTLEAP. Bogdan and Marios presented "ClaimChain: improving the security and privacy of in-band key distribution for messaging". Wouter presented "LoopTor: resisting traffic-analysis without changing Tor"
Cryptoparanoia Event	October 29 <sup>th</sup> , Moscow Russia	Harry Halpin (Inria) Iness Ben Guirat	A debate with Alexander Dugin on the nature of hacking was presented to a large audience, as well as panels on topics such as cyberfeminism and smart cities were given to a large audience at Moscow Higher School of Economics.

Surveillance, Resilience & Privacy Conference 2018, Paris <a href="http://surveillanceresilienceprivacy.org/">http://surveillanceresilienceprivacy.org/</a>	December 6th 2018 Paris (France)	Francesca Musiani (CNRS), Harry Halpin (INRIA), Wouter Lueks (EPFL), Vincent Puig and Giacomo Gilmozzi (IRI)	Final NextLeap event co-organised by Francesca Musiani (CNRS). This conference aims at looking at the relation between surveillance, resilience, privacy and data protection from a critical perspective. Based on recent theoretical work by Charles Raab, Richard Jones, and Iván Székely, the idea is to conceptualise if and how one can talk about "privacy resilient ICT systems".
ENMI 2018 https://enmi-conf.org/wp/enmi18/	December 18-19th 2018 Paris (France)	Bernard Stiegler, Vincent Puig, Giacomo Gilmozzi (IRI) Harry Halpin (INRIA)	Follow up of the July ENMI event, in this international conference brings together thinkers such as Saskia Sassen and Robert Mitchell to discuss about really smart cities, digital technology, collective intelligence and Anthropo- cene. Faced with what constitutes a risk that everyone now feels to varying degrees (even by practicing denial), the 2018 New Industrial World Forum (ENMI) intends to pose that the « resistance » to this future has no future if it fails to invent a new urban intelligence seizing and critiquing these revolutionary transformations, which start within the learning territories that could and should become the cities and conurbations engendered by the latest developments of what Clarisse Herrenschmidt called « reticular writing » and what Antoinette Rouvroy called « algorithmic governmentality ».

## **3.1.2 Interdisciplinary Panels**

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Name of the conference	Date & location	Partner	Short description
Computers Privacy and Data Protection (CPDP)	24-26th January 2018	Carmela Troncoso (EPFL)	Carmela Troncoso participated in two panels closely related to NextLeap. She talked about anonymous communications in the panel "Anonymous Communications infrastructures for the protection of metadata" organized by the PANORAMIX project; and about Privacy Engineering on the panel "Privacy Engineering: Lingua Franca for Transatlantic Privacy"
Pharmakon 2018  https://digital- studies.org/wp/seminaire-pharmakon- 2018/	1) December 13 <sup>th</sup> 2017 2) January 18 <sup>th</sup> 2018 3) January 25 <sup>th</sup> 2018 4) March 8 <sup>th</sup> 2018 5) Mai 24 <sup>th</sup> 2018 6) June 21 <sup>st</sup> 2018	Bernard Stiegler (IRI)	Pharmakon is a series of six seminars (in 2018) on the transdisciplinary Digital Studies theme organised by IRI. This Pharmakon seminar is the continuation of the one of 2017. While still exploring the political question of limits in close connection with the NextLeap's cryptography and decentralised social networks research program, in this seminar sessions we tried to analyse our contemporary political moment characterised by the post truth and the invasion of social media in the public and political spheres. Scholars on the intersection of the digital and philosophy took part in a panel with Bernard Stiegler (IRI) or other IRI scholars. Participants included Jean Lassègue (EHESS), Francesco Vitale (Universita di Salerno), Pierre de Jouvencourt (Paris 1), David Bates (Berkeley University), Paolo Vignola, Sara Baranzoni and Olga Lopez (Universidad de las Artes de Guayaquil), Gerald Moore (Durham University) and Maurizio Ferraris (Università di Torino). Videos are available online.
What Strategy for Alternative Internets? http://nextleap.eu/seminars/2018- 1.html	January 29 <sup>th</sup> 2018 Paris (France)	Francesca Musiani (CNRS), Harry Halpin (Inria) and Vincent Puig and Giacomo Gilmozzi (IRI)	NetCommons and NextLeap, two EU- funded research project working on alternative networks and encryption convened a discussion on alternative Internet infrastructures. Seed talks covered three different domains: Economic models, legal and regulatory needs and development strategy (politics). Musiani moderated the « Legal and regulatory challenges » panel.
Real Smart City and Deliberative Platform http://nextleap.eu/seminars/2018-3- 15.html	March 15 <sup>th</sup> 2018 Paris (France)	Francesca Musiani (CNRS), Bernard Stiegler, Vincent	Digital technologies and their disruptive effects are based on the fact that a de-spatialization is carried out at the same time as a de-temporalization by the virtual becoming of operations

