RAYUELA NEWSLETTER

Newsletter Issue 5　I　July - August 2022　I　　HORIZON 2020 Programme　I　Contract No. 882828

"Alea iacta est" -　Julius Caesar 49 BC acknowledged the presence of games, even though the story of his life ended in tragedy, our project Rayuela is fighting for the opposite - protecting the youth in the world which is so unpredictable and unforgiving - online world.

According to UNICEF's report "The State of the World's Children 2017: Children in a Digital World," children and adolescents under 18 account for approximately one in three Internet users worldwide. Although these minors can be considered digital natives, in many cases, they are not aware of either the benefits and opportunities or the risks and dangers that Internet access entails. To tackle this problem, it is necessary to identify risk patterns and train minors in using the Internet and new technologies. And what better way to do this than by playing? That is precisely the purpose of the European project RAYUELA ("empoweRing and educAting YoUng pEople for the internet by pLAying"). The project, coordinated by the Universidad Pontificia Comillas, has a solid multidisciplinary consortium of 17 partners from 9 European Union countries, including Universities and research centers, law enforcement agencies, and technology companies.

The RAYUELA project seeks to research the psychological, anthropological, and sociological factors that influence cybercrime (such as cyberbullying, online grooming, or human trafficking) and the risks associated with the use of IoT devices such as wearables, home assistants, or connected toys. An interactive adventure game is being developed to address these issues. The obtained in-game data will be subsequently analyzed to determine if specific profiles are more likely to commit or suffer some of these cybercrimes so that the law enforcement agencies, policy makers, educators and other relevant actors involved in the project can take measures to help and protect them.

WHAT YOU WILL FIND IN OUR NEWSLETTER

RAYUELA
a fun way to fight cybercrime

PROJECT IN NUTSHELL
RAYUELA NEWS
WPS IN PROGRESS
UPCOMING EVENTS

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PROJECT IN A NUTSHELL

RAYUELA aims to bring together law enforcement agencies (LEAs), sociologists, psychologists, anthropologists, legal experts, computer scientists and engineers, to develop novel methodologies that allow better understanding the factors affecting online behaviour related to new ways of cyber criminality, as well as promoting the potential of these young talents for cybersecurity and technologies.

RAYUELA's main goal is to better understand the drivers and human factors affecting certain relevant ways of cybercriminality, as well as empower and educate young people (children and teenagers primarily) in the benefits, risks and threats intrinsically linked to the use of the Internet by playing, thus preventing and mitigating cybercriminal behaviour.

Project focuses on cybercrime, which has a significant cross-border impact among the EU countries, but also outside the EU. Specifically, the document is addressed to cybercrime related to children, teenagers and young adults, which happen to be one of the most vulnerable populations in the EU, who must be protected and nurtured to stay safe online.

RAYUELA proposes a series of solutions to help the EU in the prevention, investigation and mitigation of cybercrime related to online grooming, cyberbullying and human trafficking, while incorporating the perspective of gender and cultural diversity.

Dissemination of the project's activities and results are essential for the successful exploitation of the innovative solutions developed by RAYUELA. RAYUELA's innovations offer high replicability across the EU. The need to raise awareness across value chains is directly related to the success of the project.

RAYUELA's consortium brings together 17 partners from 9 different EU Member States (ES, BE, SK, EE, PT, UK, GR, LV, DE). The consortium has been built with great care, looking for a group of excellent partners with proven expertise and who can fully provide the necessary know-how in the fields addressed by the project.

3

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RAYUELA 4th CONSORTIUM MEETING
Bilbao 5th April, 2022

Most of the Rayuela team were able to gather for the 4th Consortium meeting, which took place in Bilbao. This meeting was special to our team as we were successfully finishing two working packages, specifically WP1 (BUILDING A KNOWLEDGE BASE ON CYBERCRIME DRIVERS FOR CHILDREN AND YOUNG ADULTS) lead by Comillas and WP2 (TECHNOLOGY ASSESSMENT AND IT THREAT LANDSCAPE) lead by UPM. Team was also getting ready for a report, which will be handed to the European Commission giving direct feedback on so far developed activities and tasks. Purpose of this meeting was also to set up the work plan for the next 6 months and to discuss each WP and its developments. Even though not all the partners were able to attend this meeting most of them were present and the rest of the partners were involved through the video call.

