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IN THIS ISSUE

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HEAD OF REGISTRO .IT
Marco Conti

2019, one year of Registro .it (has passed)

Francesca Nicolini

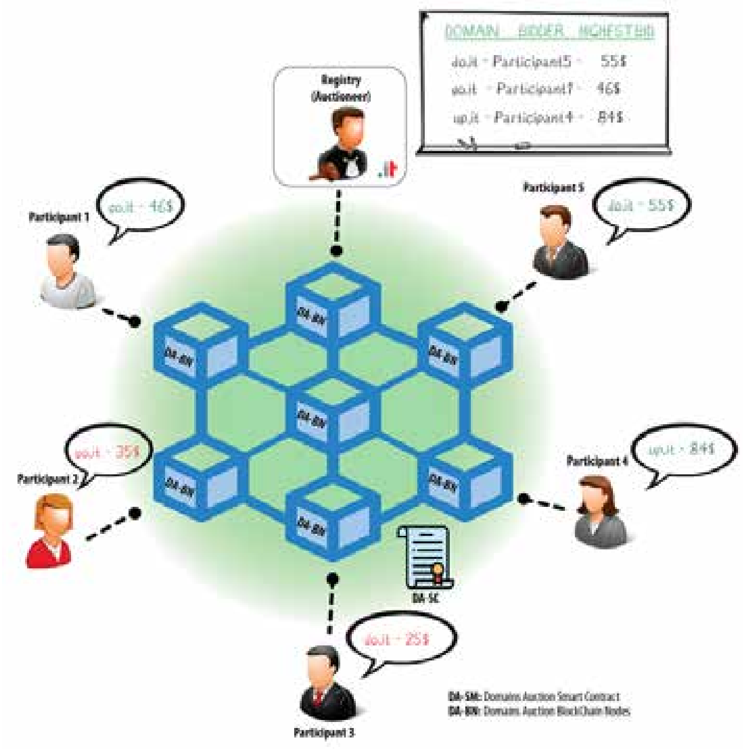
2019 was a good year packed with events, roadshows and figures. Completed projects, new projects to carry out and a constant increase in domain names

The year that has just passed was the year of Registro's 'Piccole Medie Digitali' roadshow, which saw its culmination with as many as 6 events, all in Italy, even though the roadshow started at the end of 2018. Registro .it organised a series of training events on digital marketing from North to South, with the aim of explaining to SMEs and freelancers how digital transformation and the tools of the Web can help them grow their business and lead to new opportunities.

The other important point that marked the year 2019 was the Ludoteca's joining the Advisory Board of the Safer Internet Centre of Generazioni Connesse, a project coordinated by the Ministry of Education. This is an important goal for Registro's play-based workshop, which is increasingly committed to the digital education of minors. Its participation in this table will contribute to the implementation of European policies on Web tools and means of sharing, which are a constant part of the world of young people, who are increasingly connected.

The 15th R&D Workshop of CENTR (Council of European National Top-Level Domain Registries) was held for the first time in Pisa, with the participation of the Systems and Technological Development Unit of Registro .it and the Internet and Technological Development Services of the Institute of Informatics and Telematics (IIT) of the Pisa National Research Council (CNR), with many presentations and projects. From a domain growth perspective, it should be noted that 2019 was once again a year of growth, albeit slow, which continues to reflect the European trend of new registrations: with over 72,000 new domains, net of cancellations, the outgoing year closed with a 2.3% growth.

Have a good read!


DOMAIN BIDDER HIGHEST BID
do.it - Participant5 - 55$
go.it - Participant7 - 46$
up.it - Participant4 - 84$
Registry (Auctioneer)
.it
Participant 1
go.it - 46$
Participant 5
do.it - 55$
DA-BN
Participant 2
go.it - 35$
Participant 4
up.it - 84$
DA-SC
Participant 3
do.it - 25$
DA-SM: Domains Auction Smart Contract
DA-BN: Domains Auction BlockChain Nodes

Auctioning domains: the blockchain technology is here

Clara Bacciu, Francesco Donini and **Paolo Mori**

In recent year, there has been a real explosion of blockchain technology which, thanks to the innovative and disruptive features it introduces compared to the existing technologies, has been used in an ever-increasing number of applications and sectors.

It is known that the blockchain creates a distributed ledged capable of storing data records, called transactions, in a transparent (visible to users), permanent (lasting over time) and immutable (no person involved in the blockchain has the power to delete or modify an already recorded transaction) manner.

Numerous are its areas of application, especially for what concern the ones of the domain names.

We have experienced the use of blockchain technology in the assignment and management of .it names. In particular, we designed and implemented a prototype of a domain auction system, which could be used in the case of the 'liberalisation' of 1 and 2-characters .it names. The system, implemented through smart contracts (programs that run on the blockchain nodes) and based on the Ethereum blockchain, can be used through a web interface.

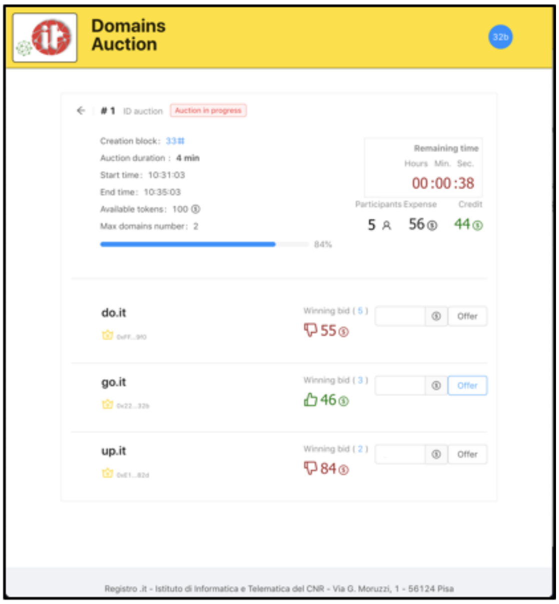
FIRST PAGE

Also in this context, the adoption of a private blockchain based on the open source platform Quorum, in turn based on Ethereum, has been envisaged. The subjects in charge of guaranteeing the validity of the transaction in the blockchain, such as Registro .it and any other governmental subjects, such as MISE, Ministry of University and Research, will be included in the platform.

The prototype creates an auction system based on a modified version of the English auction model: the Registro .it publishes the batch of domain names that will be auctioned on the website, in order to allow interested parties to register on the system.

During the auction, each participant will have a limited number of tokens available (to be used for their bids on the names included in the lot, to see the bids made by the other participants and to raise until any available tokens are exhausted. At the end of the auction, the domains will be assigned to the highest bidder.

One of the main advantages of this system is definitely the transparency: the participants will have the chance to verify whether the auction has been carried out correctly at any time, by going through the transactions carried out on the blockchain. Among the many things and in addition to the smart contract code used for managing the auction, they will be able to see, for example, the history of offers and raisings made in relation to a particular domain.