	Puig and Giacomo Gilmozzi (IRI)	that disappear and escape any deliberation in the algorithmic governmentality. This state of affairs renders inaccessible and inconceivable the rule of law constituting a true digital urbanity - if it is true that it can only be deliberative. The Plaine commune project which is associated with Dublin, Durham and Guayaquil in the EU funded <i>Real Smart Cities project</i> propose to consolidate locally a urban consciousness of the new digital functions by making them objects of capacitation for example by designing in the NextLeap project decentralized services and data control and interpretation functionalities that solicit and reinforce systematically the deliberative capacities of the various groups formed by the inhabitants of the
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That there is Counter-Information: Art, Cryptography and the Meta- Datification of Discourse <a href="http://nextleap.eu/seminars/2018-4.html">http://nextleap.eu/seminars/2018-4.html</a>	April 9 <sup>th</sup> 2018, Paris (France)	Vincent Puig and Giacomo Gilmozzi (IRI)	Through re-visiting, at its onset, the history of cryptography and its epistemological ties to art, language and the law, this session will bring together recent artistic practices that playfully explore the role of encryption and data accumulation within our present time. Gilmozzi and Puig organized and attended this seminar with the artist and writer Jessika Khazrik (The Society of False Witnesses).
Intimacy and Extimacy http://nextleap.eu/seminars/2018- 5.html	May 15 <sup>th</sup> 2018, Paris (France)	Bernard Stiegler (IRI)	This workshop explores – with a trans- disciplinary approach gathering psychoanalysis, philosophy, sociology and computer science – the concepts of localization, frontiers and boundaries in nowadays digital context where temporality and cardinality are blurred, examining these issues in the context of the Nextleap program as it is devoted to cryptology, and to the extent that the extime is what testifies to a crypt, ie a secret, which is the unconscious as it manifests itself only by becoming not conscious, but exteriorized beyond the intimate – beyond the sphere of the ego, and, in this, "published".
Information and Entropy http://nextleap.eu/seminars/2018- 6.html	June 20 <sup>th</sup> 2018 Paris (France)	Bernard Stiegler (IRI)	Technics is an accentuation of negentropy, since it brings increased differentiation. But it is equally true that technics is an acceleration of entropy, not just because it is a process of combustion and of the dissipation of energy, but because industrial standardization seems to be leading the contemporary Anthropocene to the possibility of the destruction of life as the burgeoning and proliferation of difference — a destruction of biodiversity, of cultural diversity and of the singularity of both psychic individuation and collective individuations.
Urban Intelligence After Two Centuries of Industrialization https://iri- ressources.org/collections/season- 50.html	July 2-3rd 2018 Paris (France)	Bernard Stiegler, Vincent Puig, Giacomo Gilmozzi (IRI)	This seminar, devoted to urban intelligence in the epoch of the automatic city, proposes to reopen the questions raised by Henri Lefebvre in The Critique of Everyday Life, Le droit à la ville, Vers le cybernanthropeand The Production of Space, and, in so doing, to revisit the characteristics of industrial urbanity as it emerged in Marx's epoch, with a view to describing contemporary capitalism as bearing within it the program of generalized 'smartification', along with the conditions in which the highly connected city could also become a city

			of dis-automatization, that is, of the re- invention of urban knowledge in all its forms.
Journée du Conséil Scientifique de l'AFNIC (JCSA18)  https://evenements.afnic.fr/Site/17180 3/4346/Pages/8058	July, 9th 2018 Paris (France)	Francesca Musiani (CNRS)	Musiani presented « La technique, et ses conséquences pour les droits humains » during the JCSA18 Human rights and Protocols workshop day.
ENS Seminar https://www.ens.fr/agenda/droit-et- sociologie-la-theatralisation-du- proces/2018-05-28t160000	October 24th 2018 Paris (France)	Francesca Musiani (CNRS)	La pluralité des normes sur Internet, et ses conséquences pour les utilisateurs » within the interdisciplinary workshop on law and internet ( <i>Le droit dans l'interdisciplinarité</i> , <i>séance Droit et Internet</i> )

# 3.2 Collective Awareness Platforms Projects

NEXTLEAP also continued to build synergy and communication with other research projects in CAPS. NEXTLEAP partners attended two events in different parts of Europe and IRI continued to attend the Communication WG Monthly Conf Call in order to co-ordiate with the rest of the CAPS projects. These two calls were particularly focused on the DSI Fair 2018 organization. NEXTLEAP attended workshops both in Brussels and the DSI Fair 2018 in Rome. Also, CAPS organized a seminar called "Alternative Internets" (listed above) with the CAPS NetCommons project. The OPERANDI workshop was organized by Harry Halpin (INRIA) and Carmela Troncoso (EPFL) of NEXTLEAP with the CAPS DECODE project and invited Francesca Bria (co-ordindator of the CAPS DECODE) project to give the keynote of the OPERANDI workshop at PETS 2018 in Barcelona (reported above, as event was public). The event had around 70 attendees with 15 lightning talks and 15 posters, a plenary talk by Francesca Bria on the DECODE platform, and 2 panels discussing issues related to decentralization and governance.

Name of the event + weblink	Date & location	Partner	Short description
CAPSSI Event: Connected Technologies for Social Good (https://capssi.eu/event/connected-technologies-for-social-good/?instance_id=76)	February 14 <sup>th</sup> - 15 <sup>th</sup> 2018, Brussels (Belgium)	Giacomo GILMOZZI (IRI)	The aim of this meeting and workshop was to exchange knowledge and experience, discuss priorities, and discover the many opportunities of a more human-centric Next Generation Internet. Giacomo Gilmozzi (IRI/NextLeap) attends.
DSI Fair 2018 (https://dsifair.eu/dsi-in-cities-building-the-foundations-for-responsible-data-driven-innovation/)	June 6 <sup>th</sup> -8 <sup>th</sup> 2018, Rome (Italy)	Giacomo Gilmozzi (IRI)	This workshop will explore how we can approach social innovation using data in a responsible way. It will bring together three CAPS projects – DECODE, DSI4EU and NEXTLEAP – to discuss how we can use new decentralised, privacy-aware technologies to enable responsible digital social innovation in cities. It will also consider the implications and linkages of the Next Generation Internet, which promises a decentralised and citizen-centric approach to connected internet technologies.
CAPSSI Communication TelCo (Monthly Conference Call)	October 10th, September 5th, July 2nd, May 14th, April 12th, February 28th, January 17th 2018 (Web)	Giacomo Gilmozzi (IRI)	In these calls project referents updated the Capssi community about projects' latest news, technical or scientific outputs, invite or co-organize workshops with others CAPSSI projects and highlight events to be added on the CAPSSI newsletter and website.

## 3.3 Standardisation

NEXTLEAP's dissemination to industry and open-source community aims to co-create their protocols with the larger open source community, and to standardise the protocols designed by NEXTLEAP in order to maximise their impact. In the open source community, these events are aimed at the co-design of the open-source versions of the protocols and broadening the community beyond the formal NEXTLEAP partners. Holger Krekel took a lead in organizing the pre-standards "Autocrypt" meetings (including one in Kiev, Ukraine) and Inria engaged the new MLS (Messaging Layer Security) Working Group. Iness Ben Guirat (Inria/IRI) has led work on the privacy of the W3C Web Authentication Protocol. UCL hosted,in conjunction with the PANORAMIX project, a meeting between the IRTF Human Rights Protocol Consideration Task Force and Inria/IRI, which helped lead to the creation of the IRTF Privacy Enhancements and Assessments Research Group to increase privacy in IETF protocols. Led by Iness Ben Guirat (IRI/Inria). The MLS chartering meeting at the IETF 101 meeting in London was packed, and interest was provided by Google, Facebook, WhatsApp, Cloudflare, Cisco, and others, with Inria explicitly hosting the first meeting of the MLS Working Group at Inria in Paris in September 2018: Bringing together representatives from the for-profit European secure messaging industry like Wire, open source projects like Mozilla, and even Facebook to design a new standard for secure group messaging. In an unexpected turn-ofevents, the work on decentralization by NEXTLEAP came to the notice of the massively growing blockchain community, leading to invited talks by NEXTLEAP co-ordinator Harry Halpin (Inria) at the largest Ethereum conferece EdCon and at the Web 3.0 Summit.