4

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11th Conference of the European Union's Framework Programme for Research and Innovation in Spain
6th April 2022

The Centre for the Development of Industrial Technology (CDTI), in collaboration with the Spanish Ministry of Science and Innovation and the European Commission, organized in April 6th in València the 11th Conference of the European Union's Framework Programme for Research and Innovation in Spain, under the slogan "The new Horizon for Europe". The main objective of the Conference was to analyze the first year of Horizon Europe, as well as its major new features, such as the Research and Innovation Missions, the new European Partnerships and the European Innovation Council. During the conference there was an exhibition of posters of projects coordinated by Spanish entities that have received funding from Horizon Europe or Horizon 2020. RAYUELA was represented in this exhibition and we were honored with the visit of the Spanish Minister of Science and Innovation, Diana Morant, and the European Commission's Director General for Research and Innovation, Jean Eric Paquet, who were particularly interested in the RAYUELA project.

5

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RAYUELA REACHED
18 MONTHS
12th April 2022

Rayuela Consortium reached its milestone - 18 months of project duration! With reviewers and experts, including the EC project officer, we discussed the results and future activities. It was an engaging knowledge sharing in a friendly and professional environment.

European Police Congress 2022
11th May 2022

PLV presented the sister projects, RAYUELA and CC-DRIVER, at the Panel session 1.8 of the European Police Congress 2022 that took place in Berlin in May 11th & 12th. The European Police Congress is an international congress for decision makers from police forces and security authorities and industries. Its intention is to strengthen the dialogue between the authorities and enable the participants to establish new contacts to colleagues from all over Europe. Every year critical discussions on upto-date issues are held and the latest developments in technologies for the professional use in the security sector are presented by the exhibitors. The European Police Congress is the largest conference for internal security in the European Union. Annually the conference is a meeting place for experts from more than 20 countries. Representatives of polices, border polices, secret services as well as governments, parliaments and industries participate in the conference. The European Police Congress is organized by the "Behörden Spiegel", Germany's leading newspaper for public authorities with support of national and European authorities.

6

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9th European Conference on Social Media ECSM
12th May, 2022

RAYUELA was presented, together with its sister project CC-DRIVER, at the 9th European Conference on Social Media ECSM 2022 that took place in Krakow (Poland) in May 12th & 13th. The conference attracted participants from more than 40 countries and been attended by a combination of academic scholars, public sector workers, practitioners and individuals who are engaged in various aspects of the social media industry. The presentation was titled "understanding online behavioral patterns and young cybercriminality". PLV took advantage of its participation at the conference to have bilateral meetings with the National Police of Warsaw and Krakow to exchange good practices and discuss future collaborations. RAYUELA and CC-DRIVER were presented to the LEAs.
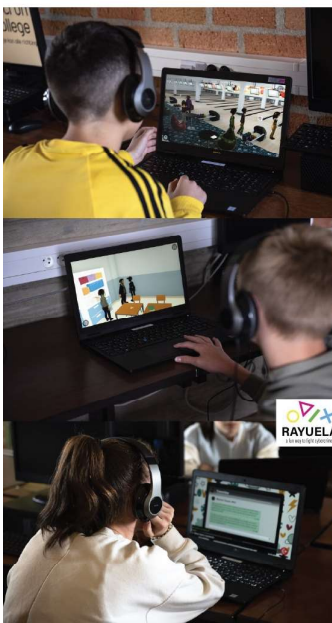
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TESTING RAYUELA game prototype
June - July 2022

RAYUELA team was able to design the first prototype of the game. The pitol prototype testing where:
- Spectrumcollege Beringen, Belgium
- Ellinogermaniki Agogi Summer Camp, Greece
- Comillas Summer Camp courses, Spain

A school class from the Spectrumcollege Beringen in Belgium had the honor to be the first to play the Rayuela game prototype

Rayuela game pilots in Spain 1

One of the Rayuela game prototype pilots which took place in Spain. Altogether 7 workshops were organized in 4 days and involved 103 students.

Rayuela game pilots in Spain 2

Here's another Rayuela game prototype pilot which took place in Spain. Altogether 7 workshops were organized in 4 days and involved 103 students.