1 ID auction Auction in progress

Creation block: 33#
Auction duration : 4 min
Start time: 10:31:03
End time: 10:35:03
Available tokens: 100
Max domains number: 2
84%

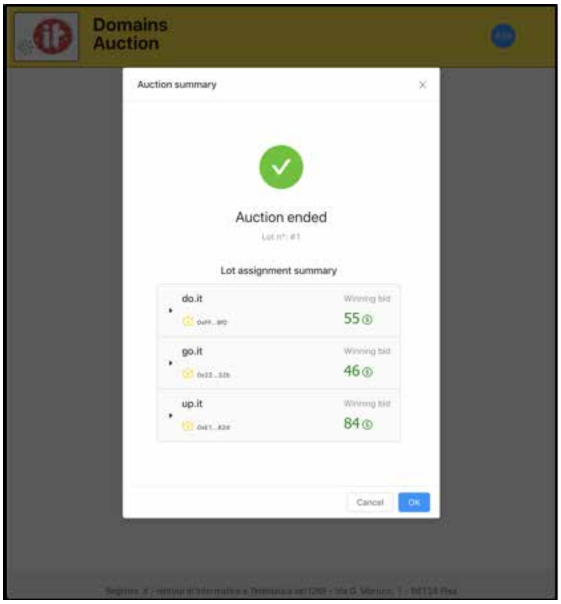
Remaining time
Hours Min. Sec.
00 :00 :38

Participants	Expense	Credit
5	56	44

Domain	Winning bid
do.it 0xFF...9f0	Winning bid (5) 55
go.it 0x22...32b	Winning bid (3) 46
up.it 0xE1...82d	Winning bid (2) 84

Registro .it - Istituto di Informatica e Telematica del CNR - Via G. Moruzzi, 1 - 56124 Pisa