## 3.3.1 IETF/W3C Open Standards Working Groups

Name of the conference	Date & location	Partner	Short description
IETF/IRTF Human Rights Consideration for Protocols (HPRC) meeting	March 22 <sup>nd</sup> 2018 London (UK)	Harry Halpin (Inria) Giacomo Gilmozzi (IRI)	Harry Halpin (Inria) attended and presented on NEXTLEAP's work at the end of the HPRC meeting. Giacomo Gilmozzi (IRI) presented the new IRI's developing on the hypothes.is digital annotation tool.
IETF Messaging Layer Security Bird of a Feather Meeting	March 22 <sup>nd</sup> 2018 London (UK)	Karthik Bhargavan (Inria)	Karthik Bhargavan (Inria) presented on MLS with Katriel Cohn-Gordon (Oxford) and Richard Barnes (Cisco), receiving widespread interest and leading to a new MLS Working Group at the IETF.
DuD (privacy officers yearly meeting)	June 13th, 2018 Berlin (Germany)	Holger Krekel (Merlinux) Janka Szymanowsk i (Merlinux)	Schutz vor aktiven Attacken gegen Autocrypt (NEXTLEAP): Introduction to Autocrypt and to NEXTLEAP research results for countering malfeasant network adversaries, using new protocols implemented in Delta.chat. Holger Krekel and Azul participated
Interim MLS meeting	September 27 <sup>th</sup> -28 <sup>th</sup> 2018 Paris (France)	Karthik Bharagavan (Inria), Harry Halpin (Inria)	Karthik Bharagavan hosted the first interim meeting of the IETF MLS Working Group at Inria de Paris. Harry Halpin (Inria) participated, focussing on decentralization and federation.

## 3.3.2 Industry and Open Source Events

Name of the conference	Date & location	Partner	Short description
EDCON2018 (https://edcon.io)	May 3 <sup>rd</sup> -5 <sup>th</sup> 2018, Toronto (Canada)	Harry Halpin (INRIA)	The purpose of the conference is to improve communication and integration between the various global Ethereum communities. EDCON is organized as a conference series, and happens once a year in different countries. The Ethereum Foundation also shows their strongly supports to this high quality community conference. Harry Halpin presented on formal verification.
Consensus2018 (https://www.coindesk.com/events/consensus-2018/)	May 14 <sup>th</sup> - 16 <sup>th</sup> 2018, New York (USA)	Harry Halpin (INRIA)	4 <sup>th</sup> annual blockchain technology summit. Consensus 2018 will feature 250+ speakers and 4,000+ attendees from the leading industry startups, investors, financial institutions, enterprise tech leaders, and academic and policy groups who are building the foundations of the blockchain and digital currency economy. Harry Halpin attended.
OSCAL 2018 (https://oscal.openlabs.cc)	May 19 <sup>th</sup> -20 <sup>th</sup> 2018 Tirana (Albania)	Harry Halpin (INRIA)	OSCAL is the annual international Open Source Free Software Conference in Albania dedicated to empowering Software Freedom, Open Knowledge, Free Culture and Decentralization. Harry Halpin gave a presentation on "End-to-End Encrypted Messaging: Next Steps for Privacy and Decentralization"
OpenPGPSummit 2018	October, 20-21, 2018 Bruxelles	Holger Krekel, Azul (Merlinux)	People from around 15 different projects and contexts in the PGP e-mail encryption space got together. Holger and Azul got two hold two of the three full-plenary talks, presenting NEXTLEAP research results, Autocrypt and key verification protocols, along with our implementation work.
Web 3.0 Summit	October, 22-24th, Berlin Germany	Harry Halpin (Inria)	Harry Halpin (Inria) gave a keynote on how the lessons of the IETF and W3C governance of standards can be applied to the blockchain space, attracting even media interest from Coindesk.
Chaos Computer Congress 2018	December 26-29 <sup>th</sup> , Leipzig Germany	Holger Krekel (Merlinux), Ksenia Emroshina (CNRS), Harry Halpin (Inria), Iness Ben Guirat (Inria)	Harry Halpin and Iness Ben Guirat (Inria) of NEXTLEAP organized a panel with researchers such as Daniel Bernstein and members of the Ethereum Foundation (Vlad Zamfir) to discuss privacy, governance, and technical protocols. The event was supported by RIAT and Binance. Ksenia Ermoshina (CNRS) also presented her work started in NEXTLEAP and continued with CitizenLab on activists and encryption in Ukraine and Russia.

## 3.4 Internet Governance

One of NEXTLEAP's dissemination objectives is to influence policy-makers and governments to help defend fundamental rights related to privacy and security research at the city, regional, national, European, and international levels. In our joint workshop with E-CRYPT USA for the European Commission and Parliament in January 2018 in Brussels, we invited speakers from Europol and engaged in an important discussion over concerns over European Commission-backed collection of "zero-days" and other "state hacking" techniques, which has led to high-level discussions with Europol on not sacrificing end-user security and maintaining European privacy. We helped discuss standards and governance at the first ever training for cryptographers in policy at the "School on Societal Aspects of Cryptology and on Business and Innovation in Crypto" and these issues were discussed both at EPFL's prestigious SURI lecture by Harry Halpin (Inria). Harry Halpin (Inria) also provoked the topic of governance in blockchain circles at a panel with Vlad Zamfir (Ethereum Foundation) and Amir Taaki (Bitcoin coder) in Bratislava, Slovakia.

