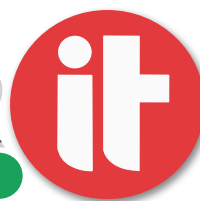


n°1 Duemila **21**

# QUARTER

FOUR MONTH OF THE YEAR .IT



## Ludoteca

Registro**it**

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**HEAD OF REGISTRO .IT**

Marco Conti

# 2021 AND THE .IT DOMAIN, A JOURNEY CALLED 'NORMALITY'

Francesca Nicolini

*2020 was marked by a very rare event, namely the Sars-Cov 2 pandemic. We all had to adapt, defend ourselves from contagion and reinvent ourselves. Like many other organisations, Registro .it carried on with its projects and online events, but most importantly, with the registration of domains, thereby reaching 3.5 million names. In 2020, a large number of companies and freelancers with .it sites was registered. 2021 is off to a great start*

We are not out of the pandemic yet, but we have learned a lot: on top of defending ourselves from an invisible monster, we have organised ourselves and moved into a new year – one that is characterised by greater awareness, as we strive for what is known as 'normality'. In the meantime, as we all look forward to attending in-person events where we can meet and talk with one another, the 2020 Registro report on .it names has provided us with a couple of very important pieces of information: first of all, Italian domains increased by 13.25% compared to 2019 (such an increase has not been seen since 2016); secondly, digital technology is becoming increasingly important, and remote working, technological tools and online activities must now be an integral part of our daily lives. Companies and freelancers, whose presence in the .it world increased precisely in 2020, namely the year of the pandemic and the subsequent lockdown, have realised how crucial it is to have a website and just how much potential the Internet offers, which has enabled them to work during the lockdown and to make their business known all around the world.

This was precisely the aim of PMD 2021, namely Registro's online event dedicated to small and micro entrepreneurs who want to learn how to use digital tools to grow their business.

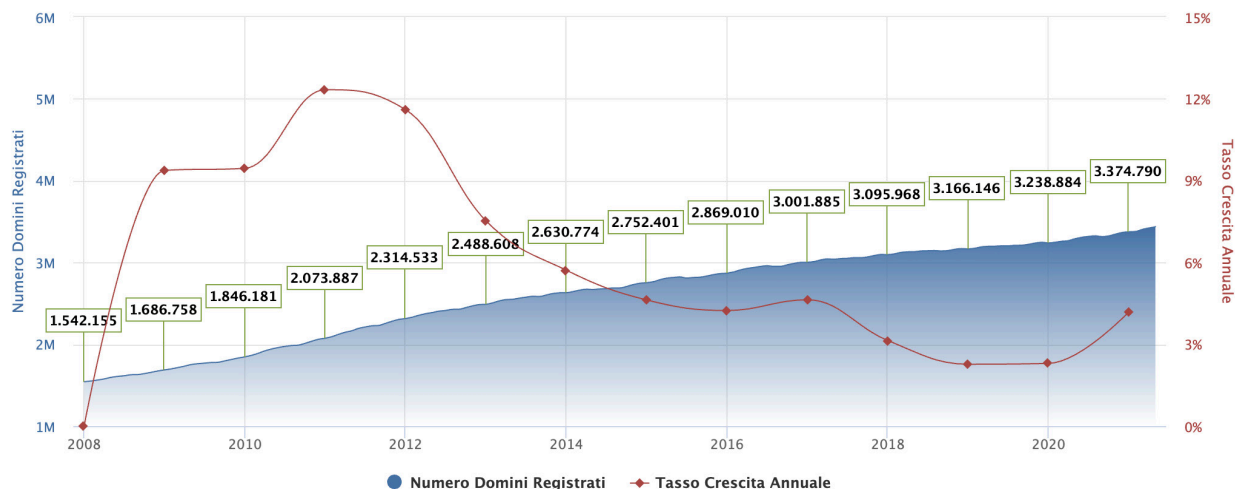
2021 marks an important anniversary for Registro .it: the Ludoteca, whose digital education workshops were first organised as part of the 2011 Internet Festival in Pisa, celebrates its 10th birthday. Since its inception, more than 14,000 young Internet users have been reached. The first important goal was achieved in 2013, with the patronage of the Italian Authority for Children and Adolescents.

Over these ten years, the Ludoteca has produced new content, games, digital tools and initiatives, which were initially only suitable for very young children, but gradually became available to parents and teachers as well. This is why we have dedicated a special section of the first 2021 Quarter, which is as rich as ever in statistics, quarterly reports, news and events from around the world.

Enjoy the read!

# BY THE NUMBERS: 2020 REPORT ON THE RECORD INCREASE IN .IT NAMES

Maurizio Martinelli



Following the start of the pandemic in February 2020, Registro .it began analysing and monitoring .it domain name registrations.

The pandemic has in fact accelerated the digital transition process and radically modified the habits and lifestyle of all of us, and the Web has become our best ally when it comes to working, studying, shopping and enjoying our spare time. For many businesses and freelancers, the Internet has proved an instrument suitable for facing the economic crisis, even though, in many cases, no other option was available.

