



From Real-world Identities to Privacy-preserving and Attribute-based
CREDentials for Device-centric Access Control















WP8– Exploitation and Dissemination
Deliverable D8.6 “Third dissemination report”

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ReCRED Project Profile

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Duration	36 Months

Partners

	University of Piraeus research center	Greece
	Telefonica Investigacion Y Desarrollo Sa	Spain
	Verizon Nederland B.V.	The Netherlands
	certSign SA	Romania
	Wedia Limited	Greece
	EXUS Software Ltd	U.K.
	Upcom Bvba	Belgium
	De Productizers B.V.	The Netherlands
	Cyprus University of Technology	Cyprus
	Universidad Carlos III de Madrid	Spain
	Consorzio Nazionale Interuniversitario per le Telecomunicazioni	Italy
	Studio Professionale Associato a Baker & McKenzie	Italy

Document History

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0.30	2018-06-15	Evangelos Kotsifakos (WEDIA)	Updated with latest dissemination activities
0.40	2018-08-22	Evangelos Kotsifakos (WEDIA)	Updated to address review comments

Executive Summary

The ReCRED consortium, recognizing the importance of the dissemination activities, employs various channels to promote project’s goals and advantages. To this end the project establishes its presence by the website, enriched with new important sections, and the social media accounts in Facebook, Twitter, LinkedIn and Youtube. Statistics indicate an increase of the traffic the last year meeting the goals that have been defined. The project’s social media gained a lot of attraction and had a huge boost during the last year due to increased posts and campaigns advertising the developments of the project and the events that have been organized, like the **H2020 Project Clustering Workshop** which gained a lot of visibility.

The promotion of the project is also done through material such as the newly re-designed leaflet and poster and the modern project’s video which has attracted a lot of viewers and positive feedback. Regarding the dissemination of the project to the general public, the consortium has produced a number of whitepapers and newsletters which have been advertised through the mailing lists and the social media accounts. Five newsletters and six whitepapers have been produced. ReCRED has a presence in the media, especially in Greek TV and local newspapers.

In the academic area the consortium has managed to produce a good number of papers in prestigious conferences and journals and present the project and its goals through talks at universities and presence at various events that both industry and academia people attend.

Apart from the project’s presence at industrial events such as the **Mobile World Congress**, a major achievement for the project at the industry level is the **FIDO UAF certification** of the gateSafe module by certSign. Furthermore, two standardization activities have been achieved; CNIT has contributed to the standardization within ETSI of Attribute Based Encryption for Attribute Based Access Control and Verizon together with CUT in OpenAM. In addition, an on-going effort to contribute to the FIDO standard is made from CSGN and CUT.

Last, the consortium has been in contact more than 20 other European projects and organized two major Project Clustering workshops that promoted cybersecurity concepts and encouraged knowledge transfer and collaboration.

The hard and dedicated work done by the consortium under the WP8 leader has led to the achievement of the dissemination KPI’s and exceeded our expectations exposing the ReCRED project and its achievements to the Commission and to the general public.

This document presents all the dissemination and communication activities that happened during the third year of the project and summarizes the activities that took place during the project’s lifetime.

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1 Introduction

Dissemination is an important part of the project's success. Project's goals and objectives as well as implementation progress, scientific research and important technological advantages have to be communicated to security experts, researches and to the general public. To this end ReCRED consortium is using various means and channels.

The base of the project's communication activities is the website and the social media accounts. Through them all the news about the project are communicated to the general public. Facebook, Twitter and LinkedIn along with YouTube, hosting project's videos and demonstrations, are the four social media platforms that we have employed.

Project video, poster and leaflet are also the means to reach a wide range of audience in a clear and quick way. In one minute, watching the video or reading the leaflet, anyone can get an idea about project's goals and advantages. Presentations in security related events, talks to universities and presence in local media promotes project's objectives and importance to the general public.

Project goals and progress are also demonstrated through our newsletter that is sent to a number of selected contacts that are into the field of IT, security either in academia or in the industry. To this more specific audience of experts we address also our whitepapers.

Our academic partners demonstrate also the research around ReCRED and its technologies to the academia through publications and presentations in conferences and workshops while, at an industry perspective, good steps have been made towards certification and standardization.

In this report we describe all the dissemination activities that took place in the third year of the project at all the above mentioned channels. This information is also available through the news section of our project's website and on our social media accounts.

2 Project website for the ReCRED project & applications.

The project's website, developed and hosted by WEDIA, is live at <https://www.recred.eu> since the first months of the project with rich content presented in a simple and modern structure. Its structure and its design principles have been discussed in deliverable D8.2 and updates are discussed in deliverable D8.3. The project's website is constantly updated with new content; Project news and information related to the dissemination and implementation activities, pilot activities, videos, communication documents, newsletters, whitepapers etc. Modifications have been also implemented to improve the UI. A twitter feed section has been also included in all website pages (not visible in the home page).

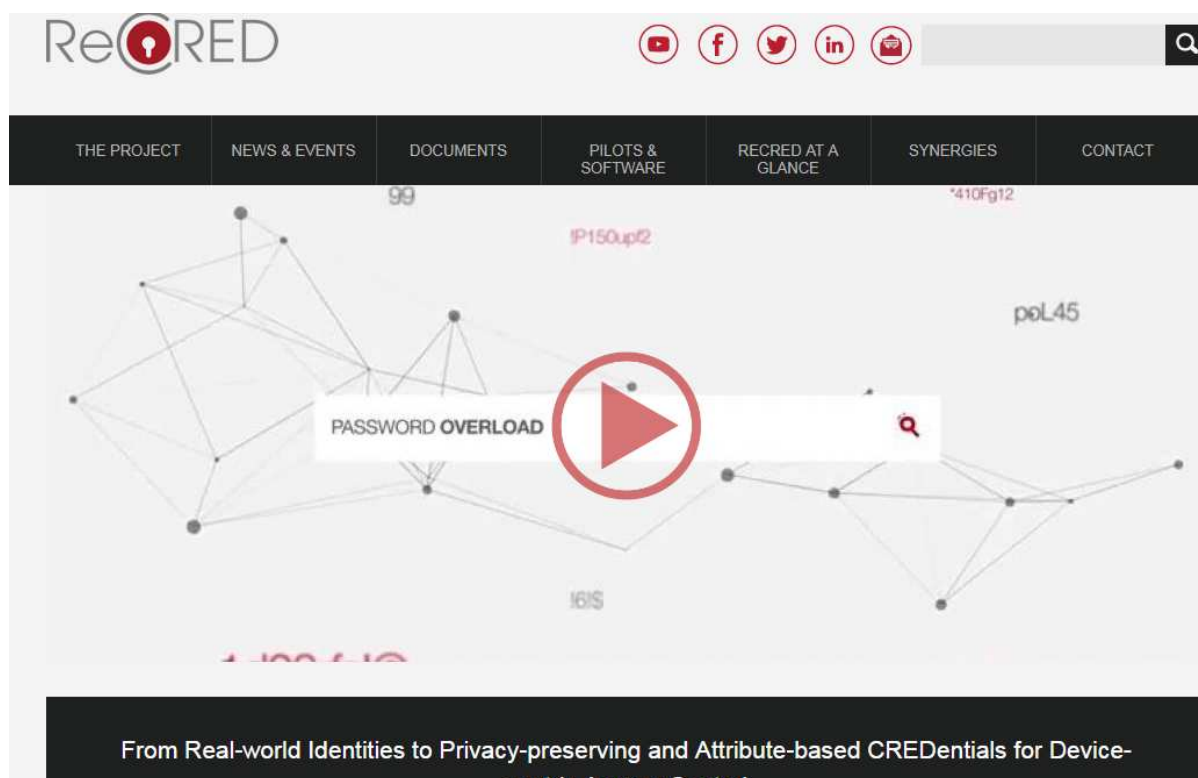


Figure 1 The ReCRED website welcome page

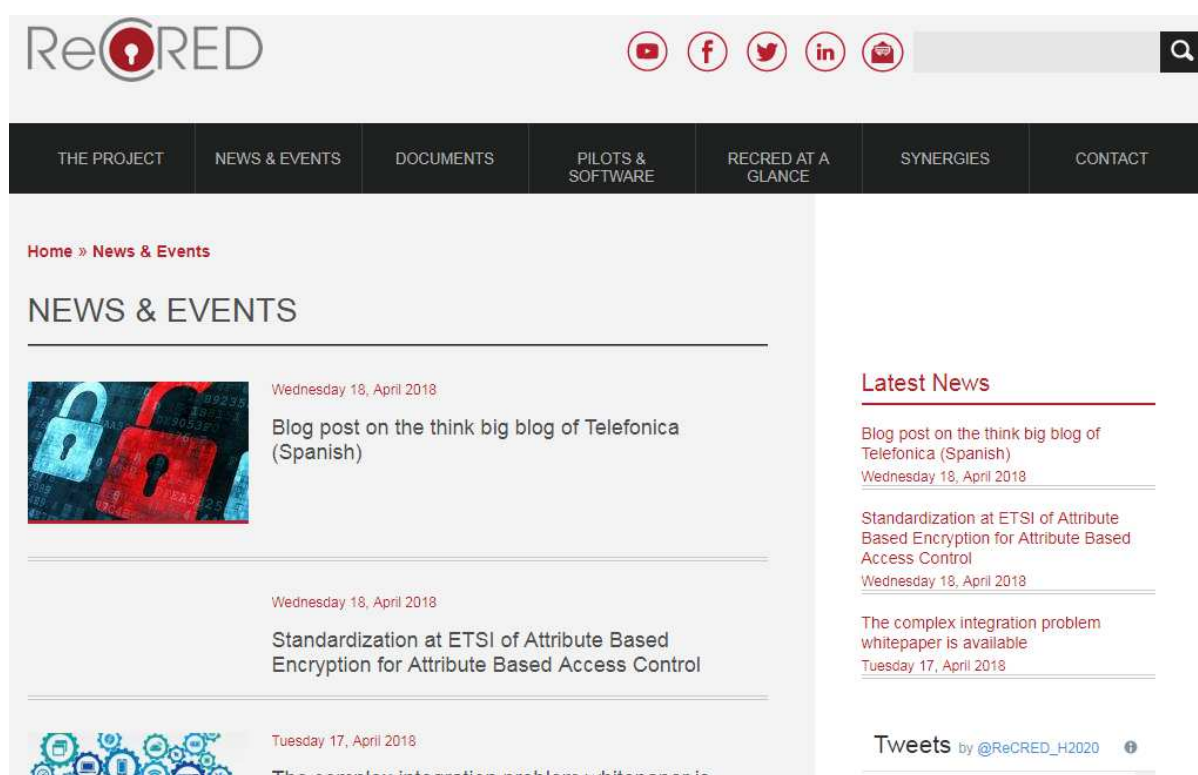


Figure 2 The news and events page of the website

Important additions have been made to the website:

Synergies

ReCRED has established collaborations with more than 10 other EU projects through the H2020 project clustering workshops that took place in Athens following the project’s plenary meetings (see section 11). The list of the participating projects with their related information and their presentations can be found in the page “Synergies” that is accessible from the main menu (<https://www.recred.eu/basic-page/169/synergies>).

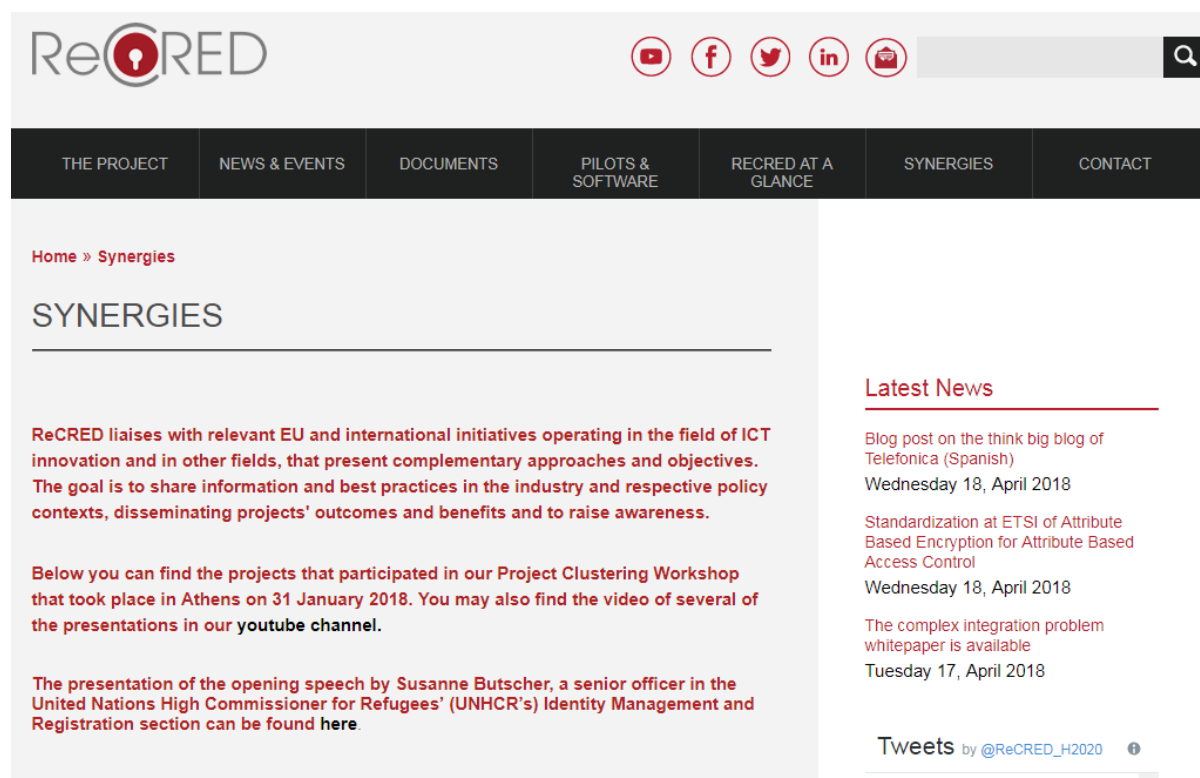


Figure 3 The synergies page

ReCRED at a glance

To easily communicate project’s goals, milestones and achievements, pilots and other activities a set of modern design infographics have been created and promoted through the project’s social media. The infographics are available at the related website page “ReCRED at a glance” (<https://www.recred.eu/recred-at-a-glance>). Please see also section 8.