## 3.4.1 Policy Conferences

Name of the conference	Date & location	Partner	Short description
ECRYPT-CSA School on Societal Aspects of Cryptology and on Business and Innovation in Crypto https://www.cosic.esat.kuleuv en.be/events/ecrypt-csa- school-cryptology/	January 7 <sup>th</sup> -9 <sup>th</sup> 2018 Zurich (Switzerland )	Harry Halpin (Inria)	Harry Halpin gave a talk (Crypto Standards for the Internet and Web on) on how the predominant standards body for the Internet and Web work in detail, the Internet Engineering Task Force (IETF), and for the World Wide Web Consortium (W3C).
ECRYPT-CSA and NEXTLEAP Crypto Policy Workshop https://www.cosic.esat.kuleuven.be/e vents/ecrypt-csa-workshop- crypto/program/	January 22nd- 23 <sup>rd</sup> 2018 Brussel (Belgium)	Harry Halpin (INRIA), Georges Danezis (UCL) and Giacomo Gilmozzi (IRI) Carmela Troncoso (EPFL)	The purpose of this CRYPT-CSA NEXTLEAP workshop on crypto- policies is to bring together cryptographers with policy makers, lawyers, law enforcement, NGOs, and industry to discuss the key issues (pun intended) related to cryptology, policy and also smart cities. Harry Halpin, George Danezis and Carmela Troncoso and Giacomo Gilmozzi actively participated in three of the panels at the workshop.
Can Protocols Enforce Human Rights via the IETF? http://nextleap.eu/seminars/2018-3-23.html	March 23 <sup>rd</sup> 2018, 2018, London (United Kingdom)	George Danezis (UCL), Harry Halpin (Inria) Giacomo Gilmozzi (IRI)	Following the intervention of Snowden at the IETF (Internet Engineering Task Force) in 2015 and the call by Tim Berners-Lee for a 'magna carta' for the Web, engineers at the IETF have been considering creating 'human rights' reviews of new standard protocols. Held in conjunction with IETF 101 in London, this seminar will briefly overview the main political issues facing current protocols at the IETF and the technical issues facing HRPC. Then we will have an open discuss in detail over the drafts of current documents and what can be done in terms of both current and future relevant work in computer science on privacy, encryption, and decentralization.
"STS approaches to Internet governance: present and possible futures" <a href="http://www.tprcweb.com/overview/">http://www.tprcweb.com/overview/</a>	September 22nd, 2018 Washington, DC (USA)	Francesca Musiani (CNRS)	Musiani participated remotely to the 46 <sup>th</sup> Research Conference on Communications, Information, and Internet Policy (TPRC46).
13th Annual GigaNet Symposium https://www.giga-net.org/2018-giganet-symposium-schedule-paris-france/	November, 15th 2018 Paris (France)	Francesca Musiani (CNRS)	GigaNet is a home for all scholars of Internet governance; its annual symposium is intended to build and showcase the entire field. Francesca Musiani participated and presented "Governing What Wasn't Meant To Be Governed: A Controversy-Based Approach to the Study of Bitcoin Governance".
Annual Meeting of the Network of Centers for Internet and Society https://networkofcenters.net/event/n oc-annual-gathering	November 15th 2018 Paris (France)	Francesca Musiani (CNRS)	Participation to the "The Role of Ethics, Governance and Privacy in the Future of Artificial Intelligence" panel at the The global Network of Internet & Society Centers (NoC) – a collaborative

			initiative among academic institutions with a focus on interdisciplinary research on the development, social impact, policy implications, and legal issues concerning the Internet.
The Politics of Bitcoin Governance	December 5 <sup>th</sup> 2018 Bratislava (Slovakia)	Harry Halpin (Inria)	This panel brought together Vlad Zamfir (Ethereum Foundation) and Amir Taaki (Bitcoin) with Harry Halpin to discuss governance on the blockchain.

## 3.5 Academia

NEXTLEAP's goal was successful in pushing the previously under-theorised discussion of decentralisation in the technical, social, legal and philosophical senses to the forefront of debates, including critique and analysis of blockchain technology that became very popular in 2018. Considering the interdisciplinary nature of the NEXTLEAP project, peer-reviewed conference papers and journal articles were published in a wide variety of venues. With this in mind, a distinction is typically be made between computer science, where conference proceedings are usually more valued than journal publications and are published formally, and the humanities (as well as social sciences), where most conferences have a relatively high acceptance rate and often have formal no "proceedings", as what is most valued is the peerreviewed journal publication that can precede or follow conference presentations. To distinguish these kinds of events, peer-reviewed conferences with published proceedings are given an asterisk. In total, eight talks were given in peer-reviewed academic conferences and there were four journal papers, with the core protocol of NEXTLEAP, Claimchain, finally being published at the Workshop on Privacy in the Electronic Society (WPES) and the case studies being presented at the Security Standardisation Research conference. There was also co-operation between NEXTLEAP and the Internet Science 2018 conference in St. Petersburg, Russia. Moreover, this year Bernard Stielger had a new NEXTLEAP related book published (Bernard Stiegler's (dir.) La Verité du numérique) and another book proposal on NEXTLEAP was submitted to University of Minnesota Press.

Lastly, in terms of Ph.D. students and postdoctoral researchers, there was considerable success. Marios Isasskides (UCL) and Bogdan Kulcynch (EPFL) are continuing their Ph.D. studies after the end of NEXTLEAP. Postdoctoral researcher Ksenia Ermoshina returned to CNRS to begin a new project studying Russian encryption. Nadim Kobeissi (Inria) defended his Ph.D. in 2018. Benjamin Lipp (Inria) has started his Ph.D., and Wouter Lueks was hired as a postdoctoral researcher at EPFL. Iness Ben Guirat, formerly of IRI, has become an Inria research engineer and will commence a Ph.D. in privacy-enhancing technologies

## 3.5.1 Academic conferences

Network and Distributed Systems Security Symposium (NDSS) https://www.ndss- symposium.org/ndss2018/	February 18- 21 2018 San Diego (United States)	Carmela Troncoso (EPFL)	Carmela Troncoso (EPFL) attended this symposium where her paper "Knock, knock, who's there. Membership Inference on Aggregated Location Data", co-authored with UCL researchers, got the Distinguished Best Paper Award.
Third Annual UK Systems Workshop http://uksystems.org/workshop/2018/	March 21st- 23rd Newcastle (UK)	Marios Isaakidis (UCL)	Marios Isaakidis attended and presented "Modern key distribution with ClaimChain", talk based on the last ClaimChain developments at the UKS2018.