Participant 1: Auction control panel



Auction summary

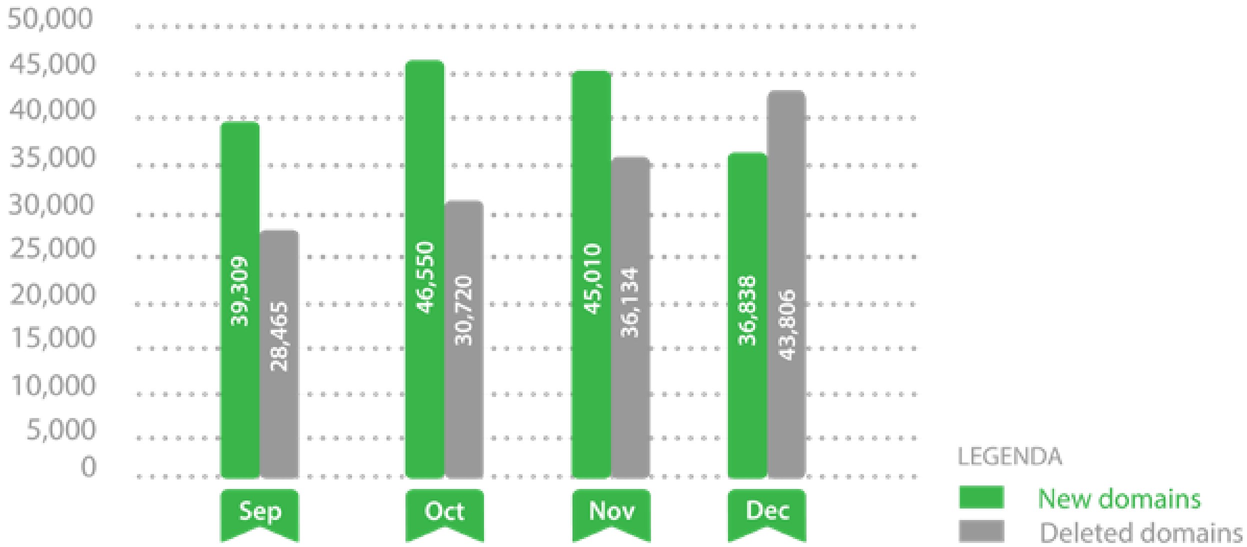
Auction ended
Lot n°: #1

Lot assignment summary

Domain	Winning bid
do.it 0xFF...9f0	55
go.it 0x22...32b	46
up.it 0xE1...82d	84

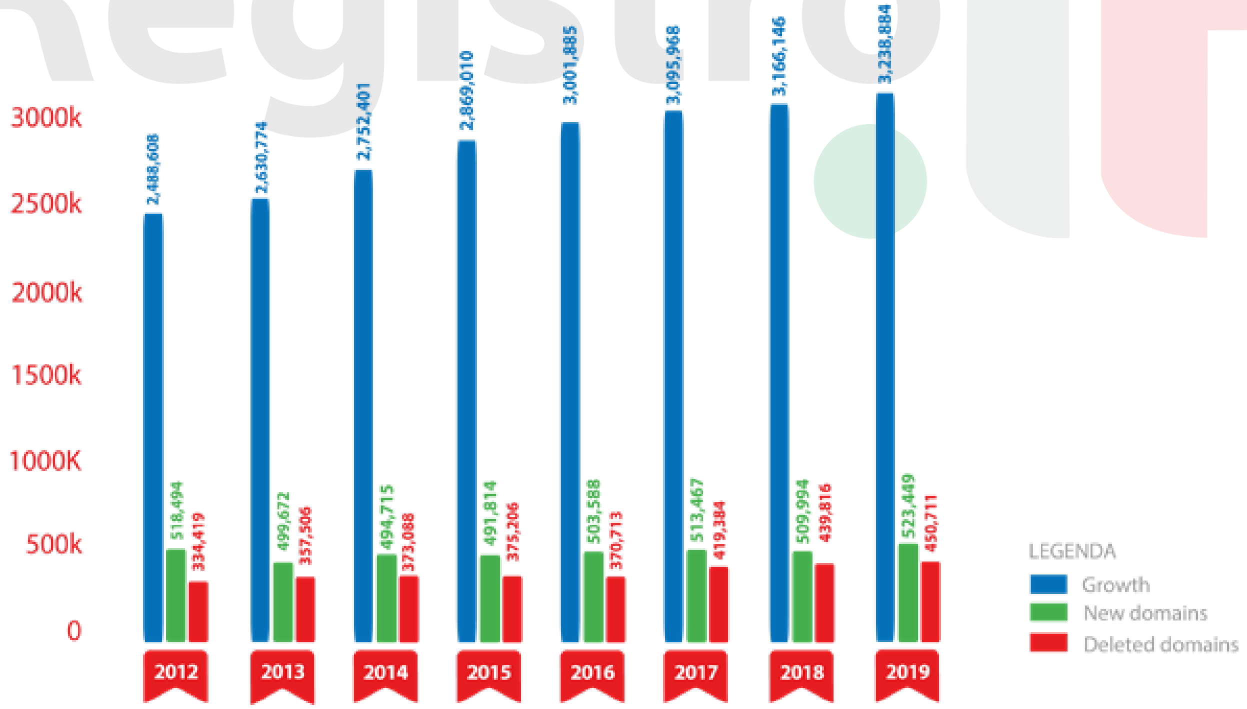
Participant 4: Auction results

STATISTICS



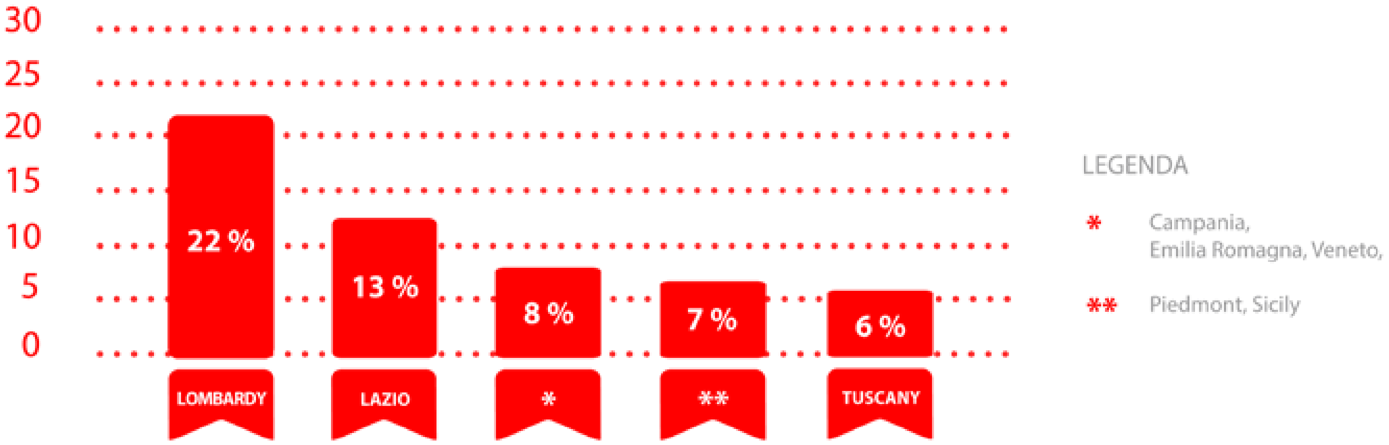
GROWTH OF NEW REGISTRATIONS

The analysis of the .it domain name registration trend shows that, in general, new registrations exceed cancellations, with significant peaks recorded particularly in September and October. The total difference, during the third quarter, amounts to about 28 thousand domains, which is definitely higher than the previous quarter. The only exception was the month of December, which saw a reversal of the trend, with an increase in cancellations, compared to new registrations, of about 7 thousand domains



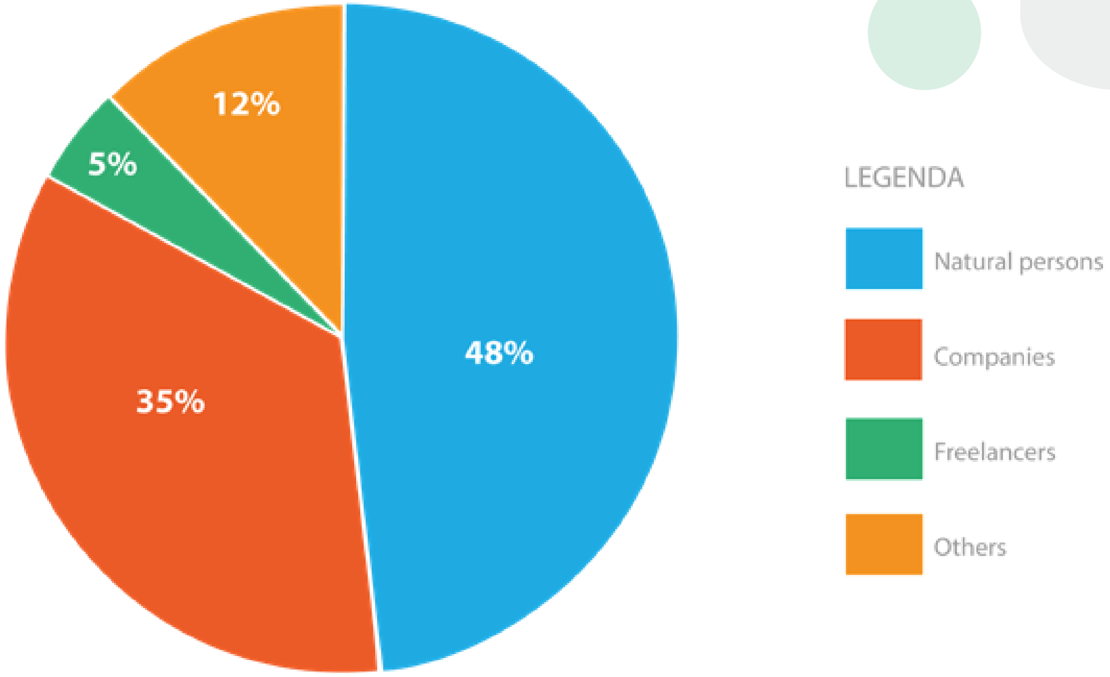
ANNUAL GROWTH

The total number of registered .it domain names amounted to 3,238,884 at the end of 2019, with a positive growth of 2.30% (72,738 more domains) compared to the end of 2018. This growth rate is in line with that recorded in the previous year