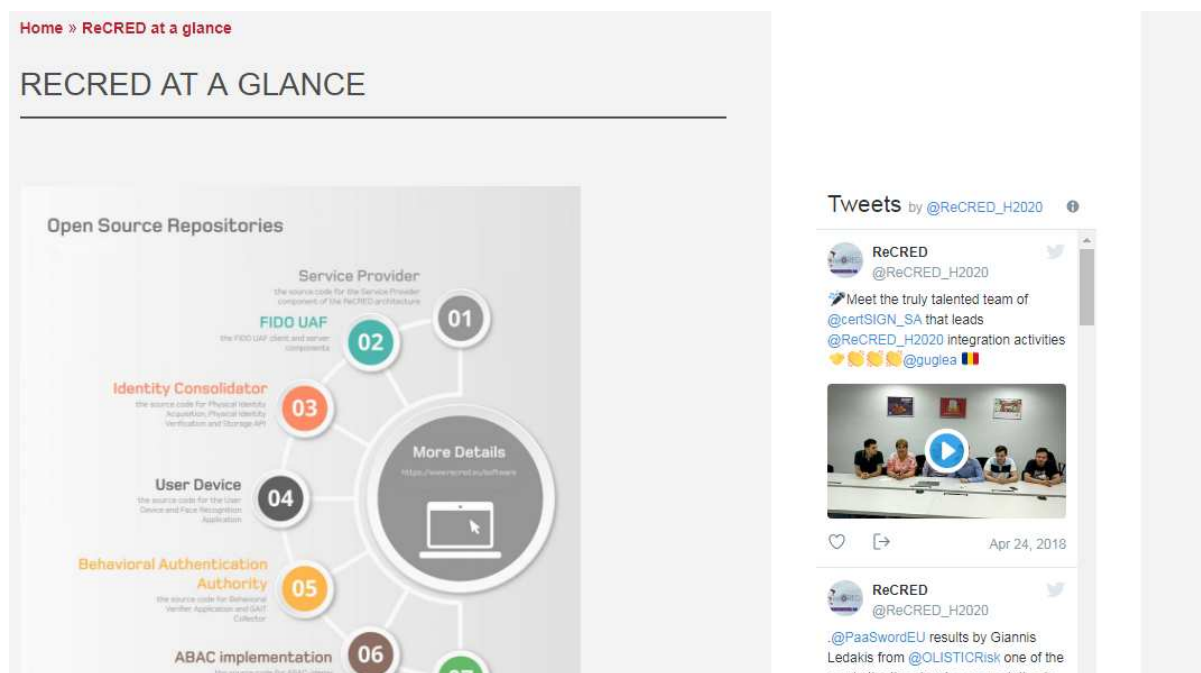


Figure 4 The “ReCRED at a glance” page with ReCRED infographics

Pilot dedicated pages

Apart from the main pilots pages (<https://www.recred.eu/pilots-software>), dedicated pages for each pilot have been created, summarizing pilot’s details and objectives along with links to the related pilot videos and webinars.

ATTRIBUTE-BASED AGE VERIFICATION ONLINE GATEWAY

Watch the pilot webinar

The age verification pilot is based on the new Age Gate solution, an online age verification service, with the purpose of granting or denying access to age-restricted resources, without revealing or disclosing any other personal and/or sensitive data of the user. An age-restricted online resource could be any of the following:

- an age-restricted web site (e.g. porn or violence related),

Pilot 3 Form

Name *

Surname *

Organization *

Email *

Select one or more of the following: *

☐ Notify me for the upcoming webinar

☐ I would like view a demo

☐ I would like to participate as a beta-tester

SUBMIT

Figure 5 The “ATTRIBUTE-BASED AGE VERIFICATION ONLINE GATEWAY” pilot page

Demos and videos

Under the “Demos” page of the Pilots & Software menu, a redesigned list of all the ReCRED videos, about pilots and the various ReCRED functionalities is available. The list has a filtering option that categorizes the videos for easier access.

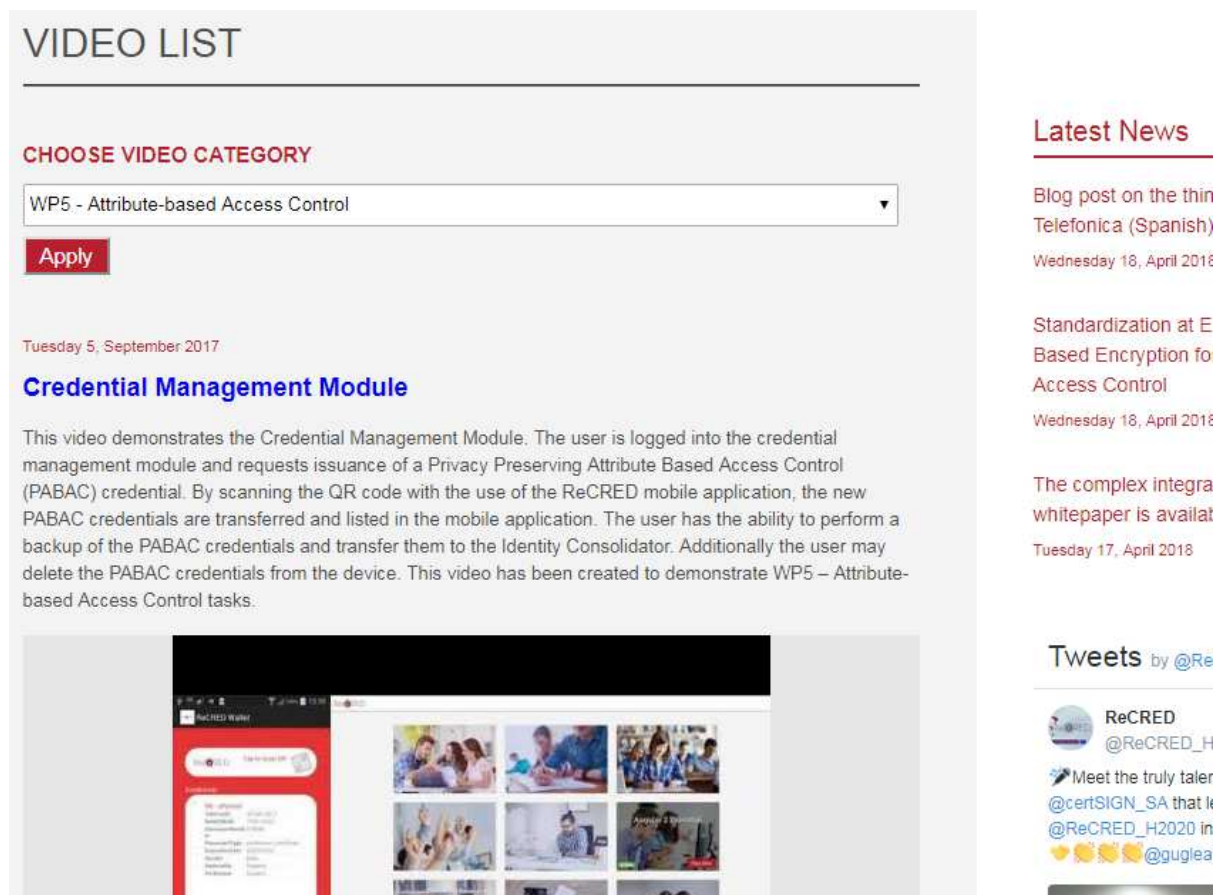


Figure 6 The “Demos” page, listing ReCRED videos

Webinars

ReCRED has organized four webinars, each for every pilot in order to demonstrate to the widest audience their functionalities. The webinars have been recorder and are available on the “demos” page or directly from the “webinars” menu item.


Webinars

Apply

Tuesday 17, April 2018

ReCRED age verification webinar

The webinar about the third ReCRED pilot - the age verification pilot - took place on Friday 13/4/2018 and it was presented by Vangelis Mpagiatis from UPCOM.



Thursday 22, March 2018

ReCRED Wi Fi Pilot Webinar

A dedicated page that hosts information about the open source software components is also available online.

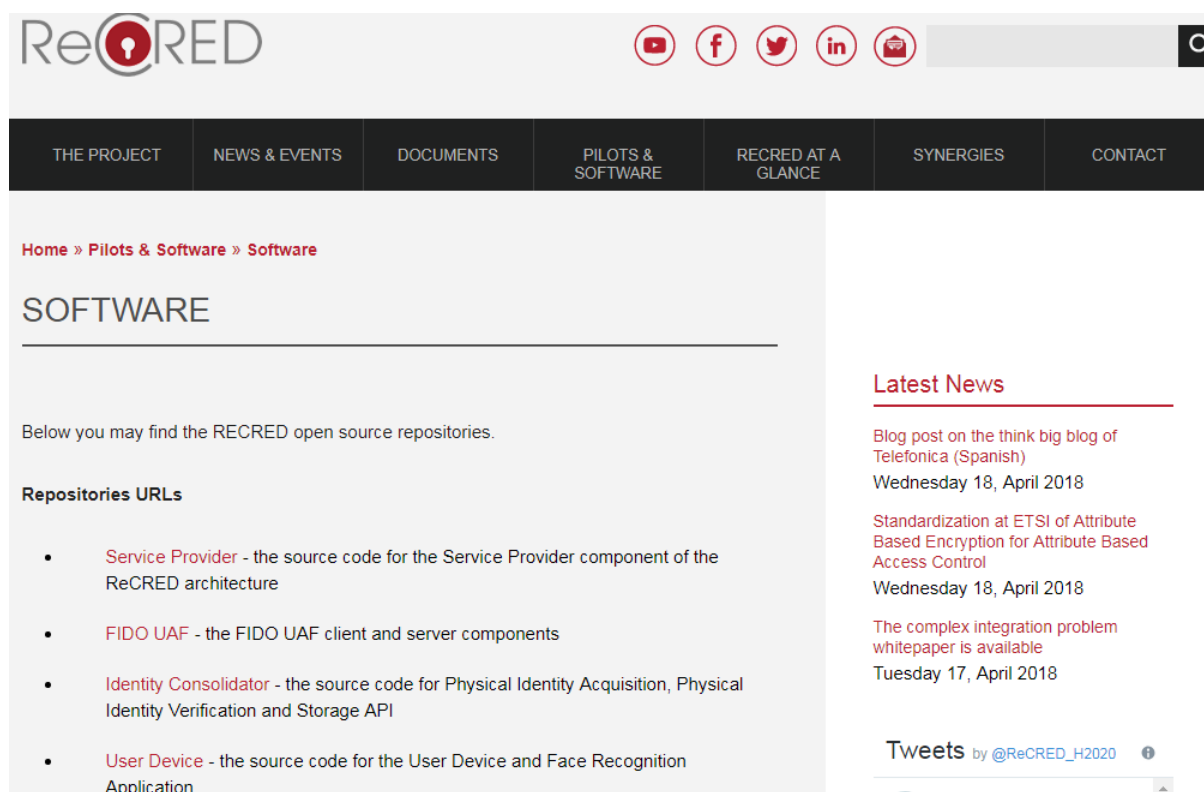
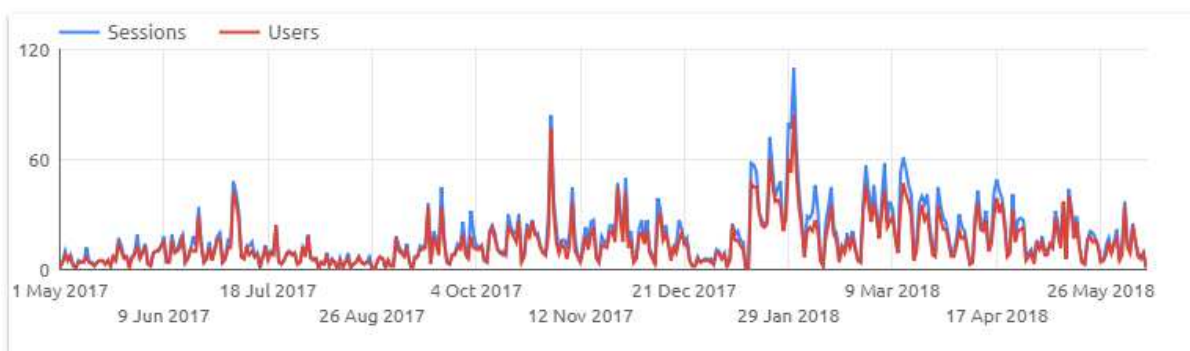


Figure 7 The open source software page of the website

The website is gaining more and more visitors and this is reflected by the analytics shown in the following figures for the period 1/5/2017 to 28/04/2018.