Hot Topics in the Science of Security (HotSOS) <a href="https://cps-vo.org/group/hotsos">https://cps-vo.org/group/hotsos</a>	April 10 <sup>th</sup> to 11 <sup>th</sup> 2018 Raleigh (United States)	Iness Ben Guirat (IRI)	Iness Ben Guirat (IRI, later moving to Inria) presented her work on formally verifying the privacy properties of the handshake doen by the cryptographic authentication W3C WebCrypto API.
European Symposium on Security and Privacy (EuroS&P). https://www.ieee-security.org/TC/EuroSP2018/	April 24-26 <sup>th</sup> 2018 London (United Kingdom)	Carmela Troncoso (EPFL) and George Danesiz (UCL)	Carmela Troncoso (EPFL) attended where her paper "TARANET: Traffic-Analysis Resistant Anonymity at the Network Layer" was presented.
Workshop on Privacy in the Electronic Society (WPES) https://wpes.tech/	October 15th, 2018 Toronto (Canada)	Wouter Lueks (EPFL)	Wouter Lueks presented the work "ClaimChain: Improving the Security and Privacy of In-band Key Distribution for Messaging" co- authored with Bogdan Kulynych (EPFL), Marios Isaakidis (UCL), George Danezis (UCL) and Carmela Troncoso (EPFL)
The Decentralization of Governance Workshop <a href="https://www.ibiblio.org/hhalpin/internetsci2018/">https://www.ibiblio.org/hhalpin/internetsci2018/</a>	October 26 <sup>th</sup> 2018	Harry Halpin (INRIA)	Harry Halpin attended and presented his paper "Decentralizing the Social Web" on standards and decentralization.
The Decentralization of Governance Workshop https://www.ibiblio.org/hhalpin/internetsci2018/	October 26 <sup>th</sup> 2018	Iness Ben Guirat (INRIA)	Iness Ben Guirat attended and presented her paper "Privacy and Social Movements" on the needs of activists for better privacy in secure messaging.
Security Standardisation Research Conference (SSRC 2018) https://ssr2018.net/	November 26th-27th, 2018, Darmstadt (Germany)	Harry Halpin (INRIA), Ksenia Ermoshina and Francesca Musiani (CNRS)	The purpose of this conference is to discuss the many research problems deriving from studies of existing standards, the development of revisions to existing standards, and the exploration of completely new areas of standardisation. Halpin, Musiani and Ermoshina presented "Coordinating Developers and High-Risk Users of Privacy-Enhanced Secure Messaging Protocols". It was then published in Cas Cremers, Anja Lehmann (eds.) Security Standardisation Research 4th International Conference (SSR 2018), (Proceedings, pp. 56-75)

## 3.5.2 Academic journals

- [FR] Francesca Musiani, (2018). « L'invisible qui façonne. Etudes d'infrastructure et gouvernance d'Internet » (*The Invisible that shapes. Infrastructure and Internet gouvernance studies*), *Tracés*, 35, pp. 161-176. Full text.
- [ENG] Holger Krekel Karissa McKelvey Emil Lefherz (2018). *How to fix email: making communication encrypted and decentralized with autocrypt.* Published in XRDS: Crossroads, The ACM Magazine for Students Pseudonimity and Anonymity, Volume 24, Issue 4, Summer 2018. Pages 37-39 ACM New York, NY, USA. <u>Link for the article</u>.

#### 3.5.3.1 Books

Bernard STIEGLER (dir.), La vérité du numérique, 2018, Paris, FYP éditions.
 ISBN: 978-2-36405-162-1
 English title: The truth of the digital. Research and Education in the Digital Age

**Abstract:** This book deepens the themes that constitute the objects of digital studies under the angle of the new "regime of truth" (in the sense of Michel Foucault) that algorithmic technology establishes as a new form of "governmentality" The truth of the digital thus directly feeds what is called the "post-truth". Revisiting Adam Smith, Charles Babbage, Alan Turing, David Hilbert, Kurt Godel, Herbert Simon and many others, this book tries to examine the history of cybernetics and computational technologies away from the usual clichés – for example, from the point of view of the incapacity of the machines to make mistakes, which would be their limit, or as a writing and graphic projection, or as a machine for languages, and in the wake of the plates of the Encyclopedia.

The truth of the digital world is also attempting to delineate questions posed by new scientific instruments - such as the Herschel space observatory and biophotonic microscopes - as well as instrumentation of the psychic apparatus in the age of the iPad, and by rereading the analysis of Freud's Wunderblock.

● Bernard STIEGLER (dir.), *The Neganthropocene*, 2018, Open Humanity Press. ISBN: 978-1-78542-048-1

**Abstract:** In the essays and lectures here titled Neganthropocene, Stiegler opens an entirely new front moving beyond the dead-end "banality" of the Anthropocene. Stiegler stakes out a battleplan to proceed beyond, indeed shrugging off, the fulfillment of nihilism that the era of climate chaos ushers in. Understood as the reinscription of philosophical, economic, anthropological and political concepts within a renewed thought of entropy and negentropy, Stiegler's 'Neganthropocene' pursues encounters with Alfred North Whitehead, Jacques Derrida, Gilbert Simondon, Peter Sloterdijk, Karl Marx, Benjamin Bratton, and others in its address of a wide array of contemporary technics: cinema, automation, neurotechnology, platform capitalism, digital governance and terrorism.