8

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RAYUELA TEAM AT THE CEPOL RESEARCH & SCIENCE CONFERENCE 2022 IN VILNIUS
June 10, 2022

Preparing law enforcement for the digital age has been the main theme of this year's CEPOL Research and Science Conference, bringing together 200 participants from around 30 countries and 7 international organizations. The conference has been organized by the EU Agency for Law Enforcement Training (CEPOL), jointly with Mykolas Romeris University, in Vilnius, Lithuania, within the scope of CEPOL's Justice and Home Affairs Agencies Network presidency programme. By bringing together ideas and perspectives of practitioners, trainers and educators in policing and other areas of law enforcement, with researchers and academic scholars from Europe and the international sphere, the conference main objective has been to provide answers on how to upskill law enforcement officials so that they can stay ahead of crime and better respond to the challenges of new ground-breaking technologies, such as artificial intelligence (AI). Cross-border cooperation, exchanging knowledge and good practices, and the respect of fundamental rights, are key elements of success.

Under the title of "Overview of CC-DRIVER and RAYUELA projects: investigate, identify, understand and explain drivers of juvenile delinquency" PLV has presented the sister projects to an audience of 200 representatives, most of them LEAs.

9

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RAYUELA TEAM PRESENT AT INTERNATIONAL CYBERSECURITY FORUM
June 10, 2022

The choice of the theme of the FIC 2022, «Shaping Europe's Digital Future» was decided long before the war in Ukraine began. The dramatic events that our continent—and by ricochet, the rest of the world—is experiencing made it more necessary than ever to strengthen a digital Europe that guarantees the development of a safe digital space, respectful of the values that are threatened today. Our team is taking this issues with all seriousness and therefore we considered our presence at this event to be essential.

RAYUELA TEAM at Council for Digital Good Europe
July 01, 2022

Project coordinator Gregorio López López, Ph.D., and I had the great pleasure to present the Rayuela project and let them test the videogame! Thanks to each of them for the genuine support, Microsoft Central and Eastern Europe Headquarters for the invitation, and Una O'Sullivan and Helena Pons-Charlet for the wonderful program arranged!

10

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WP1

In order to achieve a solid theoretical basis for the video game, three different methodologies were combined: literature review, analysis of court rulings and interviews with experts, victims and perpetrators of the different cybercrimes studied. In addition, as a complement to the research (although it was not previously included in the grant agreement) the methodology was extended with focus groups formed by young people and the implementation of a survey. The first tool, in addition to broadening the field of study, allowed us to test some hypotheses with a non- victimized/offending population. The second allowed us to confirm the hypotheses at a quantitative level.

After noting the low incidence of HT in most areas and extending the object of the research to misinformation, deception on the Internet and cyber-hate, some of the interviews were redistributed, leaving Comillas in charge of the analysis and compilation of the new block.

WP2

WP2 has studied the security and privacy issues associated with the use of the most widespread IoT devices among the youngsters. For this purpose, a comprehensive analysis of the existing literature was carried out in the first place, which concluded with a classification of the main connected devices and the problems associated with them. In addition, as an additional source of data, a survey was developed and distributed among several educational centers to find out which are the preferred devices of young people, what use they make of them, what is their perspective on security and privacy, etc.

At a practical level, a specific methodology was developed to test a set of acquired devices. In the acquisition of these devices, it was taken into account that they should be representative among young people and that they should be of different ranges and prices.

As a result, the security and privacy leaks of the devices were detected and the measures to be taken to protect against cyber-attacks and data leaks were exposed. All the data obtained was published on an open access platform hosted on GitHub. In parallel, a study was conducted on how human factors affect the vulnerabilities and risks found in connected devices. In addition, synergies were sought between cyber crimes such as cyberbullying and online grooming with the use of social media and messaging applications such as Instagram and Facebook. On the other hand, work was done on analyzing the impact of new models of cybercrime as a service that exploits IoT vulnerabilities.

11

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WP3

RAYUELA has the first prototype of the serious game ready to be validated by the target users including two cyberadventures focused on cyberbullying and online grooming.

The game narrative is around different places representing common places for the target group in high school (classroom, school gym, toilet, library, tutor's office, canteen) combined with others such as a street or a mall. The player will be part of a support group ("Spotlight Wardens Club") whose goal is to not only advise other students that are being or have been facing cybercrimes (by supporting them and reflecting on the problem to help find a solution), but also investigate potential risk situations and act as "mediators" to help resolve conflicts. The player could interact with these places to "investigate" and also with the characters to get information or have a conversation.

A school class from the Spectrumcollege Beringen in Belgium had the honor to be the first to play the RAYUELA prototype. The children, aged between 13 and 14 years old, enjoyed playing the game. They also contributed to the further development and improvement of the game by sharing their experience with the prototype.