How are site sessions / users trending?



How do you acquire sessions?

	Source / Medium	Sessions	Users	Bounce Rate	Pages / Session	Avg. Session Duration
1.	(direct) / (none)	2,656	1,593	54%	3.36	00:03:09
2.	google / organic	1,677	1,036	43%	3.22	00:03:08
3.	t.co / referral	443	161	47%	2.58	00:02:01
4.	facebook / cpm	383	337	85%	1.37	00:00:42
5.	facebook.com / referral	371	162	56%	2.78	00:03:44
6.	m.facebook.com / referral	251	210	67%	1.48	00:00:29
7.	ec.europa.eu / referral	137	95	31%	2.96	00:01:52
8.	l.facebook.com / referral	134	49	66%	2.3	00:03:27

What pages do your users visit?

	Page	Pageviews ▼	Entrances	Bounce Rate	Avg. Time on Page	Exits
1.	/	7,538	4,413	47.07%	01:29	2,850
2.	/news-events	773	37	32.43%	40	96
3.	/consortium	629	45	66.67%	01:06	196
4.	/pilots-software	570	42	42.86%	45	83
5.	/basic-page/20/project-purpose	567	83	66.27%	01:41	211
Grand total		22,536	7,077	52.25%	01:30	7,077
1 - 5 / 660 < >						

What are the most downloaded files?

	URL of File	Page Click	Total Events ▼
1.	Click	http://www.youtube.com/embed/IJr4yinF-yA?autoplay=1	304
2.	PDF	/sites/default/files/recred_leaflet_2017_3.pdf	145
3.	JPG	/sites/default/files/recred.jpg	59
4.	JPG	/sites/default/files/cyber-770x493.jpg	44
Grand total			2,118

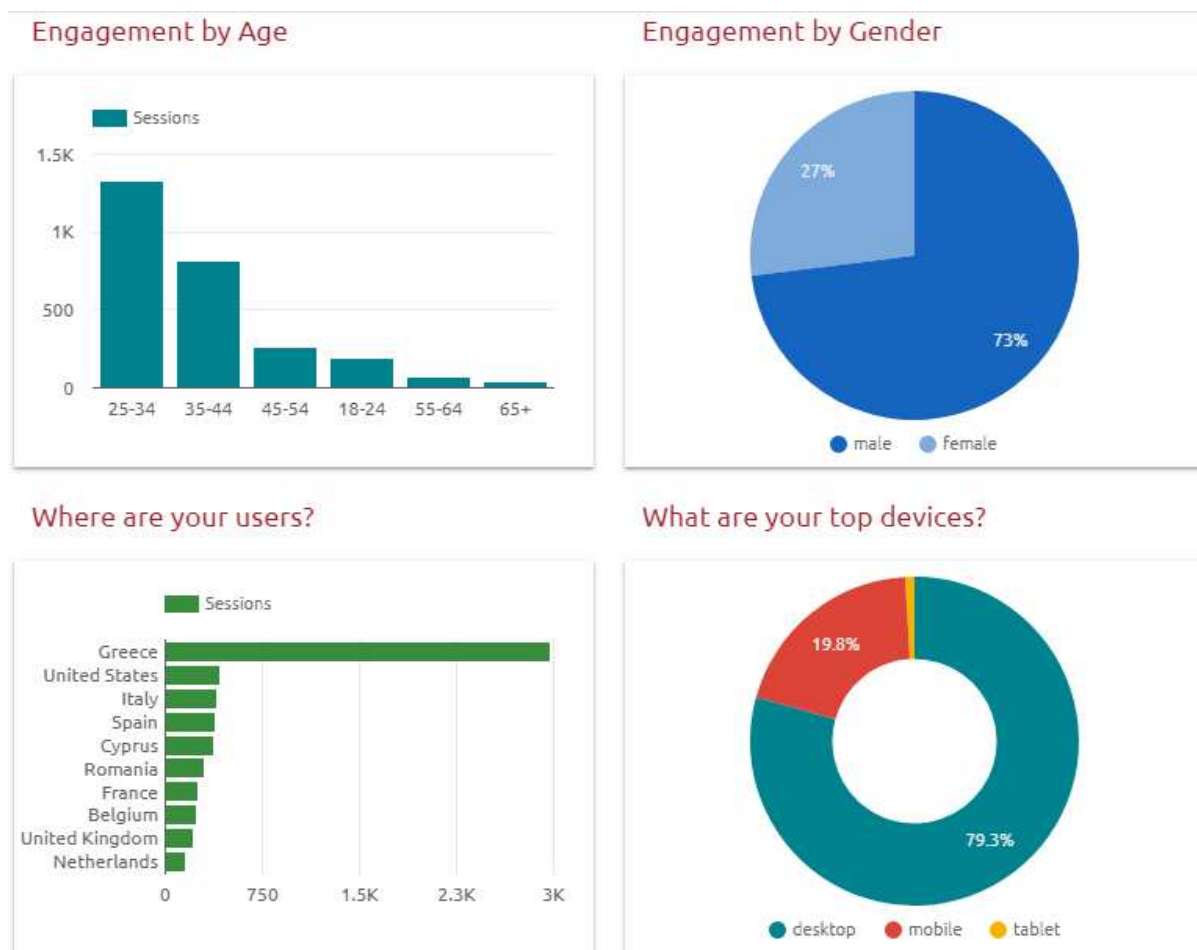


Figure 8 google analytics for ReCRED website

The project’s website is being promoted by all partners as the point of reference of the project.

3 ReCRED in social media

ReCRED has a presence in the most popular social media platforms. Posts about the news of the project, such as publications, conferences, talks, media coverage, plenary meetings, implementation issues as well as articles related to security and biometrics are posted regularly on Facebook, Twitter and linkedin accounts of the project.

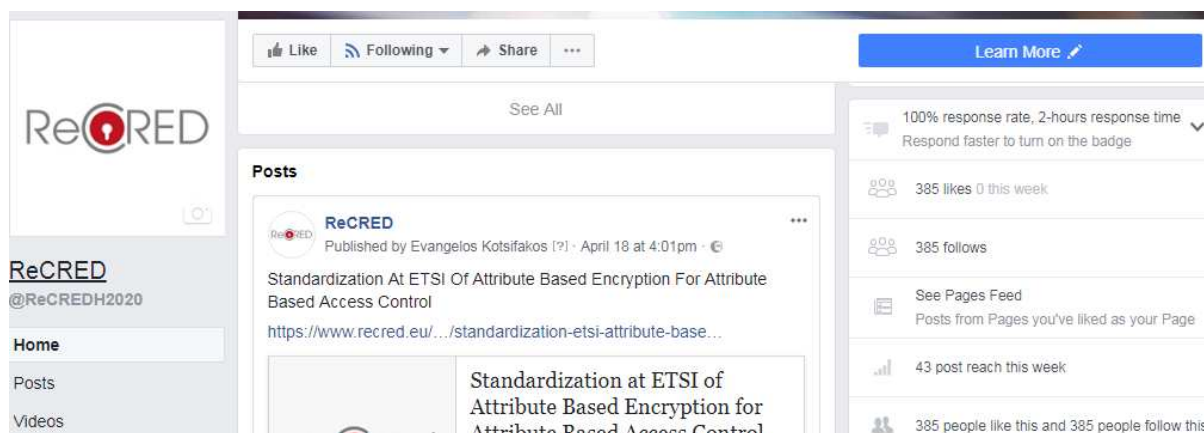


Figure 9 Project's Facebook page



Figure 10 Project's Twitter page

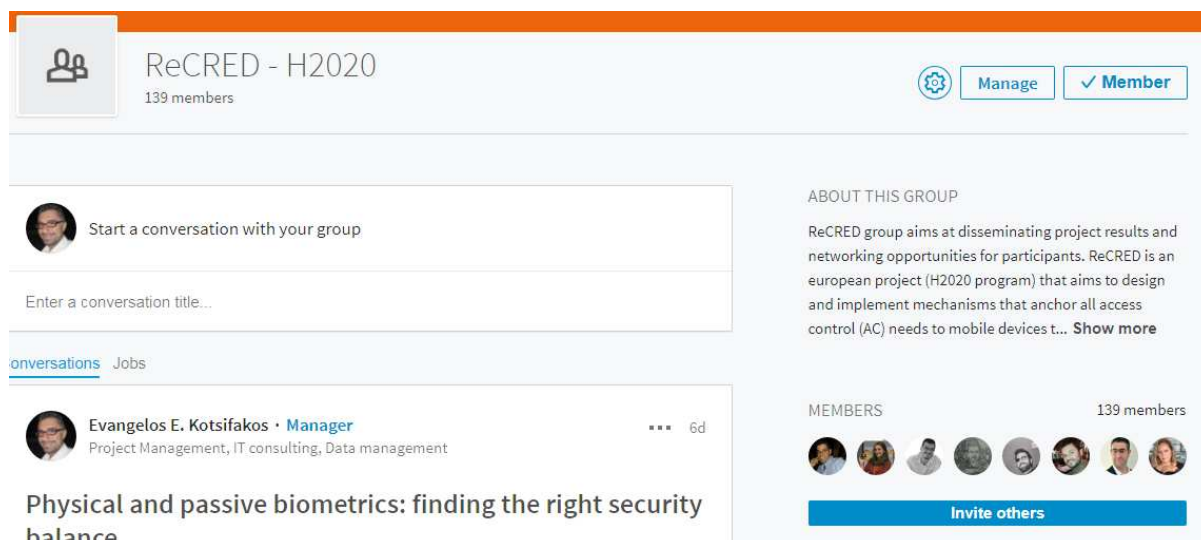


Figure 11 Project's LinkedIn group page

Furthermore, project's YouTube channel is updated with demonstrators of the developed tools as well as talks and interviews of the involved partners on local television. Demonstrator videos are related to pilots and the related applications and to specific modules developed in the project like the physical identity acquisition web application.

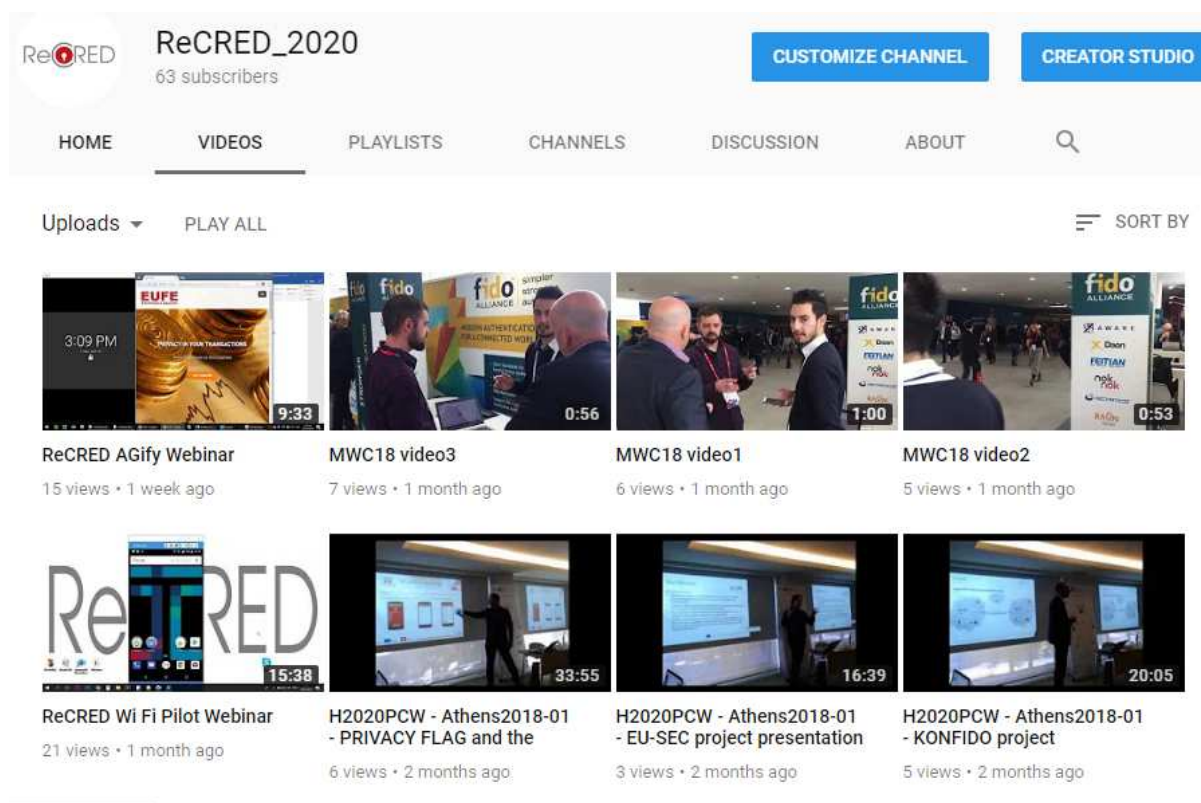


Figure 12 Project's YouTube page

Project's YouTube channel also hosts the project's video that has been implemented by WEDIA to promote the project's main concepts to the general public, in an easy to understand way raising wider interest.