### 3.5.3.2 Book Chapters

- Alexandre Mallard, Cécile Méadel, Francesca Musiani, 2018, « Les paradoxes de la confiance distribuée : l'architecture pair à pair et la confiance des utilisateurs dans le système Bitcoin », in Milad Doueihi et Jacopo Domenicucci (eds.) La confiance à l'ère du numérique, Paris, Éditions Berger-Levrault/Éditions Rue d'Ulm. <u>Abstract</u> (French translation by Mallard, Méadel et Musiani, JoPP, 2014)
- **Harry Halpin**, 2018, Whose Afraid of the Dark Web? *New Solutions for Cybersecurity*. Editors: Howard Schrobe, David Schrier, and Alex Pentland. MIT Press
- **Harry Halpin**, 2018, "Free Software" *Pluriverse: A Post Development Dictionary.* Editors: Ashish Kothari, Ariel Sallah, Arturo Escobar, Federico Demaria, and Alberto Escobar.
- **Francesca Musiani**, 2018, "Quando il peer-to-peer si 'ricentralizza'. Vincolo socio-tecnico, spinta di mercato o fallimento?", in Gabriele Balbi and Paolo Magaudda (eds.) *Fallimenti digitali*. *Un'archeologia dei 'nuovi' media*, Milan, Unicopli, pp. 109-122. <u>Abstract</u>

#### 3.5.4 Organisation and co-organisations of workshops

Name	Date &	Partner	Short Description
Ateliers de l'avenir numérique – Forum sur la Gouvernance de l'Internet (https://isoc.fr/ateliers/)	location April, 5th and 25th June 6th, July 5th, October 10th, 2018, Paris (France)	Francesca Musiani (CNRS/IS CC)	Francesca Musiani (CNRS, ISCC) participates in the Organizing Committee, besides animating the Round Table "Evaluation of the Damage suffered in the matter of personal data breach" and "Data and the digital convergence".
IEEE European Symposium on Security and Privacy (EuroS&P 2018) https://www.ieee- security.org/TC/EuroSP2018/	April 24-26 <sup>th</sup> 2018	George Danezis and Marios Isaakidis (UCL)	George Danezis chaired IEEE EuroS&P, the most prestigious conference in Europe on security and privacy, hosted last year by Inria. Marios Isaakidis attended.
International Association for Media and Communication Research (IAMCR) https://oregon2018.iamcr.org/	June 23rd, 2018 Eugene, Oregon (USA)	Francesca Musiani and Ksenia Ermoshina (CNRS)	Ksenia Ermoshina and Francesca Musiani presented "Hiding from whom? Threat-modelling and in-the-making encryption technologies" at the IAMCR 2018.
Privacy Enhancing Technologies Symposium (PETS 2018)  https://petsymposium.org/2018	July 24-26th 2018 Barcelona (Spain)	Carmela Troncoso (EPFL)	Carmela Troncoso co-chaired the PETS symposium, the premier venue for privacy-preserving technologies. The event lasted for 3 days featuring 35 presentations and a keynote by alan Mislove on profiling issues.
The Future of Decentralized Governance: A Workshop on Encryption, Blockchains, and Personal Data  (Co-located with Internet Science 2018 Conference – Insci2018) http://insci2018.org/workshops	October 26th 2018, St. Petersburg, (Russia)	Harry Halpin (INRIA), Francesca Musiani (CNRS)	This workshop discuss the issues of decentralization, self-sovereignty, and net rights. In particular, this workshop will explore the understanding of the current national and international governance processes (both strengths and weaknesses, with a particular focus on the case of Russia) and new decentralized participatory practices based on crowdsourcing and direct democracy. Halpin and Musiani organized and were part of the scientific committee of this workshop.
Surveillance, Resilience & Privacy Conference 2018, Paris http://surveillanceresilienceprivacy.org/	December 6th 2018 Paris (France)	Francesca Musiani (CNRS), Harry Halpin (INRIA), Wouter Lueks (EPFL), Vincent Puig and Giacomo Gilmozzi (IRI)	Final NextLeap event co-organised by Francesca Musiani (CNRS). This conference aims at looking at the relation between surveillance, resilience, privacy and data protection from a critical perspective. Based on recent theoretical work by Charles Raab, Richard Jones, and Iván Székely, the idea is to conceptualise if and how one can talk about "privacy resilient ICT systems".

#### 3.5.5 Academic courses

Name	Date & location	Partner
Privacy-Enhancing Technologies	UCL, 2018	George Danezis (UCL)
Introduction to Privacy Enhancing Technologies	Sibernik, Croatia, June 2018.	George Danezis (UCL)
Crypto Standards for the Internet and Web	Zurich, Switerland January 2018	Harry Halpin (Inria)
Introduction to Mix-nets	Kos, Greece, September 2018	Harry Halpin (Inria)

#### 3.5.6 Training Courses, Videos and Documentation

- Données personnelles et vie privée : vers un épanouissement numérique ?, Observatoire Mes data et moi, Reputation Squad, January 9th, 2018. Francesca Musiani (CNRS) <a href="https://www.mesdatasetmoi-observatoire.fr/entretien/donnees-personnelles-et-vie-privee-vers-un-epanouissement-numerique">https://www.mesdatasetmoi-observatoire.fr/entretien/donnees-personnelles-et-vie-privee-vers-un-epanouissement-numerique</a>
- Video from the ECRYPT-CSA Workshop on Crypto Policies (January 22nd-23rd, 2018), Brussel (Belgium) The purpose of this workshop is to bring together cryptographers with policy makers, lawyers, law enforcement, NGOs, and industry to discuss the key issues (pun intended) related to cryptology and policy. George Danezis (UCL), Harry Halpin and Nadim Kobeissi (INRIA), Giacomo Gilmozzi (IRI), Carmela Troncoso (EPFL) attended and spoke during this event.

  https://www.youtube.com/results?search\_query=+ECRYPT-CSA
- Summer School on Real-world Crypto and Privacy June 11<sup>th</sup> 15<sup>th</sup> (2018)

  Harry Halpin (Inria), Benjamin Lipp (Inria), Carmela Troncoso (EPFL), Natalia Kulatova (Inria), and George Danezis attended (UCL), giving lecture on *Introduction to Privacy-Enhancing Technologies and Anonymous Communication Networks*.