TOP REGIONS

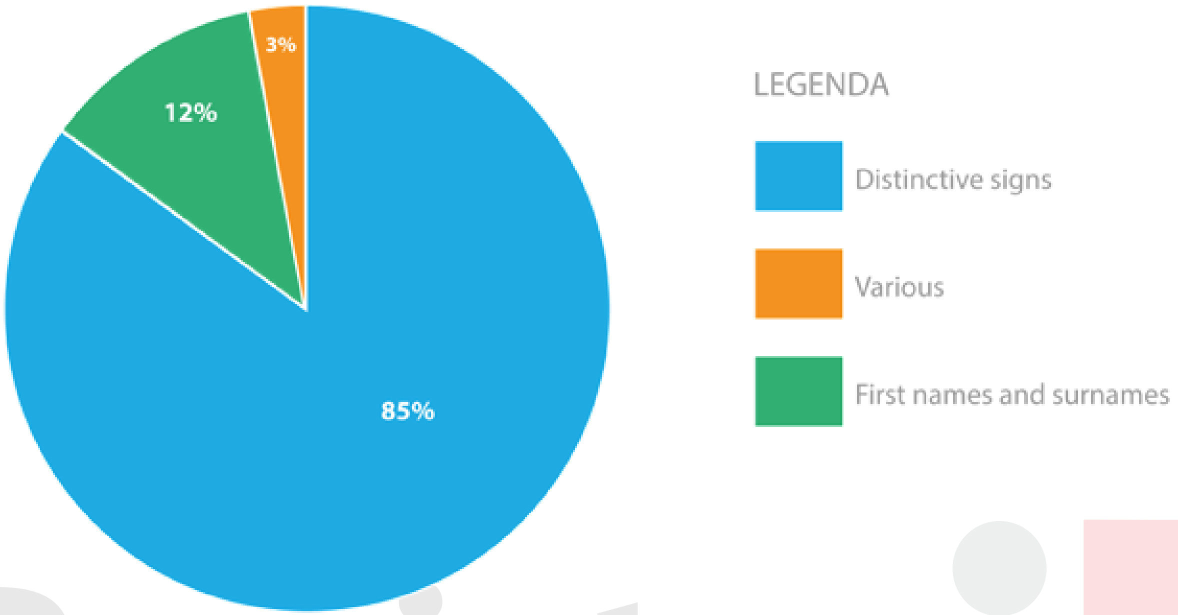
In the third quarter of 2019, Lombardy remained the leading region with regard to the registration of new domains and regained the two percentage points lost during the previous quarter. Latium ranked second, with a 1% increase compared to the May-August period. The Campania region, together with Emilia Romagna, gained one position, taking third place and holding, together with Veneto, 8% of the registered domains. With respect to the four-month period just ended, the Piedmont region lost positions and settled at 7%



ENTITY TYPES

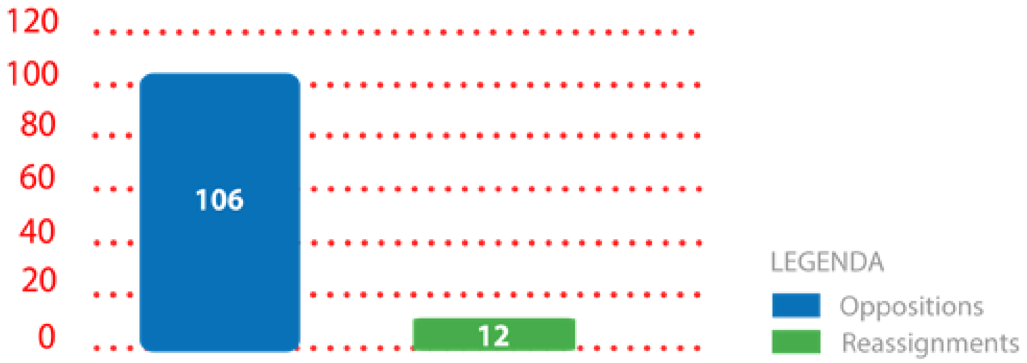
Although natural persons continue to hold the record for new registrations compared to other categories, it should be noted that, compared to the last four months of 2019, their percentage dropped to 48%, while that of companies and freelance workers increased by a few points, with 35% and 5% respectively

STATISTICS



REASONS FOR OPPOSITIONS

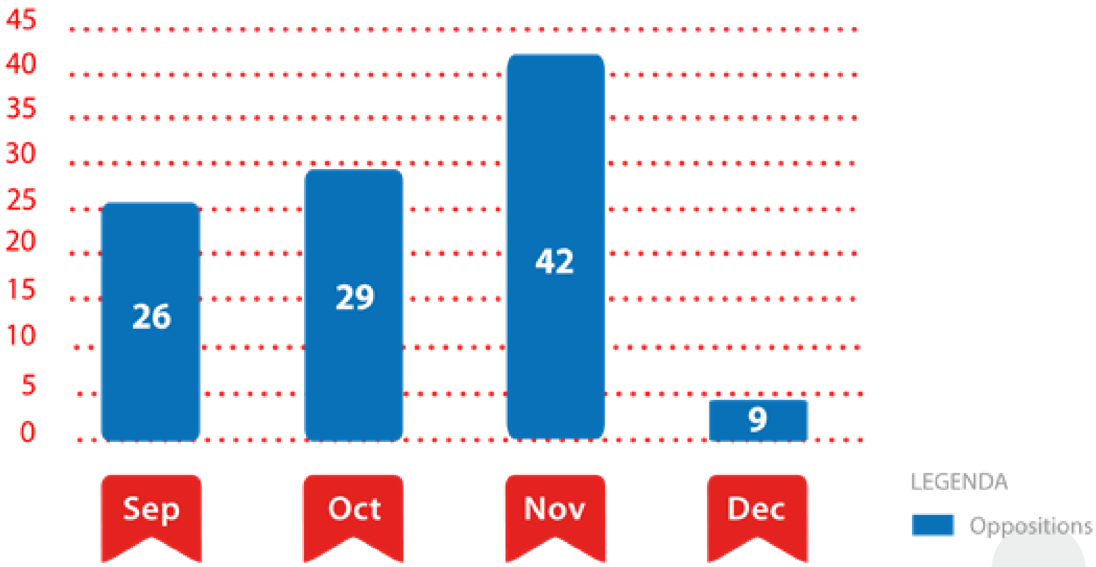
85% of the objections, as always, were activated due to the violation of company hallmarks. The requests for protecting names and/or surnames amount to 11% of the total. The remainder, 3%, refers to various reasons