Following are numbers regarding the statistics of the social media pages.

ReCRED's Facebook page currently has 384 followers, 384 likes.

On 04/2017 we had 201 followers, on 10/2016 we had 22 and on 05/2016 we had 10.

Linkedin group: 139 members.

On April 2017 we had 75 members. 18 discussions. On January 2017, 67 members and on May 2016, 52 members.

Twitter: 384 followers, 481 tweets, 2149 likes.

Last year we had 33 followers, 30 tweets. On October 2017 we had 21 tweets, 31 followers and on M5 we had 9 tweets & 23 followers.

YouTube channel has 64 subscribers, 2212 total video views

Last year we had 10 subscribers and 396 total video views.

Below are the links to the project's accounts.

Facebook: <https://www.facebook.com/ReCREDH2020/>

Twitter: https://twitter.com/ReCRED_H2020

Linkedin Group: <https://www.linkedin.com/groups/8470632>

YouTube channel: ReCRED_2020 . https://www.youtube.com/channel/UCIVzn8b6g_vE3dxzV1sli0g

Campaigns

ReCRED has organized two campaigns to promote ReCRED in the social media. One on Facebook about ReCRED project and one on Twitter about the second project clustering workshop.

Facebook campaign

The following posts have been used for the Facebook awareness campaign to promote ReCRED:

Image ads (x3)

Image 1:

ReCRED is the solution to the problem of password overload and a safe and straightforward way to access your online accounts!



ONLY ONE PASSWORD

Password Overload?
Learn how you can simplify your access to all your online accounts without passwords through the ReCRED platform.

Image 2:




ReCRED **ReCRED** Sponsored ·  Like Page

Fed up with password overload? Dreaming of an easier access to all your online accounts? Time to discover ReCRED!

Make your Digital Life Easier!
ReCRED is the solution to the problem of password overload and a safe and straightforward way to access your online accounts!


RECRED.EU [Learn More](#)

Image 3:


ReCRED
 Sponsored ·

Like Page

ReCRED is here to end the nightmare of password overload and simplify your access to your online accounts.



Too many accounts, too many passwords!
 Discover ReCRED, a platform that is your solution to proving your online identity in an easy and straightforward way.

RECRED.EU

Learn More

And the results are shown below

Facebook Ads Report

Impressions
847.6K

Reach
362.5K

Ad recall lift (people)
19.3K

1 Jan 2018 - 10 Feb 2018

People taking action
25.6K

Clicks (all)
1,407

Page likes
8.0

Ad set name

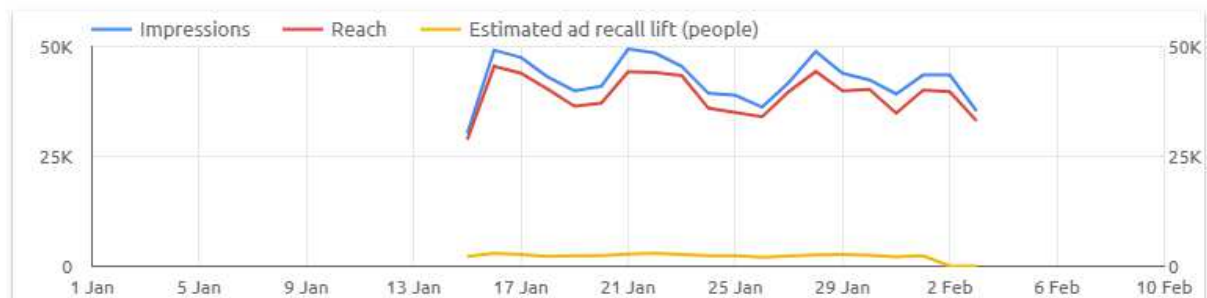
Ad name

1000 people reach (Cost)
1.38

People ad recall (Cost)
0.03

Amount spent
500.0

Impressions / Reach / Ad recall lift trending



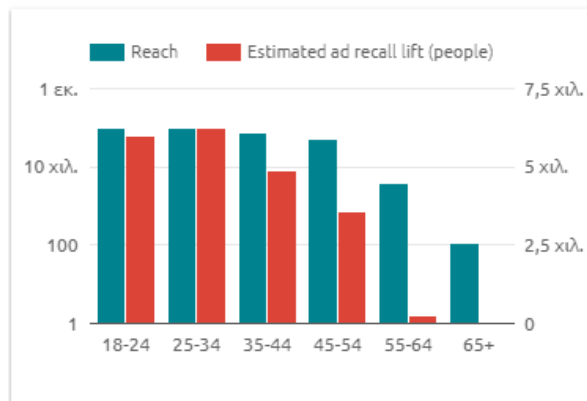
Ad Sets Performance

Ad set name	Impressions	Reach	Estimated ad recall lift (people)	Estimated ad recall lift rate (%)	Link clicks	Amount spent
EU advanced - 18-55 - Consumers (14m) - Video	375.070	195.408	13.200	6,76%	217	214,89
EU advanced - 18-55 - Consumers (14m)	350.156	185.940	11.000	5,92%	489	214,79

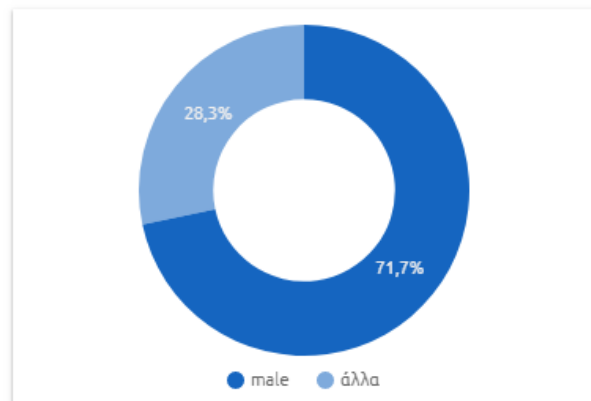
Ads Performance

Ad name	Impressions	Reach	Estimated ad recall lift rate (%)	Link clicks	Frequency	Amount spent
Video - What is	375.070	195.408	6,76%	217	1,92	214,89
Single Image 1 - Password Overload	222.693	138.394	5,99%	358	1,61	140,48
Single Image 3 - Digital Life	84.872	66.287	5,96%	102	1,28	51,06
Single Image 2 - Too many accounts	42.591	37.112	5,36%	29	1,15	23,25

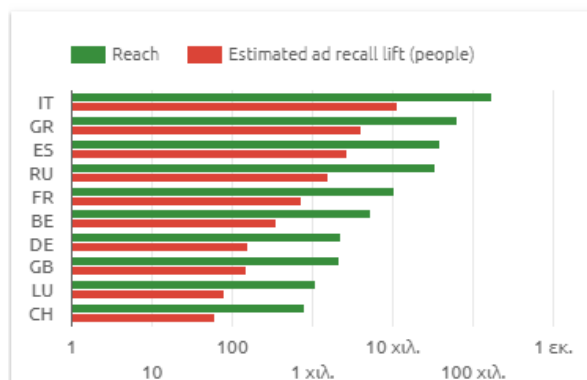
Engagement by Age



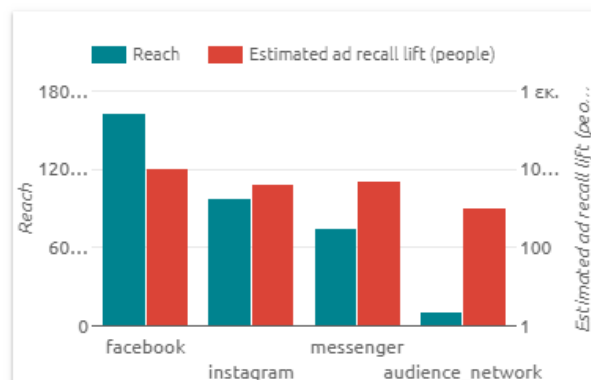
Engagement by Gender



Where are your users?



What are your top Placements?



Twitter campaign

The campaign run from 28/03/2018 to 11/04/2018.

- Maximum amount 200€
- We targeted people of:
- Both genders, age 25+
- Users that follow the following pages: Horizon2020Projects, Horizon2020 News, Horizon 2020eu, InvestHorizon
- Interested on Business (investors & partners), Personal finance (beginning investing), technology and computing (antivirus, network security, computer networking).

The promoted tweet was shown on users' timeline and/or their profile pages or in the details of the tweets they visited.

The following tweet has been used

Did you miss #H2020PCW ? Here is your chance to showcase your results #H2020 #InvestEU #InvestEUresearch

#ResearchImpactEU @EU_H2020 A workshop dedicated to pilot and platform demonstration

Save the date:

Friday, April 20 2018, Athens, GR Retweet if you are interested...

<https://t.co/BRCYFWLNJ5>

The promoted tweet had **88022 total impressions**

Also:

- tweets engagement was 748
- total clicks were 577
- media engagement reached 1487
- retweets were 13, replies were 2, while we gained 2 new followers from the campaign.

4 Project's Video

Project's video plays a very important role in communicating project's concepts to the general public. WEDIA implemented the video following specific requirements:

- Communicate a clear message in short time.
- Adopt a modern design
- Follow current trends on videos promoting similar ideas

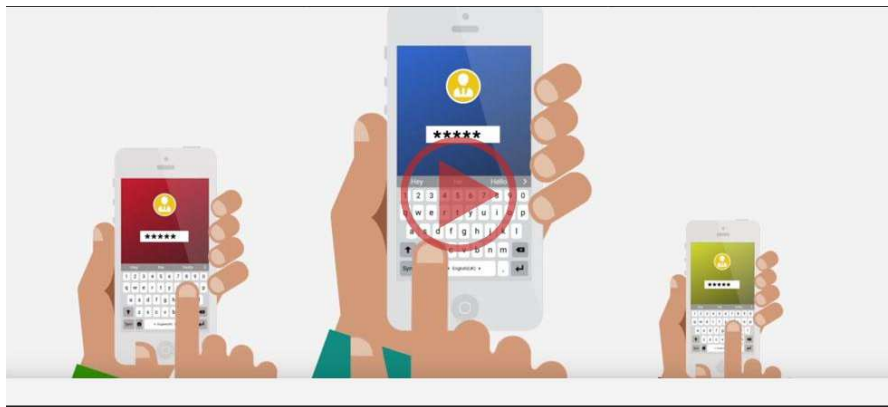


Figure 13 A screenshot from the project's video

The implementation of the video was based on the following steps

- Script preparation
- Speakage (duration 1'15'')
- Moodboard design
- Video 1st and 2nd version
- Sound and music mix

The video attracted a lot of traffic and it currently has 175 views on YouTube and 383 views on Facebook.

The video can be found here:

https://www.youtube.com/watch?v=OBNU_XXyPrE

5 Project's leaflet and poster

During the first year of the project the consortium designed a leaflet/ brochure and a project poster that have been used in workshops, talks and other dissemination activities. In the second year, as the project implementation advanced the need of an updated, fresh brochure and project poster arose. Following modern design principles EXUS implemented the second project leaflet and poster that have been distributed to all the events that took place until the end of the project.

The content of the leaflet has been re-defined in order to better present the project purpose, advantages, technologies and pilots.



Figure 14 The project's poster

CONSORTIUM

- University of Piraeus Research Center Coordinator
- Telefonica Investigacion Y Desarrollo SA.
- VERIZON Nederland BV
- certSIGN SA
- WEDIA Limited
- EXUS Software Ltd
- UPCOM BVBA
- DE PRODUCTIZERS BV
- Cyprus University Of Technology
- Universidad Carlos III de Madrid - IMDEA
- Consorzio Nazionale Interuniversitario per le Telecomunicazioni, (Italy)
- Studio Professionale Associato a BAKER & MCKENZIE

CONTACT US

You can like us on Facebook:
<https://www.facebook.com/ReCREDH2020/>

You can follow us on Twitter:
[@ReCRED_H2020](https://twitter.com/ReCRED_H2020)

You can follow us on LinkedIn:
<https://www.linkedin.com/groups/8470632>

You can visit our website and register your interest:
www.recred.eu

Makes your digital life safe and definitely easy!