  Slides: <a href="https://summerschool-croatia.cs.ru.nl/2018/slides/Modern%20anonymous%20communications%20technologies.ppt">https://summerschool-croatia.cs.ru.nl/2018/slides/Modern%20anonymous%20communications%20technologies.ppt</a>
- Summer Research Institute June 18<sup>th</sup> 19<sup>th</sup> (2018)

  Harry Halpin (Inria) gave a talk at an event organized by Carmela Toncoso, *Beyond PGP and Signal: The Challenge of Standardizing Messaging Layer Security at the IETF*Slides: https://suri.epfl.ch/#talk-02
- Video for ELEVATE Conference. Technical experts and Internet freedom activists and invites to rethink political and technical meanings of decentralization.
   Video online at: <a href="https://elevate.at/en/mediaarchive/event/e18radicalshift/">https://elevate.at/en/mediaarchive/event/e18radicalshift/</a>

- Video for Treize Minutes, Francesca Musiani Underneath the Net (Les dessous de la Toile, Mai 23<sup>rd</sup> 2018) <a href="https://vimeo.com/270642822">https://vimeo.com/270642822</a>
- Table ronde Nouveaux médias, entre opportunités et régulations(fr), Bernard Stiegler (IRI) avec Louise Tourret, Emmanuel Martin, Véronique Garguil et Bruno Rocher, 8<sup>e</sup> Journées Nationales de la Fédération Addiction, Cité des sciences et de l'industrie, Paris, May 24th, 2018
  - https://www.federationaddiction.fr/nouveaux-medias-entre-opportunites-et-regulations-video/
- Ten Years of Social Standardization Failure Can Blockchains save the Social Web, Harry Halpin – Web 3.0 Conference. Berlin, Germany. October 22<sup>nd</sup> 2018 <a href="https://www.youtube.com/watch?v=6PPv3W0InUM">https://www.youtube.com/watch?v=6PPv3W0InUM</a>

# 4. Media and Dissemination Material

NEXTLEAP successfully engaged the general public on the issues of decentralisation and privacy through appearances in the mainstream news media and by the use of social media. For example, Coindesk published

## 4.1 Press

In June 2018 NEXTLEAP Partner IRI has published *La vérité du numérique*, 2018 (*The Truth of the Digital*) book published under the direction of the French philosopher Bernard Stiegler has been sold to many European and French events and appreciated by the public. Francesca Musiani was interviewed by one of the major French newspaper such as *Liberation*. Harry Halpin (Inria) successfully engaged the blockchain community, resulting in media articles on standards and an interdisciplinary approach to decentralzation in the popular cryptocurrency website Coindesk.

NEXTLEAP continued to focus on the Minnesota Press Manifold Scholarship for the Finalized Draft of Philosophy of the Internet book (D3.4), and will work in 2019 after the end of NEXTLEAP to bring the results of this deliverable to the general public via a co-ordinated media strategy. This book should be published by Minnesota Press in 2019, so we can expect media about NEXTLEAP after the finish of the project.

- [FR] *Interview with Amaelle Guiton, Francesca Musiani : 'Il faut rendre plus transparente l'activité des grandes plateformes'* (Platforms' activities must be more transparent) Libération, June 7th, 2018.
- [EN] *Metaphorical Models and the new Internet.* Quotes from Harry Halpin. BTC Manager, October 28<sup>th</sup> 2018.
- [EN] *Defending Decentralization, Like a Twice in a Millennium Chance.* <a href="https://www.coindesk.com/defending-decentralization-like-a-twice-in-a-millennium-chance">https://www.coindesk.com/defending-decentralization-like-a-twice-in-a-millennium-chance</a> Coindesk, October 27<sup>th</sup> 2018.

## 4.2 Social Media Presence

#### 4.2.1 Facebook Group

A public group was created on Facebook (<a href="https://www.facebook.com/groups/904572596315916/">https://www.facebook.com/groups/904572596315916/</a>). Perhaps reflecting continued concerns over privacy, the Facebook group has 42 members and was run by IRI's Giacomo Gilmozzi.

#### 4.2.2 Twitter

On Twitter, the NEXTLEAP account NEXTLEAP2020 (<a href="https://twitter.com/NEXTLEAP2020">https://twitter.com/NEXTLEAP2020</a>) is used to share relevant informations, events, news articles, academic publications and also to establish links with other projects, creating networks and monitoring the debate on technological issues. The account was started in July 2016 and it currently has more than 395 followers and helped advertise the finalization of the project via IRI's Giacomo Gilmozzi.

#### 4.2.3 Mastodon

The NEXTLEAP account (<a href="https://mastodon.social/@nextleap">https://mastodon.social/@nextleap</a>) has been created at the end of 2017 by IRI with the intent of being used as a "mirror" of the Twitter account. There are currently 30 Mastodon followers, and while this shows some uptake, it shows the difficulty of using decentralized social media as well.

#### 4.2.4 Blog Posts and Web article

Blog posts allow researchers to communicate their ideas to the general public in a longer form that allowed by social media, and so they are an important part of NEXTLEAP. Currently we encourage NEXTLEAP researchers to use their personal blogs, and are linked to the NEXTLEAP web-page.

- Lucien Castex, Francesca Musiani, Julien Rossi, 2018, <u>Big data et préjudice moral</u>, AOC Analyse Opinion Critique, June 15th, 2018.
- Ksenia Ermoshina, Francesca Musiani, 2018, <u>Il giornalismo nell'era della crittografia</u> (translated to Italian by Giulia Quarta; to Spanish by Nicole Wichmann and Dayana Holguin <u>Periodismo en la era de la criptografia</u>, from a 2017 article, Observatoire européen du journalisme (website in Italian and Spanish).
- Francesca Musiani, Valérie Schafer, 2018, « La gouvernance, un enjeu transversal d'Internet au numérique », *Annales des Mines*, n° 4 Enjeux numériques, pp. 7-11. <u>Texte intégral</u>
- Francesca Musiani, 2018, « Peer-to-peer, une technologie de réseau multiforme », *Revue TDC Textes et documents pour la classe*, n° 1116 Réseaux, pp. 26-29.

## 5. KPIs

Every year, NEXTLEAP measures its performance on dissemination impact based on the KPIs for the project established in the Dissemination Plan and the Project Plan. The KPIs for the end of the project summarize the KPI results over all three years. As can be see in the following table, NEXTLEAP partners have very successful in spreading its results via participating in engaging the open source and standards community and participating in academic conferences (as well as publishing academic articles). This is reflected in the high participation in research conferences and journals, as well as the social innovation, industry or standards conferences. In this area of dissemination, the targets have been met, and often largely exceeded, with a few exceptions as detailed below. In particular, we continue to see growth in usage of Autocrypt and the IETF MLS standard.