The analysis showed that, over the course 2020, there was a significant increase in new registrations (592,821), i.e. 13.25% more than in 2019 (523,449).

In particular, in April 2020 alone, namely in the midst of the lockdown phase, new registrations reached 66,313 domains, which corresponds to a 44.26% increase compared to April 2019 (45,967), thereby bringing the total growth rate for the first 4 months of 2020 to 1.60%. This sharp growth continued into early summer, with 59,474 new registrations in May (corresponding to a 28% increase compared to 2019) and 49,224 new domains in June (up 21.73% compared to the previous year).

New registrations picked up again in October, November and December; by 31 December 2020, the .it domain had settled on total annual growth of 4.20% and a total of 3,374,790 domains. Only four years earlier, namely 2016, was a similar growth rate registered (4.63%).

Registro .it has analysed and monitored new registrations not only at a global level, but also at a regional and provincial level, as well as by category of registrant (businesses, freelancers, natural persons, not-for-profit entities, public bodies).



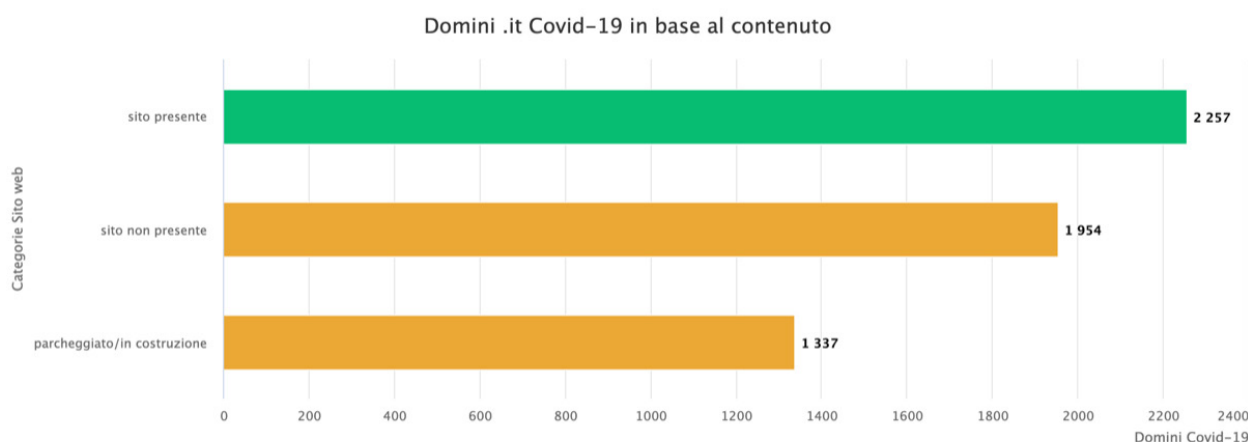
The data confirms what we all imagined: the Web and digital technologies were the undisputed protagonists of 2020; the real and the virtual are now indissolubly intertwined, and the need to build and affirm one's digital identity in order to make the most of the advantages that the Internet can offer, as well as to promote and enhance one's commercial, professional and social activity, is now greater than ever.

Indeed, over the course of 2020, businesses, freelancers and natural persons registered the most .it domain names, with significant growth rates compared to the previous year (+35% for freelancers, +20% for natural persons and +17% for businesses).

In particular, in the month with the highest number of registrations (April 2020), the number of new domains registered by freelancers saw a 113% increase compared to April 2019; in the same month, 23,721 businesses registered a new .it domain (+56% compared to April 2019), while natural persons registered 28,768 new domains (+52%). As to 2020 regional growth, the 3 regions with the highest penetration were Trentino Alto Adige, which achieved a PR (Penetration Rate) of 456.36 .it domains per 10,000 inhabitants, Lombardy, with a PR of 390.50, and Tuscany (PR 380.47).

The Aosta Valley (PR 379.82) and Veneto (PR 372.78) were next in line. At a provincial level, Milan was the 'most digital' province in Italy, with an overall PR of 538.45 .it domains per 10,000 inhabitants, followed by Bolzano (PR 483.18), Florence (PR 448.50), Rimini (PR 436.50) and Bologna (PR 431.35).

Milan was also the province with the highest penetration levels in the 'businesses', 'freelancers' and 'natural persons' categories. Specifically, out of every 100 active businesses, 26 have a .it domain, and out of every 10,000 inhabitants, approximately 55 domains are registered by freelancers and 170 by natural persons.