- Biometric and behavioral authentication
- Device centric authentication
- Secure Storage
- Anonymous Access
- Single Sign On

Horizon 2020 European Union Funding for Research & Innovation

Figure 15 Project's re-designed leaflet page

www.recred.eu

Project Purpose

ReCRED is an EU funded project and its ultimate goal is to promote the user's personal mobile device to the role of a unified authentication and authorization proxy towards the digital world.

ReCRED moves the burden of authentication from the user to the device itself, taking full advantage of smartphones' inherent capabilities. Users can be authenticated by their mobile devices, locally, using fingerprint, face recognition, how they walk, type, move around the city, etc., while the device in collaboration with the ReCRED platform provide access to the subscribed services (e.g. e-banking accounts, social media accounts, etc).

ReCRED also offers two additional innovations:

- the consolidation and management of online user identities and accounts, and
- the issuance of anonymous credentials that verify specific attributes or properties of the users, while guaranteeing the latter's anonymity.

ReCRED's advantages

ReCRED is targeting to offer the following advantages:

- Device centric authentication**, using either biometrics or behavioral characteristics that overcomes the password overload problem.
- Account consolidation** to solve the problem of dispersed identity attributes.
- Anonymous access** to address privacy issues.

Technologies

- FIDO UAF
- OpenID Connect
- U-Prove
- Trusted Execution Environment (TEE)
- Idemix

Pilots

Pilot 1
Campus-wide Wi-Fi and web services access control

Pilot 2
Student Authentication and Offers

Pilot 3
Age verification online gateway

Pilot 4
Microloan origination

Figure 16 Project's re-designed leaflet. Page 2.



Project Poster have been already used in the “7th InfoCom Security Conference” that took place in Athens on 29 & 30 of March 2017, where the UPRC presented to a large audience the ReCRED project and its impact to the security domain. It has been also used in all other events where the ReCRED was present.

6 Project newsletter

ReCRED consortium employed another mean of dissemination that is very popular and effective, that of promoting news and events through newsletters.

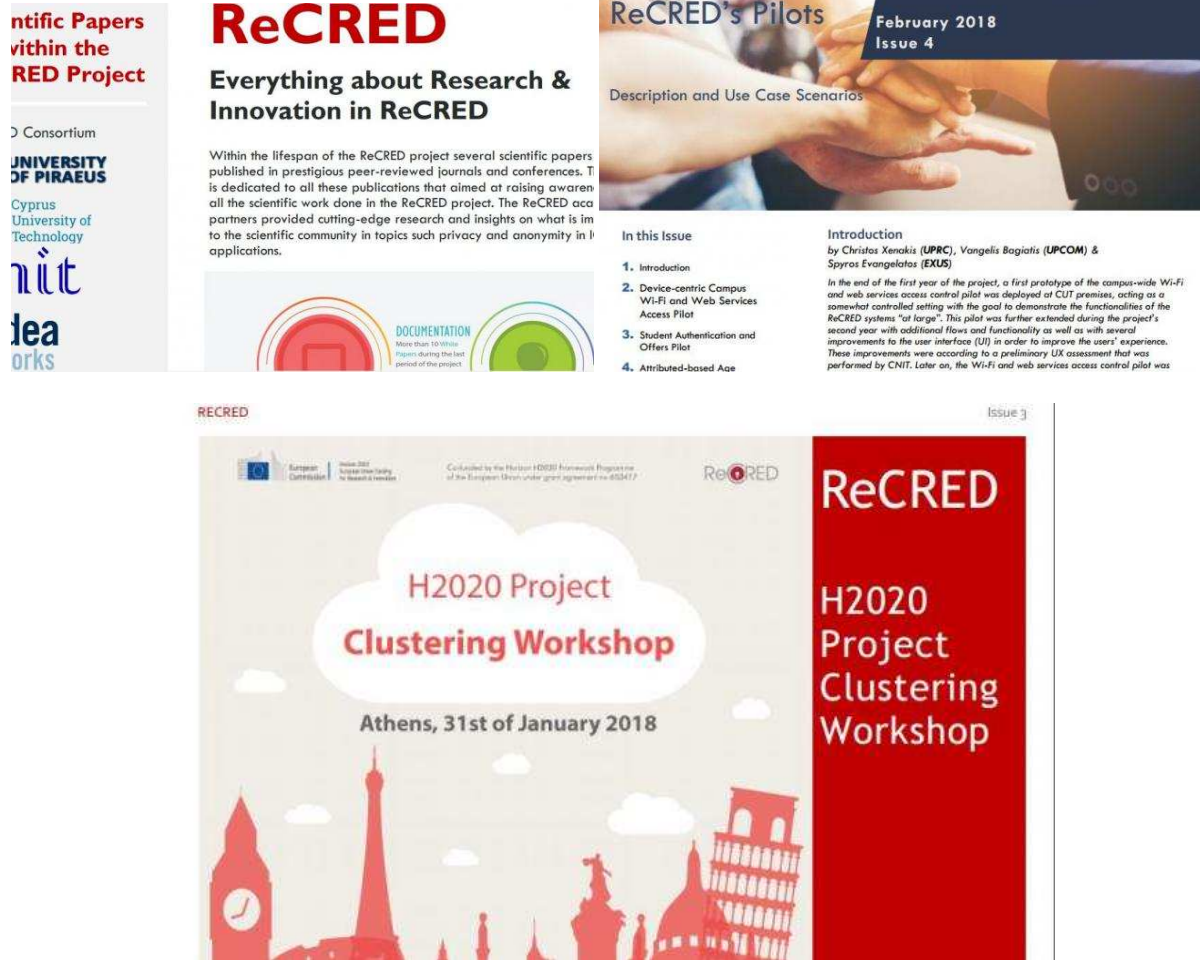
The newsletters have been sent to a large list of contacts that partners have provided. People from the IT industry and especially of the IT security sector, professors and researchers were included in the recipients list, while an online subscription form is also available in the project’s website in order for visitors to be able to register and receive the project’s newsletters.

 A screenshot of the ReCRED website's newsletter subscription page. The header includes the ReCRED logo and social media icons for YouTube, Facebook, Twitter, LinkedIn, and a mail icon. A navigation bar contains links: THE PROJECT, CONSORTIUM, NEWS & EVENTS, DOCUMENTS, and PILOTS & SOFT. The main content area has a breadcrumb trail 'Home » Subscribe to Newsletter' and a heading 'SUBSCRIBE TO NEWSLETTER'. Below this are two input fields: 'Full Name *' and 'E-mail *'. A red 'SUBMIT' button is positioned below the fields. On the right side, there is a 'Latest' section with a link 'Newly imj functional Tuesday 2' and a note 'Watch tw newly imj funcional'.

Figure 17 The subscription to the newsletter form

Five newsletters have been produced and distributed through the mailing list:

- Everything about Research & Innovation in ReCRED
- ReCRED's Pilots
- H2020 Project Clustering Workshop
- ReCRED Reaching our goals as a truly successful project
- ReCRED first newsletter



All newsletters are available for download from the communication page of the website.

<https://www.recred.eu/publication-categories/communication>

7 ReCRED whitepapers



As a very innovative project, ReCRED has a lot to share regarding new technologies, concepts and technical challenges. In order to disseminate the acquired knowledge, the consortium will release a number of whitepapers each one discussing important aspects of the ReCRED project.

The following whitepapers have been produced

1. Identity federation enhances authentication solutions
2. FIDO in a nutshell
3. The complex integration problem

4. Privacy minds for your business
5. The concept of Behavioral Authentication Authorities
6. Killing Passwords: Strong Authentication Beyond the Password Era

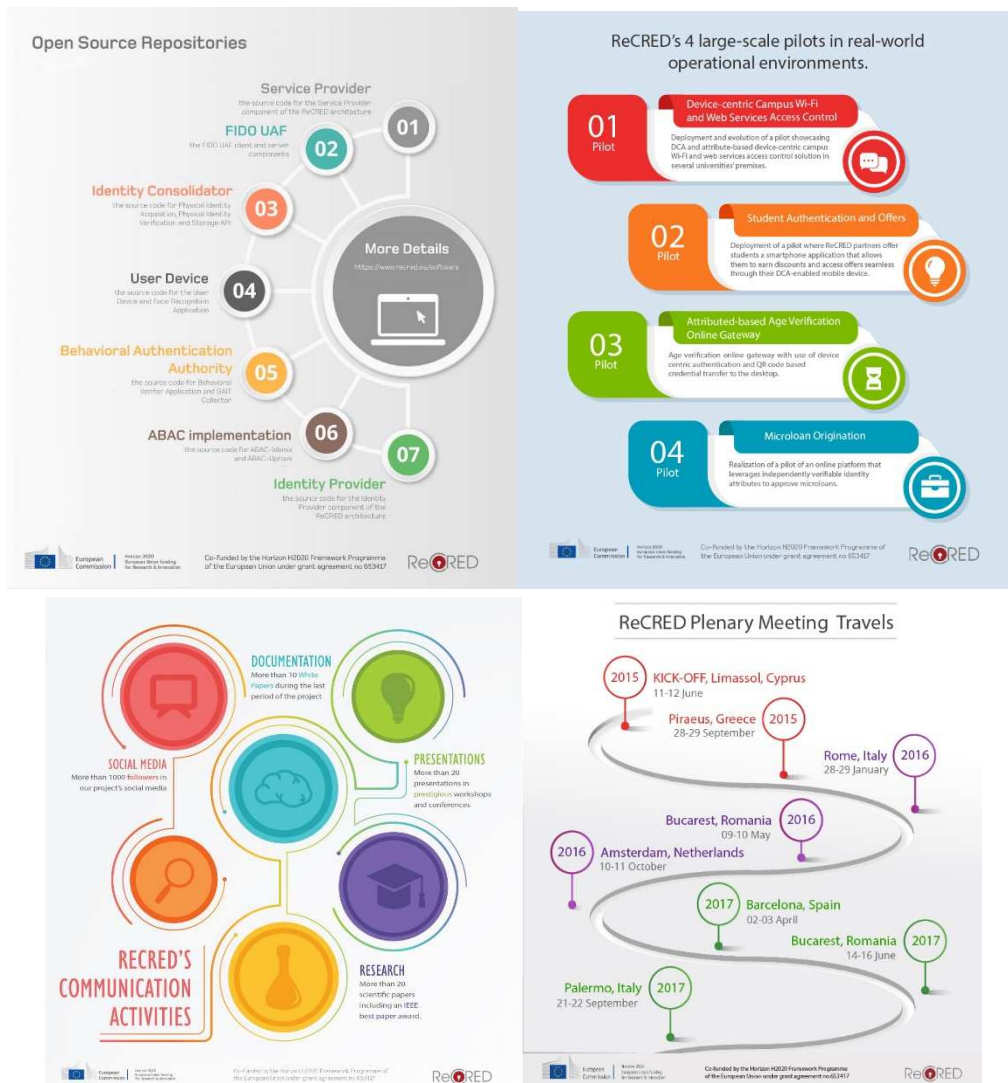


All whitepapers are available for download from the communication page of the website.

<https://www.recred.eu/publication-categories/communication>

8 ReCRED infographics

In order to easier communicate ReCRED, EXUS has also produced several infographics that depict major concepts, activities, facts and figures, milestones etc of the project



The infographics have been posted in the social media and are also available under the <https://www.recred.eu/recred-at-a-glance> page of the website.

9 Webinars

Three webinars have been organized by the pilot leaders in order to explain to the participants the features and functionalities of each pilot in a live demo scheme.

The webinars were free to watch. A form in each pilot page was available, where people interested on the pilot could fill-in their contact information and they have been notified via email about the date and time of the webinar as well as with the participation link.

The webinars information can be found below. The recorded webinars videos are available in the project’s youtube channel and in the webinars page of the website.

https://www.recred.eu/video-list?field_video_category_value=6

Pilot 1 Form

Name *

Surname *

Organization *

Email *

Select one or more of the following: *

☐ Notify me for the upcoming webinar

☐ I would like view a demo

☐ I would like to participate as a beta-tester

ReCRED Wi Fi Pilot Webinar

The webinar about the first ReCRED pilot - the WiFi pilot - took place on Thursday 15/3/2018 and it was presented by Antonis Papasavva from CUT.

ReCRED Webinar - Microloan Origination Pilot

The webinar about the third ReCRED pilot - the microloan pilot - took place on 23/3/2018 and it was presented by Spyros Evangelatos from EXUS.