Dissemination was again successful this year regarding citizen involvement in the social issues around privacy, security, and decentralization via a large amount of outreach at grassroots and citizen-centric conferences. Many NEXTLEAP researchers have spoken at public initiatives for citizens and other self-organized grassroots events, and the closing event for NEXTLEAP was full. The OPERANDI workshop helped build a strong connection between NEXTLEAP and the CAPS DECODE project and participated in grassroots events in places such as Kiev in Ukraine, working with high-risk activists.

In the end, there are two main areas where the KPIs were clearly not met: The net rights platform developed IRI ended up being difficult to use by anyone outside IRI, and thus there has been very little public involvement in 'crowd-sourcing' net rights. Unfortunately, NEXTLEAP advisor Renata Avila left the Web Foundation, although she did bring the NEXTLEAP results to their addition. This work then helped inform the The Web Foundation's #ForTheWeb initiative spearheaded by Tim Berners-Lee, the inventor of the Web. Unexpectedly, NEXTLEAP results are a "constitutional" approach to embedding human rights in protocols have been taken up by the blockchain community, gaining the supporter of one of the inventors of Ethereum and head of the Web 3.0 Foundation, Gavin Wood as well as other blockchain communities such as Tezos and Binance. Also, public-facing blog posts were much lower than expected, due to a focus by researchers on academic publications and high-profile public events, media, and videos, rather than blog-posts. However, this was to some extent addressed by a larger amount of media events, as well as a much active engagement in policy and citizen conferences. The same held for seminars, as the IRI seminar series ended and in general, active engagement in high-profile conferences made up for the lack of explicitly smaller interdisciplinary seminars, which likely produced higher impact. In general, work on standardization and outreach to industry (via open source events) was much higher in the final year than the initial focus on research papers and journal publications (and so less journal publications than expected in 2018), as partners moved to push the results NEXTLEAP into the mainstream. Additionally, there was a much larger concentration on policy conferences given the focus on the final year in governance and the commons, and these workshops – including the first ever workshop on decentralization and governance hosted at Internet Science 2018 as well as two day workshop in Brussels on encryption and policy – provided a high impact finale to the NEXTLEAP project.

Performance Dimension	KPI	Target	Action (Objective)	Realized (over the entire project period)	%
Increase decentralized and privacy- preserving protocols	Number of Protocols produced, demonstrated, and shipped to standardization	4	Design and coding of new protocols (Task 3)	Released: Autocrypt, ClaimChain, MLS IETF standardization, UnlimitID	100%
Bind social science and technical protocol design closer together	Number of case studies	30 overall (5 in depth). Note eventually 90 users were interviewed, the largest study of the users of secure messaging to date.	Commit to doing case-studies with appropriate groups (Task 1)	90 surveys and 3 ongoing in depth. We opted to do a larger spread in order to understand different kinds of users.	300%
Spread awareness of Net Rights	Number of people participating in seminars, conferences, and online discussion of Net Rights documents	10,000	Outreach through seminars and conferences over Net Rights (Task 2)	The annotation tools developed by IRI were very hard to use and did not have take up outside IRI and Web Foundation stopped focus on net rights. However, the large number of events did spread awareness.	10%

Demonstrate portability of decentralization across different types of domains	Different kinds of domains using the protocols	9	Outreach across a diverse set of domains (Task 3)	Portability demonstrated through the various actions conducted by Merlinux, for both personal and business- oriented users. However, MLS has the backing of WhatsApp, Google, Mozilla, Cisco, Cloudflare, Facebook, Wire (A European secure messaging service), and the French government.	90%
Demonstrate scalability and use with realworld citizens to enable bottomup participation	Number of individual citizen users that take up our protocols	100,000	Outreach over centralization and mass surveillance in larger ethical backdrop (Task 2)	While MLS is not yet deployed, Autocrypt is already in mailclients such as Thunderbird via Enigmail, reaching over 100,000 users.	100%
Increase co- operation and innovation capacity of Europe	Number of open-source projects, businesses and public institutions that adopt our protocols	13	Outreach to public institutions and the 'privacy market' (Task 2)	Autocrypt currently reaches eight clients (https://autocry pt.org/dev- status.html)  MLS has seven companies and projects signed up for deployment with others such as Snapchat	133%

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Demonstrate durable interdisciplinary foundations of Internet science	Number of interdisciplinary panels	15	Encourage researchers from across disciplines to work together (Task 1)	NEXTLEAP helped organize workshops and panels in St. Petersburg Russia in co- operation with Internet Science 2018.	140%
Dissemination Typ	oe	Examples	Target (per year)	Realized	%
User-facing websit	tes and blog posts	Posts on George Danezis' blog, Nadim Kobeissi's blog	30	6	20%
Seminars		IRI NEXTLEAP Seminar series, CNRS Seminars	30	14	46%
Number of particip discussions	oants in online	Twitter followers, Facebook public group followers, Website visitors, presentation video viewers	10,000	500 (Twitter + FB) 4500 (website). Final media push will happen at end of project.	5%
Research Conferen	nce	NDSS TRON, Hot Topics in Privacy- Enhancing Technologies (HOTPets), 4S/EASST Conference, Internet Science Conference, Association of Internet Researchers (AoIR) Conference, ACM CCS, ASIACRYPT,	8	9	112%

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Social Innovation, Industry, or Standards Conference	W3C Workshop, FOSDEM, PGPSummit, OpenPGP Conference, IETF	3	13	433%
Policy Conferences	European Dialogue on Internet Governance, Internet Governance Middle East and North Africa (IGMena),	3	7	230%
Grassroots Citizen Conferences	Internet Freedom Festival (IFF), Cryptoparty, Worldwide LEAP developer meeting, Brick Lane Debates, Elevate Festival,	5	8	160%
Research Journals	Internet Science, Journal of Cryptology, First Monday, Internet Policy Review,	3	2	67%
Media Event	Les Inrocks, Revue, New Scientist	2	3	150%
Training Courses, Videos and Documentation	IACR Summer School on Blockchain Technologies, Summer school on real-world crypto and privacy, Computer and	5	12	240%

Network Security, Pharmakon Summer		
Academy,		