SEPTEMBER - DECEMBER 2019

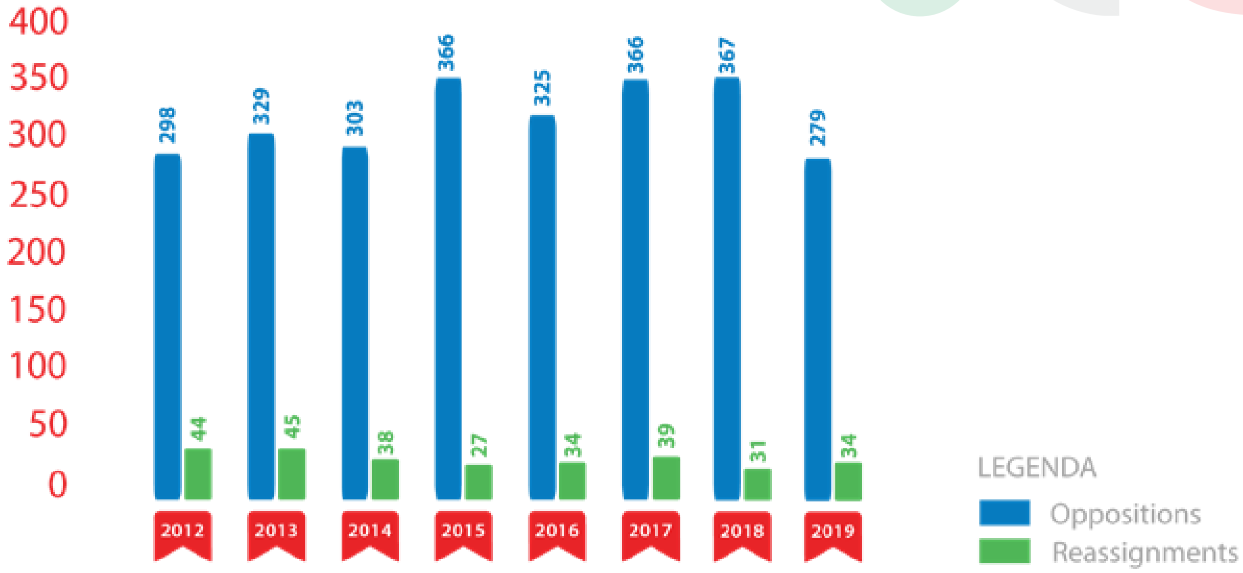
OPPOSITION-REASSIGNMENT RATIO

In 2019, the objections amounted to 279, whereas the reassignments amounted to 34.
Over the first two quarters, the objections undoubtedly followed a regular pattern, respectively with 88 and 85 procedures. In the last part of the year, the amount of dispute procedures increased, with 105 activations, also due to 15 objections filed against a single registrant, by a single entity, domain names rightsholder. The reallocations reached a total of 15 activations. The ratio between the two procedures is 8.21: every 8 oppositions a PSRD is used for the reassignment procedure



TREND OF OPPOSITIONS

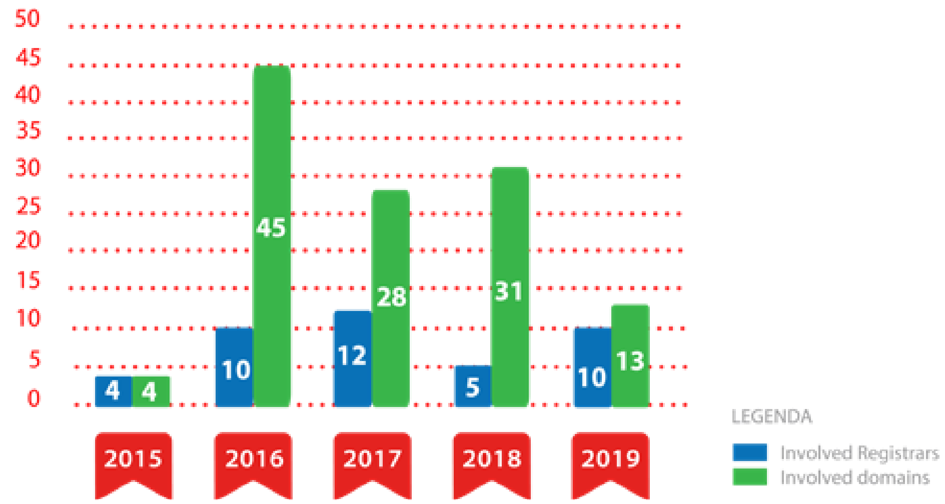
The graph represents a discontinuous trend. Over the first two months of the period considered, the objections were fairly constant: 26 in September and 29 in October. In November, an increase in the number of procedures was registered: 42 procedures, 15 of which were activated by the same subject against a single assignee. In December, unlike the previous month, the oppositions were 'only' 9. The average of the last four months of the year is 26, slightly higher than the previous periods, 22 in the first part of the year, and 21 in the central part



OPPOSITION-REASSIGNMENT TREND

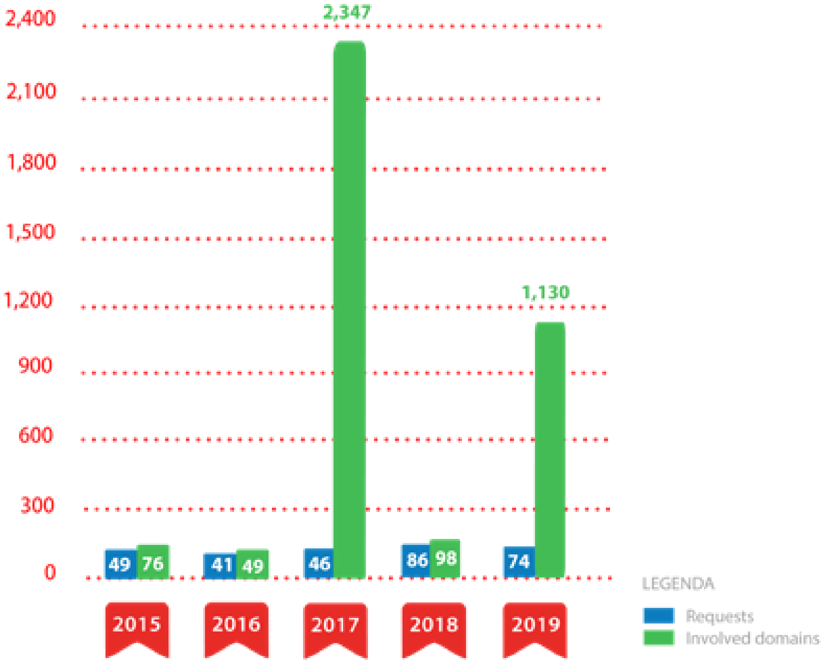
This year, a moderate decrease in the number of objections was recorded: 279, falling thus below 300. This has not happened since 2012. The reassignments in the same period amounted to 35 procedures, 4 more than the previous year. Therefore, we can say that, unlike year 2018, in relative terms, the number of reassignments increase, especially in relation to the objection procedures activated during the year

STATISTICS



AuthInfo REQUESTS

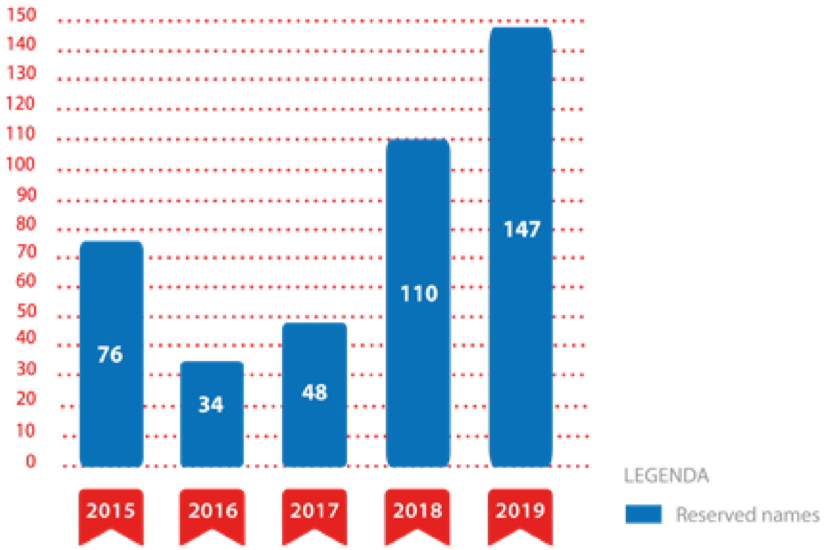
The number of .it names for which Registro .it has issued the relevant Authinfo codes to Registrants has significantly decreased compared to previous years, while the number of defaulting Registrars in relation to the issue of the codes in question has doubled compared to 2018, as required by the contractual obligations they sign with Registro. It should be specified that in the latter case, it was often Registrars who were experiencing economic and management difficulties that had a negative impact also in the provision of essential services to their clients/Registrants such as the provision of Authinfo codes