ReCRED age verification webinar

The webinar about the third ReCRED pilot - the age verification pilot - took place on Friday 13/4/2018 and it was presented by Vangelis Mpagiatis from UPCOM.

10 ReCRED in the media, conferences and workshops

ReCRED had a very active participation in a variety of events, workshops and conferences with large audiences, where the interest of the participants was very high. Some of the most important events are listed below.

ReCRED At 3rd ICT Security World Conference, Greece, June 2017

ICT Security World is a Greek conference discussing digital security strategies, technologies and mechanisms employed on a global and national scale against cyber threats. On this year’s occasion of the conference on June 8th in Athens, Greece, high profile ICT representatives from public sector, banking and business operators supported the event, taking the stand in order to share their experience from implementing various security projects. Large Greek and international companies also participated, presenting emerging technologies and best practices in the field of Digital Security.

C. Xenakis from UPRC, being one of the invited speakers of the conference, shared ReCRED’s goals and implementation details during his presentation titled “From Password-less Authentication to Anonymous Access”.

ReCRED Presentation At Cyprus Cyberdefense Day, June 2017

Prof. Michael Sirivianos, ReCRED's technical manager, presented the device-centric and behavioral authentication aspects of ReCRED at the Cyprus Ministry of Defense Cyberdefense Day.

The Minister of Defense of Cyprus, the Chief of the Cyprus National Guard and Heads of Government departments were among the participants.

The participants expressed their particular interest in ReCRED's solutions.

ReCRED Presentation At The Technical University Of Darmstadt, Germany, June 2017

The Collaborative Research Centre (CRC) 1053 “MAKI – Multi-Mechanisms Adaptation for the Future Internet” of the Technical University of Darmstadt, Germany, invited Prof. Xenakis from UPRC to participate in the university’s Guest Presentation Series, during the summer semester of 2017 (June 27th).



C.Xenakis’ presentation, titled “Beyond password authentication: a device centric approach”, focused on the solutions proposed by ReCRED in the era of e-commerce and Internet of Things.

ReCRED Supporting The Hellenic Cyber Security Team, Oct 2017

Driven by the increasing need for sufficient IT security professionals, ENISA organizes the European Cyber Security Challenge that is aimed at identifying new talents in cyber security. National teams from all across Europe will compete against each other in solving security related tasks, to determine the country with the most gifted aspiring hackers. The Hellenic team and participation to the Challenge was organized, for the second consecutive year, by UPRC and the Greek team is also supported by ReCRED. Prof. C. Xenakis was invited to present the Greek participation on national tv (ERT). The national team will travel to Malaga, Spain, at the end of October for the finals.



Romanian Research Congress 2017

certSIGN was invited to participate in the Romanian Research Congress, 2017 edition, where we presented some of the research projects that we implemented. ReCRED had a central role in the discussions and passwordless authentication methods were presented to the large public and representatives of other science fields as well (e.g. Physics, AeroSpace, UAV, etc).

NIAS 2017, NATO cyber symposium

certSIGN participated as exhibitor at NIAS 2017

CdP2017

Dr. Cuevas participated in a panel about “Personal Data Security and Fraud” as part of the CdP European Privacy Summit. The panel discussed the view of law, police forces, industry and research towards the protection of personal data in current online services. Dr. Cuevas shared the vision of ReCRED in this matter, discussing the need of creating a secure online identity of each user, where the user has full control of its own data and can handle it with all the security guarantees provided by the Technology. This discussion was very linked to the work that UC3M/IMDEA team has been performing in ReCRED for the design and implementation of the Identity Consolidator.

ReCRED at FOSSCOMM 2017, Greece

This year, Harokopio University of Athens hosted FOSSCOMM 2017, during 4th-5th of November, offering presentations and workshops discussing open software, open content, open data, open design, open licenses issues and more. Dr. Christoforos Ntantogian from UPRC attended the event on behalf of ReCRED, where he got the chance to introduce our project, which is built on open source technologies, to a wide audience of IT students and professionals.



Following the presentation, C. Ntantogian was approached by participants, expressing their interest in the project and asking about the possibility of integrating ReCRED with insurance companies in the future.

ReCRED At IPICS Summer School On IT Security

The Intensive Programme on Information and Communication Systems Security – IPICS summer school is a well-established academic European school on IT security, supported by ENISA. It takes place annually for the past 19 years, and brings together experts from many different security fields.



This summer, IPICS will take place at the Ionian University at Kerkyra (Corfu), Greece. On June 30th, C. Xenakis and C. Ntantogian from UPRC were invited to speak about ReCRED’s outcomes and the underlying technologies that the project is built upon, such as the biometric and behavioral authentication, as well as the anonymous credential systems.

ReCRED At International Tyrrhenian Workshop On Digital Communication 2017 – “Towards A Smart And Secure Future Internet”, Palermo, Italy

The International Tyrrhenian Workshop on Digital Communication 2017 – “Towards a Smart and Secure Future Internet”, that took place in Palermo, Italy, during September 18-20, attracted many researchers who wished to share their latest research insights and present key results on the emerging paradigms for the design of the Future Internet. Characterized by an informal and highly interactive atmosphere, the workshop featured keynote talks, tutorials, panels, demos and technical sessions where invited lectures were given by leaders, in both academia and industry, to describe recent research results. The Tyrrhenian Workshop hosted Prof. C. Xenakis and Prof. M. Sirivianos, ReCRED’s project and technical management leaders respectively, as keynote speakers, offering them the chance to present our project’s approach and outcomes, that are set to influence the Future Internet. Additionally, UPRC contributed a paper, “A Security Evaluation of FIDO’s UAF Protocol in Mobile and Embedded Devices”, focusing on FIDO, the backbone of ReCRED’s device-centric authentication feature. The paper was also presented in the workshop by Dr. C. Ntantogian.



Presentation And Best Paper Award At IEEE WiMob 2017 For CNIT

CNIT has presented its work titled "On the Feasibility of Attribute-Based Encryption for WLAN Access Control", developed in the framework of the H2020 ReCRED project, at the 13th IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob) in Rome. The paper received the best paper award from the conference chairs. The audience expressed their interest and ask the presenter, Dr. Tooska Dargahi specific technical questions.

ReCRED Supporting The University Of Piraeus Team In TADHack Athens 2017

The Department of Digital Systems, of the University of Piraeus, won the 3rd location prize in TADHack Athens 2017, that took place at the end of September (22-24 September and 29 September – 1 October). The postgraduate students Papadopoulos Polymenis, Karapetsas Sotirios and the undergraduate students Kompolis Marios and Evaggelou Nikos, represented UPRC in the competition with the project “SS7 attacks on Telestax’s JSS7 SMSC Gateways”, which focused on telecom security, demonstrating attacks on the SS7 network and intercepting SMSs.

The Telecom Application Development – TADHack, the largest telecoms-focused hackathon worldwide, is the global meeting place for people who want to learn, share, code and create using the tools and technologies available in telecommunications. Aiming at building an ecosystem focused on telecom application development, TADHack brings together businesses, developers, non-coders and anyone who is interested in using telecom capabilities in their applications, to solve local and global problems.

The carried-out R&D task was supported by ReCRED, with the intend to motivate more undergraduate and postgraduate students of the Department of Digital Systems of the University of Piraeus that study information security, to engage further with telecom security tools and technologies.

ReCRED At Athens War Museum, Greece

A two-day event, titled “Security Challenges for Communication Networks, Electronic Warfare and Information Systems”, took place on 27th & 28th of November 2017 at Athens War Museum.

Organized by the Hellenic Armed Forces, the event hosted representatives from the military, distinguished members of the academic community and executives from the public and private sectors of Greece.

Prof. C. Xenakis from UPRC was also invited to the event by the Hellenic Armed Forces to present ReCRED, a secure and innovative solution for password-less authentication and anonymous access for Future Internet.

<https://www.thinknews.gr/defence/diimerida-thema-proklisis-asfalias-gia-ta-diktya-epikinonion-ilektronikou-polemou-ilektronikis-epitirisis-ke-pliroforiakon-systimaton-sto-polemiko-mousio/>

ReCRED At ECommerce Expo 2017, Greece

eCommerce Expo is the largest trade fair for B2B e-commerce solutions in Greece, providing industry-leading companies with the opportunity to present the latest solutions and services that enable businesses to develop advanced e-commerce platforms, leveraging state-of-the-art technologies. This year, the conference that took place in Athens, 25th & 26th of November 2017, mainly focused on the hot topics that currently concern e-commerce businesses, such as the General Data Protection Regulation (GDPR), the latest developments in digital payments, as well as the best practices regarding security, user experience and promotion.

Establishing trust between online stores and consumers is a crucial factor that can exponentially increase revenue for e-businesses. In a session dedicated to online security, specialists and academics highlighted the problems that need to be addressed. Prof. C. Xenakis from UPRC presented the ReCRED solution for “Password-less Authentication and Anonymous Access for on-line Services & eCommerce” to over 2000 visitors of the expo, consisted primarily by e-business owners and executives, IT specialists and digital agencies.

ReCRED Presented At The Research Executive Agency (REA) Of European Commission

The Research Executive Agency (REA), the funding body for research and innovation that manages EU research grants, on November 30th, 2017, organized the REA.B.4 Science Conference in Brussels, titled “Addressing Cybersecurity challenges and REA's role therein”. The topics discussed included the policies that need to be enforced to protect European Citizens’ personal details online, whether cybercrime will halt the growth of the digital world and how cybersecurity research can help fight against it.



In the above context, four invited speakers presented the current policy landscape and demonstrated how some of the cybersecurity challenges we face are being addressed by innovative B.4 research projects. Being one of speakers, our project coordinator, Prof. Christos Xenakis from UPRC, was given the exciting opportunity to explain how the research results from ReCRED can have a tangible effect, making our lives safer and our information more secure.

ReCRED At InfoMobility World, Greece

The Greek ICT Forum organized, on December 5th, 2017, the 2nd InfoMobily World conference in Athens discussing the exploitation of Information and Communication Technologies for the benefit of the economy, trade and the industry. Topics related to the transition to the digital economy era, such as e-Business and Social Media, Big Data, Electronic Payments and Security and many more were presented by prominent speakers. Prof. C. Xenakis from UPRC was invited to talk about ReCRED as an innovative and secure solution for authentication and access control for online services.



Our H2020 Project Clustering Workshop In The Official EU News Site

https://ec.europa.eu/info/news/horizon-2020-project-recreds-organises-privacy-and-security-workshop-participation-unhcr-2018-feb-13_en



A Very Successful Presence Of The ReCRED Project At MWC2018 In Barcelona

ReCRED had a strong participation in this year's MWC in Barcelona. The participants have the opportunity to discover ReCRED's potential applications through the live demos presented by ReCRED's partners.

Moreover the age verification software, Agify, developed by UPCOM for the third pilot is showcased in a dedicated booth.



During these four days we talked with many people who showed interest to AGify and ReCRED, and demonstrated our solutions to them.

We talked with Service Providers, who start to realize the importance of age verification and that they'll soon be obliged to somehow verify the age of their customers.

We had meetings with potential Identity Providers and we set the basis for future collaborations.

We met and exchanged opinions with organizations and end-users that are concerned about the safety of minors on the Internet and online privacy in general.



We explored the other booths in MWC and 4YFN and discovered other interesting initiatives in the privacy and security sectors.

We discussed with other application developers who would be interested in integrating our solutions to their apps.

We demonstrated our solution to the FIDO Alliance, talked with them about ReCRED and invited them to our next workshop.

ReCRED At The SAINT Workshop, Greece

In the spirit of the coordinated effort to promote and disseminate research results from EU-funded projects in the field of cybersecurity, the H2020 SAINT project organized its 1st workshop on Tuesday, March 20th, 2018, in Athens, Greece.

The SAINT workshop brought together 10 EU cybersecurity and privacy related projects, assisting in the exchange of knowledge and ideas. ReCRED, consistently supporting initiatives that promote inter-project collaboration, participated in the event through its project coordinator, Prof. C. Xenakis. Prof. Xenakis presented ReCRED, a secure and privacy preserving device-centric authentication solution for the Future Internet, to an audience of researchers and business representatives.

European Payment Summit

ReCRED Project was presented as a case study at European Payment Summit, hosted by FIDO alliance.

ISSE 2017 – Conference Programme

ReCRED Project was presented as a case study at ISSE conference.

EEMA's Annual Conference

ReCRED was presented as case study by Verizon.

<https://annualconference.eema.org/programme/>

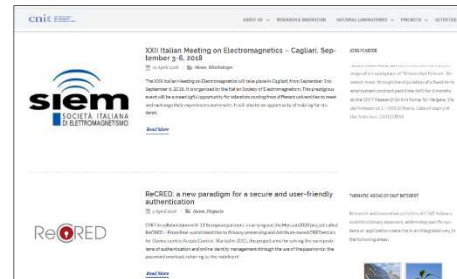
Telefonica's blog post "Autenticación robusta más allá de las contraseñas" at the "Think Big" blog (in spanish).