WP4

RAYUELA's WP4 deals with legal and ethical issues in the project, as well as data management. Since the start of the project, this WP has been supporting the research activities in RAYUELA, organizing workshops and providing input to the partners. Most recently, the WP partners have been working with WP3 to ensure that the design of the game is in in compliance with legal and ethical principles, with WP5 to set up the pilots in accordance with those same rules and principles, and with WP9 to organize ethics committee approval for the various research activities in RAYUELA, but in particular for the first phase of testing the game in a supervised environment (i.e. in schools). WP4 has also dealt with all aspects of managing data, including data protection and in particular has made a first data protection impact assessment (DPIA) on the planned first phase of the pilots. At the same time, WP4 is conducting a legal study on how criminal activities by minors (i.e. with minors as perpetrators) are dealt with in various countries. This study will provide input to the game. In the coming weeks and months, WP4 will continue to make sure that all RAYUELA activities are in line with applicable law and ethical principles. In particular this will include providing further support to the continued development of the RAYUELA serious game (WP3) and the future phases of the pilots (WP5), both supervised (i.e. in schools) and later on unsupervised environments (i.e. youngsters finding the game by themselves and playing it online without the project's supervision). WP4 will also provide support to WP6, which will analyze the data coming from RAYUELA's serious game.

12

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WP6

WP6 is fully immersed in the process of generating synthetic data through an agent-based simulator. This is done using probabilistic models based on research carried out by previous WPs. Work is also underway to generate synthetic demographic data based on prevalence data and surveys of children in schools.

Furthermore, the first Machine Learning algorithms are being implemented on this synthetic data, which will help us to calibrate these techniques for successful use on real data.

WP5

RAYUELA is currently setting up several supervised testing groups and is going to conduct educational workshops in schools and other educational organisations, through a combination of lecturing and hands - on experimentation based on the two applications of the game. Once the first playthrough of the game is completed, minors will be asked to replay the game. The variation on their decision -making process from the first and second iterations will help RAYUELA set up an individualized internet behavior profile. This measurement will be used in a pre - post manner with supervised testing groups. Thanks to first hand interaction with the second application of the game, RAYUELA will be able to explore if the overall intervention has been effective, since the child's response options at each stage should be different in the second application of the game and their final risk level should fall considerably.

13

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WP7

WP7 has been running since the very beginning of the project; it involves all the communication and dissemination activities reaching the different target groups. Main activities can be split into two areas: providing information about RAYUELA project through communication tools/channels as website, partners network, contribution to third party publication, events or different channels and engagement with the target audience via communication channels (social networks, newsletters, infographics, networking/research, conferences and more). Dissemination and communication materials were prepared in cooperation with all the partners so they were the most suitable for the purposes of the project and for reaching the target group. The communication materials - website, logo, PPT presentation, newsletter, infographics, social media channels, videos are all created with the same visual to evoke unison and playful approach.

WP8

So far, COMILLAS has coordinated and managed the RAYUELA project on a strategic level, ensuring project follow- up (project progress control and planning); continuous update of the project status to the EC; and decision making procedures and suitable project administration. In addition to this, scheduled Consortium Meetings (October 2020, March 2021 and October 2022) and monthly technical synchronization calls have been performed. The main objective achieved during the period can be summarized as the successful coordination of the RAYUELA project, by the implementation of a management framework customized to the needs of the project and capable of ensuring the high quality of the results reached.

14

USER NAME

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REMEMBER ME

5th Consortium Meeting in Tartu

15

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PROJECT DATA

PROGRAMME: H2020-SU-FCT01-2019

Sub-topic 2: Understanding the drivers of cybercriminality, and new methods to prevent, investigate and mitigate cybercriminal behaviour

TYPE OF ACTION: Research and Innovation Action (RIA)

DURATION: 36 months (1 oct 2020 – 30 sept 2023)

PROJECT BUDGET: € 4 978 040 (EU contribution: € 4 974 290)

CONSORTIUM: 17 partners from 9 European countries

COORDINATOR: COMILLAS

project coordinator: Gregorio López
e-mail: gllopez@comillas.edu
web: https://www.rayuela-h2020.eu
facebook: https://www.facebook.com/RayuelaH2020
linkedn: https://www.linkedin.com/company/rayuela-h2020
twitter: https://twitter.com/RAYUELA_H2020