REQUESTS FROM COMPETENT AUTHORITIES

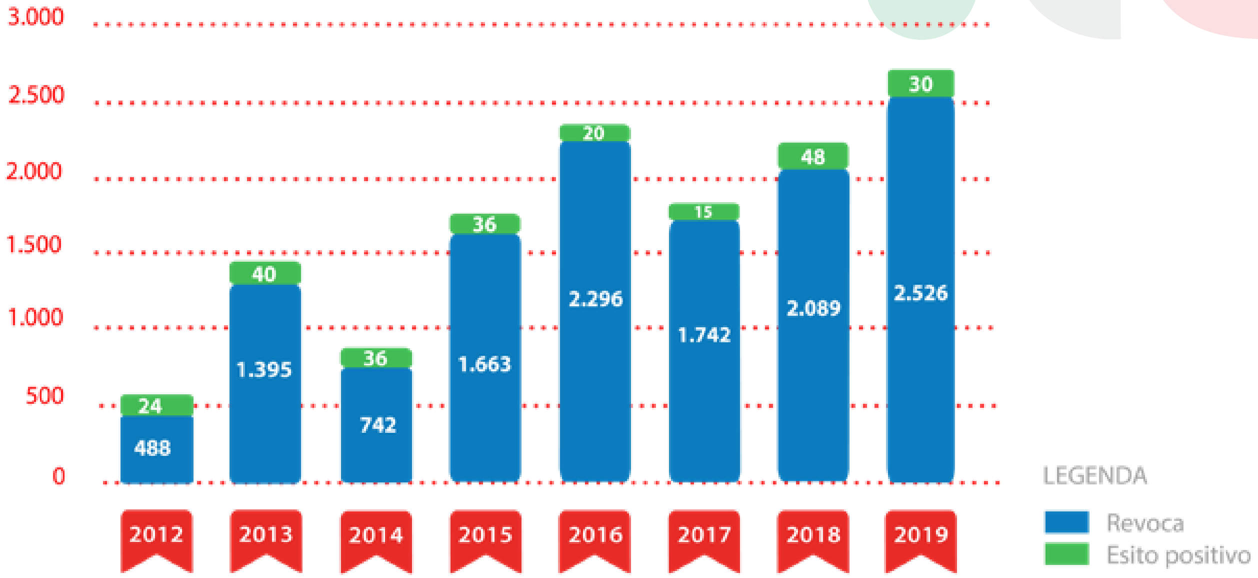
The number of requests for information from competent authorities is slightly down compared to 2018, but the number of reported domains has increased considerably, following two specific requests concerning several hundred domain names used for potentially illegal activities

STATISTICS



RESERVED NAMES

The increase, compared to 2018, of domain names reserved for municipalities, provinces and regions is mainly due to the establishment of new Italian municipalities in different regions as a result of the unification and merger of the existing ones



VERIFICATION OF DOMAINS BY THE REGISTRO

The number of domains subjected to 'subjective requirement' checks in 2019 continues to show a growing trend compared to the previous two years: only for a very small part of them does the Registrant produce documentation that proves its data in the public database, namely the Whois DB. A part of the verifications was activated ex officio by Registro .it, only after failure to receive adequate documentation or after Registro implemented actions aimed at 'improving' the accuracy of the assignee's data present in the Whois DB, either on the part of the Registrant itself or by the Registrar that kept it

The projects of the Registro at the 15th R&D Workshop by CENTR

Francesca Nicolini

On 27 and 28 November, CENTR (Council of European National Top-Level Domain Registries) R&D Workshop was held in Pisa, for the first time in Italy. The event, full of presentations, was animated by a careful debate on technologies and innovations in the domain sector, a peculiarity typical of the R&D Working Group.

Systems and Technological Development Unit of Registro .it and the Internet Services and Technological Development Department of the Institute for Informatics and Telematics (IIT) of the CNR of Pisa participated in the event. The researchers of the Registro and of CNR-IIT presented several projects, from 'MoRSe: a Monitoring Registrar Services platform' to 'GDPR compliance assessment tool', and 'Domain auctions based on blockchain'. The latter is the most recent project among those presented, a prototype demonstrating that the blockchain technology can be widely developed and applied in the domain sectors as well.

Angelica Marotta, CNR-IIT, Systems and technological development of Registro .it

In the middle, from the left, Lorenzo Luconi Trombacchi, Sonia Prignoli and Francesco Donini, CNR-IIT, Systems and technological development of Registro .it

2019: all the numbers of the Ludoteca of the Registro

edited by **Beatrice Lami**

27 September - Bright 2019 - Researchers' night - Cybersecurity workshop with the participation of 40 children, CNR Research Area, Pisa

30 September, 1 and 7-8 October - Let's Bit! Project - Lecture at the 'F. Buonarroti 'of Pisa to 21 boys, Pisa

4 October - Let's Bit! Project - Lecture at the 'F. Buonarroti' of Pisa to 26 boys, Pisa

10-11-12 October - Internet Festival T-tour 2019 and activities dedicated to cybersecurity with over 130 children, 'Le Benedettine' Congress Center, Pisa

16-17-18 October - Let's Bit! Project - Lecture at Liceo 'R. Foresi' to a class of 21 boys, Portoferraio Elba Island (LI)

28 and 30 October - Cybersecurity seminars for classes 4SAP, 5SAP, 4A, 4B, 5A, 5B of the Liceo Scientifico and class 5 of the Liceo Classico 'R. Foresi' of Portoferraio Elba Island (LI) with a total of 88 children, CNR Research Area, Pisa

10 December - Seminar on Registro .it and CNR-IIT projects in classes 4 and 5 of ITIS 'A. Meucci' of Florence with 40 boys, CNR Research Area, Pisa

2019 Registrar courses

edited by **Beatrice Lami**

In 2019, the Registro organised, as every year, 5 specialised courses dedicated to the Registrars. These courses took place in Naples and in the Cnr Pisa and Bologna Research Areas.