The "Think Big" blog (<https://blogthinkbig.com>) is the corporate blog of Telefonica, where the company communicates about technology, innovation and entrepreneurship. It is associated with a Twitter account where every blog post is disseminated. The account has about 133,000 followers and count more than 30K tweets. It is followed by most Telefonica employees, including high level management, and by many external people with different background.

CNIT web site

A brief description of the ReCRED project is published on CNIT web site (news page)

<http://www.cnit.it/en/2018/04/05/recred-a-new-paradigm-for-a-secure-and-user-friendly-authentication/>



CNIT Training activity

8 students from the Master program of Communication and Marketing Psychology (University of Rome Sapienza) have been involved in a training activity to acquire skills for the usability assessment.

ReCRED project provides them with the opportunity to work on a real case, and to develop their skills in the field of User Experience design.



The training activities they were involved in are structured as follow:

1. Learn about the ReCRED project
2. Lecture about the objectives and methods of usability evaluation
3. Observation and discussion of the user test sessions
4. Organization and management of user test sessions

ReCRED at Cyberwatching.eu - Concentration Meeting, 26/04/2018 in Brussels

The objective of this first Cyberwatching.eu concertation meeting is to take stock of the current R&I landscape and to identify common themes and challenges for clustering activities. With a strong EC presence, this is a key event to ensure all the projects of the catalogue get noticed. There will be opportunities for all projects to have their say through interactive discussions, break-out sessions, position papers and presentation opportunities.



Break-out 1 Applications & user-oriented services - Bharadwaj Pulugundla, Verizon & Re-CRED

<https://www.cyberwatching.eu/concertation-meeting-brussels>

ReCRED at GDPR event in Romania, May 2018.

CSGN promoted ReCRED at a GDPR related event in Bucharest. The event targeted the non-IT industry audience, with focus on financial organisations. The event had also traction in the press and newsfeeds from Romania, i.e. <http://www.comunicatedepresa.ro/certsign/70-dintre-bresele-de-securitate-se-datoreaza-parolelor-slabe/>.

The event has been also promoted on CSGN social media accounts



ReCRED at the “GDPR: The next day” workshop, Greece

On May 30th, 2018, the University of Piraeus organized a workshop on the European General Data Protection Regulation titled “GDPR: The next day”, to present the European framework and discuss the challenges that organizations face after its implementation. Faculty members, representatives from the Hellenic Data Protection Authority, as well as banking and business operators supported the event by sharing their knowledge and experience to a wide audience of undergraduate and postgraduate students.

Prof. Christos Xenakis was responsible to demonstrate the contribution of EU Research and Innovation projects towards a GDPR compliant digital society that respects and protects user data. ReCRED, being fully compliant with the new regulation, was mentioned as a prominent example of a platform that combines forefront technologies that allow for user authentication in a user-friendly, secure and privacy-preserving manner.

<https://www.recred.eu/news-article/241/recred-gdpr-next-day-workshop-greece>



11 Pilot Dissemination

Several events were organized by the pilot leaders in order to disseminate the four project’s pilots. Examples of these events are

- In-house dissemination, like presentations to students, faculty and university stuff and to high school students.

- Corporate events, demonstrations to commercial partners and to prospect customers, participation in major ICT events.
- Social media dissemination.

All these events are described in detail in deliverable D7.4.

12 Standardization and certification activities

A major achievement for the project is the FIDO UAF certification that certSIGN obtained.



More specifically, the FIDO (Fast Identity Online) Alliance certified that **gateSAFE UAF** module complies with the **FIDO UAF** specifications. The product was developed and implemented by certSIGN as part of the ReCRED project, making it one of the very few open source FIDO® Certified UAF Servers. The implementation successfully passed the

Interoperability tests – performed with international partners from different countries, on Windows, Android and iOS clients – that took place in December 2016 and the subsequent FIDO Alliance review.

CNIT has contributed to the standardization within **ETSI of Attribute Based Encryption for Attribute Based Access Control** through the publication of TS 103 532. The views of the ReCRED project on the use of Attribute-Based Encryption for Attribute-Based Access Control have been fed to the standardization process. <https://www.recred.eu/news-article/236/standardization-etsi-attribute-based-encryption-attribute-based-access-control>

OpenID+FIDO standardization:

We have prepared and submitted a proposal for standardization of the OpenID Connect/FIDO integration. This document describes the architecture for this integration, the details of the OpenID Provider and the FIDO UAF server, as well as how the standard operations of OpenID Connect are affected from this integration. In addition, we describe in details the messages that are exchanged between the FIDO-enabled OpenID Provider, the Relying Party and the FIDO-enabled client during a registration and an authentication and authorization process.

13 The H2020 Project Clustering Workshops

ReCRED liaises with relevant EU and international initiatives operating in the field of ICT innovation and in other fields, that present complementary approaches and objectives. The goal is to share information and best practices in the industry and respective policy contexts, disseminating projects' outcomes and benefits and to raise awareness.

Below you can find the projects that participated in our H2020 Project Clustering Workshop that took place in Athens on 31 January 2018. The opening



speech made by Susanne Butscher, a senior officer in the United Nations High Commissioner for Refugees’ (UNHCR’s) Identity Management and Registration section.

The video of several of the presentations can be found in our youtube channel. The complete list and description of the projects can be found here <https://www.recred.eu/basic-page/169/synergies>

ENCASE - Enhancing security And privacy in the Social web: a user centered approach for the protection of minors. Website: <http://encase.socialcomputing.eu/>

PRIVACY FLAG – Enabling Crowd-sourcing based privacy protection for smartphone applications, websites and Internet of Things deployments. Website: <http://privacyflag.eu/>

CREDENTIAL – Secure Cloud Identity Wallet. Website: <https://credential.eu/>

FutureTrust – Future Trust Services for Trustworthy Global Transactions. Website: <https://www.futuretrust.eu/>

LIGHTEST – Lightweight Infrastructure for Global Heterogeneous Trust management in support of an open Ecosystem of Stakeholders and Trust schemes. Website: <http://www.lighttest.eu>

WITDOM – Empowering Privacy and Security in Non-Trusted Environments. Website: <http://witdom.eu/>

PaaSword – A Holistic Data Privacy and Security by Design Platform-as-a-Service Framework Introducing Distributed Encrypted Persistence in Cloud-based Applications. Website: www.paasword.eu

ANASTACIA - Advanced Networked Agents for Security and Trust Assessment in CPS / IOT Architectures. Website: <http://www.anastacia-h2020.eu/>

FORTIKA - Cyber Security Accelerator for trusted SMEs IT Ecosystems. Website: <http://fortika-project.eu>

OPERANDO – Online Privacy Enforcement, Rights Assurance and Optimization. Website: <https://www.operando.eu>

KONFIDO - Secure and Trusted Paradigm for Interoperable eHealth Services. Website: <http://www.konfido-project.eu>

GHOST – Safe-Guarding Home IoT Environments with Personalized Real-time Risk Control. Website: <https://www.ghost-iot.eu/>

TYPES - Towards transparency and Privacy in the online advertising business. Website: <http://www.types-project.eu/>

DOGANA - advanced social engineering And vulnerability Assessment Framework. Website: <https://www.dogana-project.eu/>

SUNFISH - Secure information SHaring in federated heterogeneous private clouds. Website: <http://www.sunfishproject.eu/>

ARIES - Reliable European Identity Ecosystem. Website: <http://aries-project.eu/>

PANORAMIX - Privacy and Accountability in Networks via Optimized Randomized Mix-nets. Website: <https://panoramix-project.eu/>

AMBER – enhAnced Mobile BiomEtRics. Website: <https://www.amber-biometrics.eu/>

CIPSEC – Enhancing Critical Infrastructure Protection with innovative SECurity framework. Website: <http://www.cipsec.eu/>

ARMOUR – Large-Scale Experiments of IoT Security Trust. Website: <https://www.armour-project.eu>

mF2C – Towards an Open, Secure, Decentralized and Coordinated Fog-to-Cloud Management Ecosystem. Website: <http://www.mf2c-project.eu>

YAKSHA - Cybersecurity Awareness and Knowledge Systemic High-level Application. Website: <https://www.facebook.com/project.yaksha/>

SPECIAL – Scalable Policy-awareE linked data arChitecture for prIvacy, trAnsparency and compliance. Website: <https://www.specialprivacy.eu/>

H2020 Project Clustering Workshop – the Demos.

After the successful Project Clustering Workshop that took place in Athens, on 31/1/2018, we have organized the second workshop that will take also place in Athens on 20/4/2018. The workshop focused on demonstrations, pilots showcasing and system prototypes of various EU funded projects.



OPERANDO – Online Privacy Enforcement, Rights Assurance and Optimization. Website: <https://www.operando.eu>

FutureTrust – Future Trust Services for Trustworthy Global Transactions. Website: <https://www.futuretrust.eu/>

LIGHTEST – Lightweight Infrastructure for Global Heterogeneous Trust management in support of an open Ecosystem of Stakeholders and Trust schemes. Website: <http://www.lighttest.eu>

PaaSword – A Holistic Data Privacy and Security by Design Platform-as-a-Service Framework Introducing Distributed Encrypted Persistence in Cloud-based Applications. Website: www.paasword.eu

KONFIDO - Secure and Trusted Paradigm for Interoperable eHealth Services. Website: <http://www.konfido-project.eu>

DOGANA - aDvanced sOcial enGineering And vulNerability Assesment Framework. Website: <https://www.dogana-project.eu/>

SHIELD – Securing Against Intruders and Other Threats Through a NFV-enabled Environment. Website: <https://www.shield-h2020.eu/>

SAINT – Systemic Analyzer In Network Threats. Website: <https://project-saint.eu>

14 Scientific publications

The ReCRED consortium has a strong presence in the security related conferences and journals. The academic partners' activity has resulted in a total of 20 scientific papers in prestigious venues and 7 journal articles.

All project related publications, including the pdf documents, are available at the ReCRED website. <http://www.recred.eu/publication-categories/publications> and at OpenAIRE directory

https://www.openaire.eu/search/browse/publications?project=corda__h2020::5690e4e5f3ae5189e95992a9acea2e8b%7C%7CReCRED

The following publication won the paper award at IEEE WiMob 2017:

Pisa, Claudio, Tooska Dargahi, Alberto Caponi, Giuseppe Bianchi, and Nicola Blefari-Melazzi. "On the feasibility of attribute-based encryption for WLAN access control." In 2017 IEEE 13th International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob), pp. 1-8. IEEE, 2017.

Another publication from CNIT is under review:

Analysis of users' needs for security and privacy on the web: qualitative investigation to inform the design of access control mechanisms

Authors: Annamaria Recupero, Alessandra Talamo, Alberto Caponi, Claudio Pisa

Journal: Frontiers in ICT

Status: under review

Other publications:

2018 – journals

Analyzing, Quantifying, and Detecting the Blackhole attack in Infrastructure-less Networks

Panos, Christoforos; Ntantogian, Christoforos; Malliaros, Stefanos; Xenakis, Christos (2017)

Types: Article

Subjects: Blackhole attack, CUSUM, MANET, IDS, AODV

Show additional classifications

Identifiers:doi:10.5281/zenodo.1195983, doi:10.5281/zenodo.1195984

A recharging distance analysis for wireless sensor networks

Tsoumanis, Georgios; Oikonomou, Konstantinos; Aïssa, Sonia; Stavrakakis, Ioannis (2018)

Types: Article

Subjects: Battery recharging, Energy consumption, Facility location theory, Sink positioning, Wireless sensor networks

Identifiers:doi:10.1016/j.adhoc.2018.03.003

Commix: Automating Evaluation and Exploitation of Command Injection Vulnerabilities in Web Applications

Stasinopoulos, Anastasios; Ntantogian, Christoforos; Xenakis, Christos (2018)

Types: Article

Subjects: Command injection, code injection, exploitation, software tool, web security

Identifiers:doi:10.5281/zenodo.1195991, doi:10.5281/zenodo.1195990

2016 – journals

On the Feasibility of Attribute-Based Encryption on Internet of Things Devices

Ambrosin, Moreno; Anzanpour, Arman; Conti, Mauro; Dargahi, Tooska; Moosavi, Sanaz Rahimi; Rahmani, Amir M.; Liljeberg, Pasi (2016)

Languages: English

Types: Article, Preprint

Subjects: Computer Science - Cryptography and Security

Identifiers:doi:10.1109/MM.2016.101

(U)SimMonitor: A mobile application for security evaluation of cellular networks

Xenakis, Christos; Ntantogian, Christoforos; Panos, Orestis (2016)

Languages: English

Types: Article

Subjects: Security measurements, Mobile application, Android, AT commands, Cellular networks

Identifiers:doi:10.1016/j.cose.2016.03.005, doi:10.5281/zenodo.153964

Resource location based on precomputed partial random walks in dynamic networks

Millán, Víctor M. López; Cholvi, Vicent; Anta, Antonio Fernández; López, Luis (2015)