Courses held:

11-13 June - 'Cyber security' - CNR Research Area, Pisa

13-14 November - 'DNSSEC' - CNR Research Area, Bologna

13-14 November - 'The new European regulation on the protection of personal data. Citizen's rights, information and data security aspects: privacy by design, Data Protection Impact Analysis'- CNR Research Area, Bologna

14 November - 'Accuracy of data and Authinfo code' - CNR Research Area, Bologna

3-4 December - 'The new European regulation on the protection of personal data. Citizen's rights, information and data security aspects: privacy by design, Data Protection Impact Analysis'- Renaissance Naple Hotel Mediterraneo, Naples

'Let's Bit!' arrives in Elba (for the first time)

Manuela Moretti

The school-work experience model that the Ludoteca of the Registro arrives for the first time in Tuscany Island territory: from 16 to 18 October 2019 on Elba Island, in Portoferraio, three training days were held at Liceo Scientifico 'R. Foresi', with 12 hours of lessons, 2 of which dedicated to final tests, both written and oral.

'Let's bit!' is a project by the Ludoteca of the Registro .it created in 2015: with it the Ludoteca decided to widen the network of its educators and put two generations of digital natives in contact: teenagers become 'junior' educators of primary school children.

The children, by mean of tailor-made lessons, the study of the 'Internetopolis' App and games focused on of cybersecurity, were trained for their future role as 'teachers' of the youngest Internet users.

The 21 high school students were enthusiastic about the project and prepared for the final exam, ready for the new adventure in Portoferraio primary school classes.

Cyber Quiz, the award ceremony

Giorgia Bassi

On 27 October, in the context of the Conversazioni sul Futuro Festival, the award ceremony of the National Cyber Quiz Tournament of the Ludoteca of Registro .it was held in Lecce. The winning class was the fourth grade of the Centro Montessori Lecce (school year 2018/2019). The subject of the quiz, as can be seen from the name itself, was cybersecurity, offered to children in a fun way through the tables of the cartoonist Gabriele Peddes.

From September 2018 to June 2019, 1,181 children from primary schools in Tuscany, Sicily, Friuli Venezia Giulia and Puglia participated in the cybersecurity challenge.

At the centre, at the bottom, from left Anna Vaccarelli, head of External Relations, Media, Communication and Marketing of Registro .it, and Claudia Mazzanti, Registro .it of the CNR-IIT

They are talking about us: the Ludoteca of Registro on RAI PLAY

Francesca Nicolini

The 'Digital World' section of RAI portal is enriched with three episodes dedicated to the activities of the Ludoteca of Registro .it and the topic of cybersecurity, through an interview with Giorgia Bassi.

There are three fundamental points that emerge from the interview and which constitute, respectively, the skeleton of each of the three parts dedicated to it:

- educate children on the digital world also means protecting them from the dangers of the Web, from the dark side of the Web;
- manage and prevent threats through games, identify good cybersecurity practices for children and educate them on the correct use of digital;
- always keep in mind that IT security does not only concern the individual child and its family, but it affects the whole society: possible vulnerabilities can have social consequences and very serious consequences of unpredictable extent. For this reason, it is important to keep in mind that real life and virtual life move hand to hand and should not be considered as two distinct dimensions.

Giorgia Bassi, Registro .it of the CNR-IIT

GIOVEDÌ 7 NOVEMBRE 2019 | LARIOFIERE, VIALE RESEGONE, ERBA (COMO)
PICCOLE MEDIE DIGITALI
Registro .it

Piccole Medie Digitali, a year's worth of roadshows

Stefania Fabbri

The roadshow of Registro dedicated to the digitisation of Italian SMEs ended with the events in Modena and Erba. Many people flocked to both events to listen to the advice of marketing experts and successful business stories dedicated to the metalworking and furniture/design sector respectively.

'Piccole Medie Digitali', namely our roadshow, started in Lecce on 26 October 2018 with an event dedicated to tourism operators and continued in six other cities while touching on just as many leading sectors of the Italian economy: fashion (Prato, December 2018), wine (Udine, February 2019), food (Ercolano (NA), May 2019), the third sector (Rome, June 2019), mechanics (Modena, September 2019) and design (Erba (CO), December 2019).

The roadshow was born to talk about the opportunities of the Web and the digital transformation of Italian micro, small and medium-sized enterprises. Registro did so through a series of training events and presentations by the most important national digital experts, who took turns with Registrars on stage to provide new tools and digital awareness to operators in the key sectors of our economy.

Every event also saw the presentation of data on the penetration of the .it domain and the presence of SMEs on the Internet, which was specially and exclusively processed by Registro. The data offered food for thought and an accurate picture of the digitisation of each province and product sector involved in the roadshow.

Those who want to watch or review the Piccole Medie Digitali events will find, on the website of Registro, the full recording of each event and interviews with their protagonists.

The outcome of the initiative is positive, given the involvement of many companies in the sector and the establishment of online and offline interactions, although there is still much to be done. As we have had the opportunity to ascertain during these seven events, the Italian territory is very diverse and hosts considerable disparities among regions in terms of infrastructure, knowledge and access to lifelong learning. The Registro .it will continue to engage on all fronts with its activities: the Internet and the digital world are a great opportunity and must be an asset for everyone.

Erba

Erba

Erba

Erba - Giampaolo Colletti, communication manager and digital storyteller, and some guests of the day

Modena - Mauro Comendulli, digital marketing specialist for China and CEO East Media

Modena - Gianluca Diegoli, digital marketing specialist

Modena - Anna Vaccarelli, Responsible for External Relations, Media, Communication and Marketing of Registro .it with Giampaolo Colletti

Safer Internet Centre: the Ludoteca in the Advisory Board

Giorgia Bassi

The year ended with a very important partnership for the Ludoteca, which joined the Advisory Board of the Safer Internet Center of Generazioni Connesse, a project coordinated by the Ministry of Education and a national reference point for the initiatives related to network security. The general objective of the Board is to guarantee the implementation of European policies that favour the positive use of digital technologies by young people, also through the sharing of innovative content and high quality.

Among the events scheduled for the coming months, Safer Internet Day, which will take place on 11 February and the Ludoteca will participate as Member of the Advisory Board.

#IF2019: let us draw the conclusions

Chiara Spinelli

A success with public and critics has accompanied the events of Registro .it at the Internet Festival, organised in collaboration with ‘Il Post’, the newspaper directed by Luca Sofri.

On stage, applauded by more than a thousand people who passed through Officine Garibaldi in the afternoons of Saturday 12 and Sunday 13 October, the cartoonist Makkox, the youtubers The Jackal and Il Terzo Segreto della Satira took turns.

Among the important people who took the stage with Luca Sofri during the event, the journalists Federico Ferrazza, Carola Frediani, Marianna Aprile, Anna Vaccarelli, responsible for the external relations, media, communication and marketing of Registro .it and Marco Conti, Director of the Institute of Informatics and Telematics of the CNR. All seasoned with the interventions by Il Post’s newsroom, conducted by Deputy Director Francesco Costa and with insights on the structure of the Web, domain names, stories and news on the hot topics of the Internet.

See you in 2020 for the tenth edition of the Internet Festival, during which Registro .it will still be the protagonist.