Languages: English

Types: Preprint

Subjects: Computer Science - Networking and Internet Architecture

2015 - Journals

Quantifying the Economic and Cultural Biases of Social Media through Trending Topics

Carrascosa, Juan Miguel; Cuevas, Rubén; González, Roberto; Azcorra, Arturo; García, David (2015)

Publisher: PLOS (Public Library of Science)

Languages: English

Types: Article

Subjects: Research Article, Social Communication, Mass media, Medicine, Q, R, Twitter, Economics, Cultural Bias, Science, Telecomunicaciones, Social Media, Trending Topic

Identifiers:doi:10.1371/journal.pone.0134407, pmc:PMC4521871

Opportunities and Challenges of Ad-based Measurements from the Edge of the Network

Publisher: Zenodo

Types: Article

Subjects:

Identifiers:doi:10.5281/zenodo.1321239

2018 – conferences

A Flexible Authorization Mechanism for Enterprise Networks Using Smart-phone Devices

Bogdan-Cosmin Chifor, Sorin Teican, Mihai Togan, George Gugulea.. The 12th International Conference on Communications – COMM 2018, Bucharest – Romania

Identifiers:doi:10.5281/zenodo.1323324

Analysis of Multiple Random Walkers for Service Discovery in Fog Computing Network Environments

Skiadopoulos, Konstantinos; Giannakis, Konstantinos; Oikonomou, Konstantinos; Stavrakakis, Ioannis (2018)

Types: Conference object

Subjects: multiple random walkers, fog computing, coverage, service discovery, virtual network functions, cover time, geometric random graphs

Identifiers:doi:10.5281/zenodo.1251690, doi:10.5281/zenodo.1251691

A Proposed Algorithm for Data Measurements Synchronization in Wireless Sensor Networks

Fanarioti, Sofia; Tshipis, Athanasios; Giannakis, Konstantinos; Koufoudakis, George; Christopoulou, Eleni; Oikonomou, Konstantinos; Stavrakakis, Ioannis (2018)

Types: Conference object

Subjects: Data Measurements, Synchronization, Wireless Sensor Networks, Clock Deviation

Identifiers:doi:10.5281/zenodo.1255823, doi:10.5281/zenodo.1255822

2017 – conferences

Facebook's gender divide

Garcia, David; Kassa, Yonas Mitike; Cuevas, Angel; Cebrian, Manuel; Moro, Esteban; Rahwan, Iyad; Cuevas, Ruben (2017)

Languages: English

Types: Preprint

Subjects: Computer Science - Computers and Society

On the feasibility of attribute-based encryption for WLAN access control

Claudio Pisa; Tooska Dargahi; Alberto Caponi; Giuseppe Bianchi; Nicola Blefari-Melazzi (2017)

Types: Conference object

Subjects: attribute-based encryption, access control, WLAN, Wi-Fi, attribute-based policies, WPA2, WPA, beacon extension, privacy, wireless LAN, embedded device

Identifiers:doi:10.1109/WiMOB.2017.8115806

A Security Evaluation of FIDO's UAF Protocol in Mobile and Embedded Devices

Panos, Christoforos; Malliaros, Stefanos; Ntantogian, Christoforos; Panou, Angeliki; Xenakis, Christos (2017)

Types: Conference object

Subjects: TPM, FIDO, Security Analysis, Remote Attestation, Mobile Devices, Embedded Devices, Trusted Computing, TrustZone, Authentication

Show additional classifications

Identifiers:doi:10.5281/zenodo.1181774, doi:10.5281/zenodo.1181773

RiSKi: A Framework for Modeling Cyber Threats to Estimate Risk for Data Breach Insurance

Panou, Angeliki; Ntantogian, Christoforos; Xenakis, Christos (2017)

Types: Conference object

Subjects: Cyber insurance, Optimal Investment, Risk analysis, Serious games

Identifiers:doi:10.5281/zenodo.1195988, doi:10.5281/zenodo.1195987

2016 – conferences

Internet Computing: Using Reputation to Select Workers from a Pool

Christoforou, Evgenia; Anta, Antonio Fernández; Georgiou, Chryssis; Mosteiro, Miguel A.(2016)

Languages: English

Types: Preprint

Subjects: Computer Science - Computer Science and Game Theory, Computer Science - Distributed, Parallel, and Cluster Computing

Protecting sensitive information in the volatile memory from disclosure attacks

Malliaros, Stefanos; Ntantogian, Christoforos; Xenakis, Christos (2016)

Types: Conference object

Subjects: Memory management, Volatile memory, Operating Systems, Memory zeroization, Information disclosure

Show additional classifications

Identifiers:doi:10.5281/zenodo.1181767, doi:10.5281/zenodo.1181766

SALVE: Server Authentication with Location VERification

Yu, Der-Yeuan; Ranganathan, Aanjhan; Masti, Ramya Jayaram; Soriente, Claudio; Capkun, Srdjan (2016)

Languages: English

Types: Preprint

Subjects: Computer Science - Cryptography and Security

Identifiers:doi:10.1145/2973750.2973766

FEBA: An Action-Based Feature Extraction Framework for Behavioural Identification and Authentication

Stammati, Luigi; Pisa, Claudio; Dargahi, Tooska; Caponi, Alberto; Bianchi, Giuseppe (2016)

Languages: English

Types: Conference object

Subjects:

Identifiers:doi:10.1109/ARES.2016.31

Ensuring the Authenticity and Fidelity of Captured Photos Using Trusted Execution and Mobile Application Licensing Capabilities

Papadamou, Kwstantinos; Samaras, Riginos; Sirivianos, Michael (2016)

Languages: English

Types: Conference object

Subjects: Authenticity, Cryptography, Privacy, Fidelity, Trusted Computing

Identifiers:doi:10.5281/zenodo.152087, doi:10.1109/ARES.2016.83

CoVer-ability: Consistent Versioning for Concurrent Objects

Nicolaou, Nicolas; Anta, Antonio Fernández; Georgiou, Chryssis (2016)

Languages: English

Types: Preprint

Subjects: Computer Science - Distributed, Parallel, and Cluster Computing

WI-FAB

Pisa, Claudio; Caponi, Alberto; Dargahi, Tooska; Bianchi, Giuseppe; Blefari-Melazzi, Nicola(2016)

Languages: English

Types: Conference object

Subjects: WLAN federation, Attribute-Based Encryption, Attribute-Based Access Control, Privacy Preserving, WPA, WPA2

Identifiers:doi:10.1145/2944789.2949546

An Adjustable Forwarding Policy Exploiting Path Vulnerability in Wireless Sensor Networks

Demertzis, Apostolos; Oikonomou, Konstantinos; Stavrakakis, Ioannis (2018)

Types: Conference object

Subjects: Convergecast, Forwarding, Energy Consumption, Wireless Sensor Networks, Vulnerability

Identifiers:doi:10.5281/zenodo.1255827, doi:10.5281/zenodo.1255826

Understanding the detection of fake-view fraud in Video Content Portals

M. Marciel, R. Cuevas, A. Banchs, R. Gonzalez, S. Traverso, M. Ahmed, A. Azcorra, “Understanding the detection of fake-view fraud in Video Content Portals”. In proc. 25th International World Wide Web Conference (WWW), 2016.

Independent Auditing of Online Display Advertising Campaigns

Callejo, Patricia; Cuevas, Ruben; Cuevas, Angel; Kotila, Mikko (2016)

A privacy preserving authentication service using mobile devices

Mihai Togan, Bogdan Chifor, Ionut Florea, and George Gugulea. certSign Romania and Military Technical Academy, Computer Science Dept., Bucharest, Romania. "A privacy preserving authentication service using mobile devices". Information Security Solutions Europe – ISSE 2016, 15th-16th November 2016, Paris, France

Conferences 2015

I Always Feel Like Somebody's Watching Me. Measuring Online Behavioural Advertising

J. Carrascosa, J. Mikians, R. Cuevas, V. Erramilli, N. Laoutaris, “I Always Feel Like Somebody's Watching Me. Measuring Online Behavioural Advertising”. Proceedings of the 11th ACM Conference on Emerging Networking Experiments and Technologies. Dec. 2015

Evaluation of Cryptography Usage in Android Applications

Chatzikonstantinou, C. Ntantogian, G. Karopoulos, Christos Xenakis, "Evaluation of Cryptography Usage in Android Applications" In Proc. 9th EAI International Conference on Bio-inspired Information and Communications Technologies, New York, Dec.2015.

Web Identity Translator: Behavioral Advertising and Identity Privacy with WIT

Papaodyssefs, F., Iordanou, C., Blackburn, J., Laoutaris, N., & Papagiannaki, K., “Web Identity Translator: Behavioral Advertising and Identity Privacy with WIT”. In Proc. 14th ACM Workshop on Hot Topics in Networks Article No. 3. 2015

15 Dissemination Assessment and Conclusions

During the first year of the project a lot of effort has been put by the partners to disseminate the project’s goals and objectives. These efforts have been increased during the second year of the project resulting in reaching a wider audience and making the project known to industry and academia as well as to general public. During the third year of the project, when the ReCRED platform and application were mature, the dissemination and communication activities were even more increased. Webinars, whitepapers, newsletters, demonstrations, workshops and project clustering events, appearance in major conferences and several talks helped in making ReCRED reaching a lot of stakeholders.

In the proposal of the project the consortium defined specific KPIs that would indicate the progress of the dissemination effort. Overall, project dissemination activities have reached and in many cases

exceeded these KPIs. The table below summarizes the numbers of the dissemination activities, compared to the project’s initially defined KPIs.

Communication Action	Description	Performance Indicators	Target Values	Target Audience	Achieved Values until today
Web Site	Project website: information about the project technological and scientific results	Unique visits to the web site	50+ unique visits per day at the end of the project	All	26+
Journal Publications	Publications in top scientific journals	Accepted articles	One article per year per academic partner	Scientific community (and industry)	9 journal publications in total
Conference Participation	Presentations (and publication) at top international conferences and workshops	Number of conferences attended	One conference / workshop per year and academic partner	Scientific community (and industry)	21 total publications and presentations
Graduate-level Courses	Results of ReCRED in graduate level courses	Number of courses	One course per academic partner	Scientific community (and industry)	Total: 11 courses UPRC: IPICS summer school on IT security Post-graduate course: “Mobile Internet Security” Graduate course: “Mobile and Wireless Communications Security” CUT: Post-graduate course: “Advanced and Distributed Operating Systems” Post-graduate course: “Data Science”

					<p>Graduate course: “Data Structures and Algorithms”</p> <p>Graduate course: “Databases”</p> <p>Graduate course: “Computer Organization and Micro-processors”</p> <p>CNIT:</p> <p>Post-graduate course: “Network Security”</p> <p>Graduate course: “Internet Systems Vulnerabilities and Defense”</p> <p>UC3M:</p> <p>Post-graduate course: “Cybersecurity, Big Data and Telematics”</p>
Project Workshop	Final dissemination workshop with presentation of results, open call for papers, and industry sessions	Number of workshop attendants	At least 100 attendants	Scientific community (and industry)	<p>130</p> <p>Workshop FASES2016 at ARES conference.</p>
Trade Fairs Participation	Participations and/or presentations in fairs and trade shows	Number of events attended	Two events per year	Industry and trade organizations	8 participations
Demonstrations of the pilots	Demonstration of the pilots at demo sessions of conferences and at companies	Number of demos done	<p>- Two demos at conferences the final year of the project</p> <p>- One demo to a company per partner the final year</p>	Industry and trade organizations	<p>4 demonstrations</p> <p>In-house dissemination by all partners</p>

Dissemination Package	Brochure and press releases with technological achievements, services and products	Brochure downloads; number of press releases	1000 downloads; at least 2 press releases per year	Media and public in general	2480 downloads. 11 press releases in total
Online Social Networks presence and activity	Creation of profiles and activity in social networks for ReCRED	Number of networks with presence; posts in each network	Presence in 4 social networks; 1-2 post per month	Media and public in general	4 social networks. Facebook: 384 likes, 384 followers Twitter: 481 tweets, 384 followers LinkedIn Group: 139 members, 164 discussions YouTube: 2212 views, 64 subscribers
Articles in popular science magazines	Article describing the project to the general public in a wide audience magazine	Number of articles	At least 2 articles	Media and public in general	1 newspaper article 2 articles in magazines 2 appearances in local TV
Interaction and coordination with other projects	Identification and coordination with related project in the same call	Number of projects	At least 2 projects	Scientific and industry community	31 H2020 projects Common plenary meeting disseminating projects results and exploring collaboration potentials with IRMA (I Reveal My Attributes) Co-organized an ARES Workshop (FASES 2016) along with the TYPES EU Project consortium. Synergies with more than 30 H2020 projects (https://www.recred.eu/basic-page/169/synergies)

Aiming at a high rate of dissemination to the general public and of the acceptance of the project's outcomes from the industry, the consortium has to keep seeking for opportunities for communicating the project's progress and achievements beyond the end of the project.