Anna Vaccarelli, with the authorities, during the ribbon ceremony of IF2019

Luca Sofri, Director of ‘Il Post’

The collective 'Il terzo segreto di Satira'

The collective 'The Jackal'

.it domains liberalization and synchronization, two dates to remember

Daniele Vannozzi

Two important dates should be remembered in the last four months of 2019: December the 15th and September the 28th. Exactly twenty years ago, on December the 15th 1999, the so called '.it liberalization' was first implemented, a procedure that, on the one hand allowed Italian legal persons to register illimited domains (before that day, they could register only one .it domain) and, at the same time, allowed EU Community organizations to register one or more domains under the ccTLD .it. Ten years have passed, instead, from September 28th, 2009, day of the launch of the EPP-based synchronization system; such system allowed the automatic registrations of .it domain names, thus eliminating cumbersome paper requests and forms (Assumption of liability letters).

After the '99 revolution, the possibility to register more than one it domain was subsequently extended to natural persons residing in Italy – or holding EU citizenship – in 2000; this, led to a relevant increase in registrations (46 thousand domains in 1999 against more than 320 thousand in 2000).

The .it liberalization has also contributed to enriching the role of the then 'Italian Registration Authority – RA' (now Registro) by including the tasks of the 'Italian Naming Authority - NA', in charge of defining the rules and procedures for the allocation of .it domain names. This development led, in 2004, to the dissolution of the NA and to the subsequent establishment of a Regulatory Commission (now Registro Steering Committee, CIR) within Registro.it. Along with members of Registro, the Commission initially included Registrar's representatives, members of historical Italian internet providers' associations (AIIP and Assoprovider), users and GARR's representatives.

The whole liberalization procedure managed in collaboration with representatives of the Italian Internet Community (LIC) allowed paving the way to the creation of Registro.it as we know it today, with a stable ranking in the top ten ccTLDs Registries at an European and international level, and constantly growing through new registrations across Europe.

The European Commission and the role of DNS Operators within Digital Services Act

Gino Silvatici

The European Commission has confirmed its plans to investigate the role of operators providing DNS services within the upcoming 'Digital Services Act', stressing the need for a review of the regulatory framework.

The current regulatory framework, dating back to the late 1990s, shall be reviewed, as it does not consider the big multinationals and the information society, always considered to be 'under development'. The drastic change in the digital services landscape occurred over the last two decades, forced the European Commission to start a process to determine the responsibilities of internet providers operating in the field of DNS services, for the purpose of fighting against illegal content. The aim is to standardise the assessment method of DNS intermediaries in the various countries of the European Union and in the various trials.

European Union Council: revision of the directive on critical infrastructures

Gino Silvatici

On 10 December the EU Council published its conclusions on the desire to strengthen resilience and combat threats to security. To implement this aspect, it invited the European Commission to consult the Member States on a possible proposal to revise Directive 2008/114/EC, so as to identify any new players, including some actors in the digital world.

The EU Council also acknowledged the importance of the NIS (Network and Information Security), directive on the development of a culture of risk and safety management by operators in critical sectors, also in the context of hybrid threats.

CcTLDs can now participate in ICANN's DAAR

Arianna Del Soldato and **Adriana Lazzaroni**

Last November, the Internet Corporation for Assigned Names and Numbers (ICANN) announced that country code top-level domain (ccTLD) operators will now be able to actively participate in the Domain Abuse Activity Reporting (DAAR) system. The DAAR system aims at promoting a greater knowledge of the abuses perpetrated across the global DNS; this system is used to study and report on data concerning the security threats across top-level domain (TLD) registries. The data is obtained from a curated list of Domain Name System (DNS) reputation providers.

Now, ccTLD operators can pull their own aggregated DAAR data (on the threats) via the Monitoring System Application Programming Interface (MoSAPI). The MoSAPI interface allows registry operators to retrieve information collected by the ICANN Service Level Agreement Monitoring (SLAM) system in aggregated form.The aggregated data counts security threats divided by threat type (e.g., phishing, botnet command and control, malware distribution, and spam) per TLD. Having access to such data will enable ccTLD operators to monitor the DAAR security threat levels per threat type per month in the same way as gTLD operators. The ICANN organization invites all ccTLD operators to participate in the DAAR project to promote a greater understanding of DNS abuse across the global DNS.

For additional information: https://www.icann.org/octo-ssr/daar

Quantum cryptography and the DNS

Arianna Del Soldato and **Adriana Lazzaroni**

The advent of quantum information science led to studies on quantum cryptography: a calculation model that not only introduces a different series of algorithms but also a different line of attack. Among the interesting topics discussed in the ICANN 66's 'Tech Day' Workshop, one of the most relevant for country code domains was the relationship between quantum cryptography and the DNS. Great attention was paid to the browser security (for the protection of communications and information exchange between two nodes of the network), as well as emails, instant messaging and IP voice over, but little attention was paid to the DNS.

The information received focused on the protection of the software connected to domain names, which currently uses a public-key cryptography system, by providing it with the ability to use a quantum-resistant algorithm, without necessarily know the exact algorithm.

But how does quantum cryptography affect the DNS?

The main DNS software using cryptography are the DNSSEC (Domain Name System Security Extensions) and the DKIM (Domain Keys Identified Mail), with short-term keys and signatures and little extendable keys in terms of size or elliptic-curve cryptography (ECC). Due to the great amount of data used by the DNSSEC for each query, the classical idea of extending the keys to keep up with quantum computers would be too complicated both in terms of computational solutions and of network traffic, and it could only be implemented through EDNS (Extension mechanisms for DNS). The EDNS allow exceeding the 64k limit of the UDP and give the chance to transmit the TCP protocol at the expense of a more complicated communication mechanism which might, in turn, result in a slow data transmission and in further inefficiencies.

In the meantime, the National Institute of Standards and Technology (NIST) is analysing the post-quantum cryptography quantum-resistant algorithms, to publish a set of standards in 2022-2024; the purpose is implementing an HSM (Hardware security model) by 2030. Since the algorithms analysed so far by the NIST have large size keys and/or signatures, and since it is not likely for the DNS to be abandoned by 2030, the Registries should be ready to avoid any problem arising from the keys and signatures' lengths.

International appointments in the world of the Web

edited by ***Gian Mario Scanu***

Icann (https://www.icann.org/)

7-12 March, **Cancun**, Mexico: ICANN67

Centr (https://www.centr.org/) FOR MEMBERS ONLY

6-7 February, **Stockholm**, Sweden: 31st CENTR Marketing workshop

12-13 February, **Ljubljana**, Slovenia: 63rd CENTR General Assembly/2020 Annual General Meeting

27-28 February, **Warsaw**, Poland: 49th CENTR Administrative workshop

Ietf (https://www.ietf.org/)

21-27 March, **Vancouver**, Canada: IETF 107

Ripe (https://www.ripe.net/)

11-15 May, **Berlin**, Germany: RIPE 80

Other events

20-21 February, **Innsbruck**, Austria: DomainPulse 2020