Over the course of 2020, Registro .it designed and set up a ‘Temporary Web Observatory for analysing and monitoring the spread of the Covid phenomenon on the Internet’ (<https://www.osservatoriodominicovid.it/>) and assessing its impact on the evolution of .it domain names. The Observatory also had the goal of verifying that no domain names



Sono presenti **5548** domini .it covid

*Osservatorio temporaneo sui domini del .it il cui scopo è di analizzare come la pandemia COVID-19 ha impattato sul DNS*

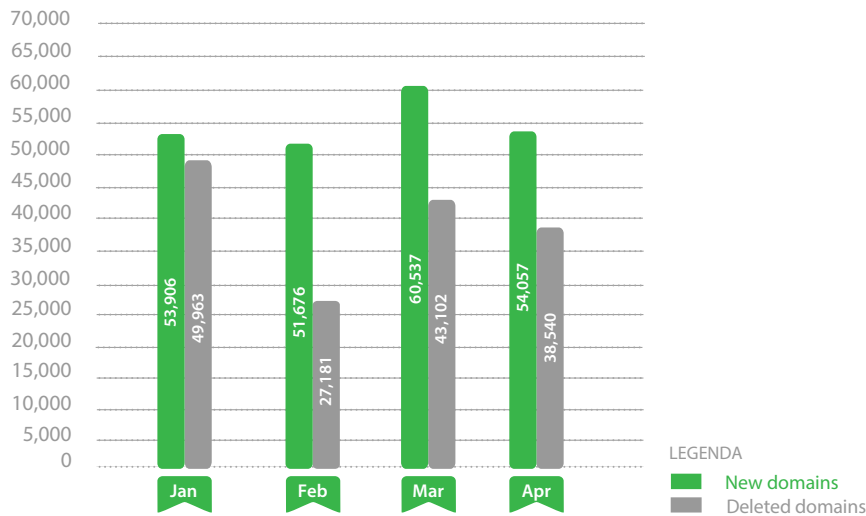


linked to the pandemic had been registered for illicit purposes, such as carrying out cyber-attacks and spreading viruses and malware.

The first pandemic-themed domain, namely [vaccinocoronavirus.it](https://vaccinocoronavirus.it), was registered on 28 January 2020, about a month before the start of the pandemic in Italy. Subsequently, starting in February 2020, there was a fully-fledged rush to register ‘covid’ domains, that is, domains containing keywords that referred to the pandemic both in their names and in the contents of the related websites. Such keywords included terms such as ‘masks’, ‘lockdown’, ‘swabs’, ‘vaccines’, ‘virus’, ‘coronavirus’, ‘pandemic’, etc. – in all their meanings, in the singular and the plural, and with the separator sign ‘-’ (witness lockdown and lock-down, coronavirus and corona-virus, and so forth).

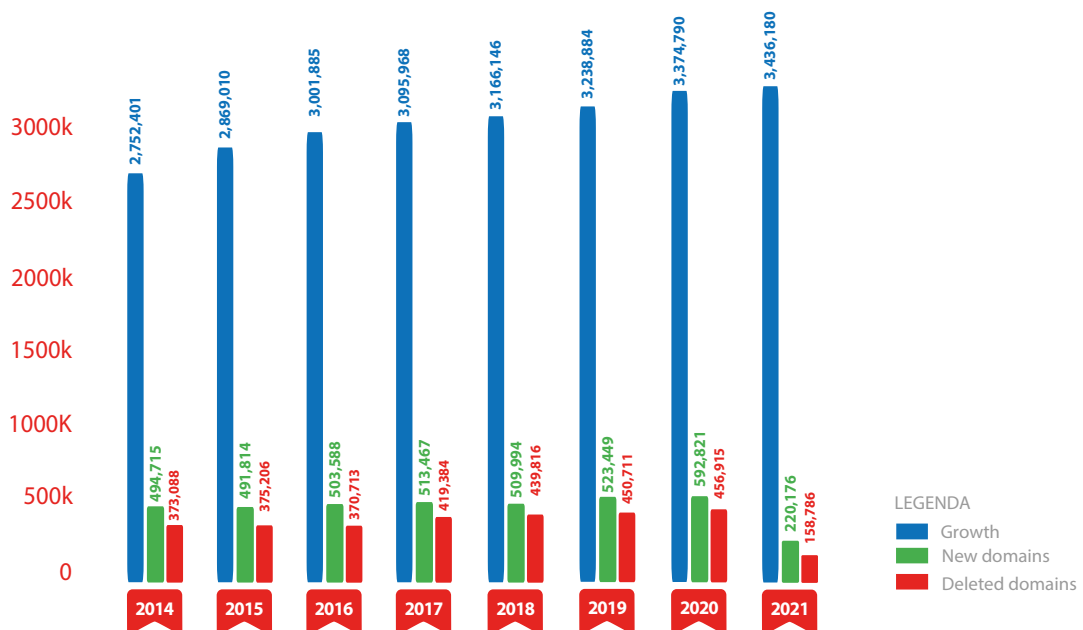
In February 2020, more than 100 covid-themed domains were thus registered, although most of these registrations actually took place in March (1,162 names) and April (2,150 names), thereby amounting to a total of 6,615 ‘covid’ domains as at 31 December 2020.

## GROWTH OF NEW REGISTRATIONS



The difference between new registrations and cancellations amounted to approximately 61,000 domains, with peaks of new registrations recorded in February (approximately 24,000) and March (approximately 17,000). The growth in domains is considerable compared to the first and last four months of the previous year. In all four months, new registrations outnumbered cancellations. However, January saw a considerable increase in the number of cancellations compared to the same month in 2020: new registrations outnumbered cancellations by only 3,943 domains. In addition, it should be noted that the peak of new registrations was recorded in March, rather than in April like in the previous year. This trend is in line with what happened in the years prior to 2020

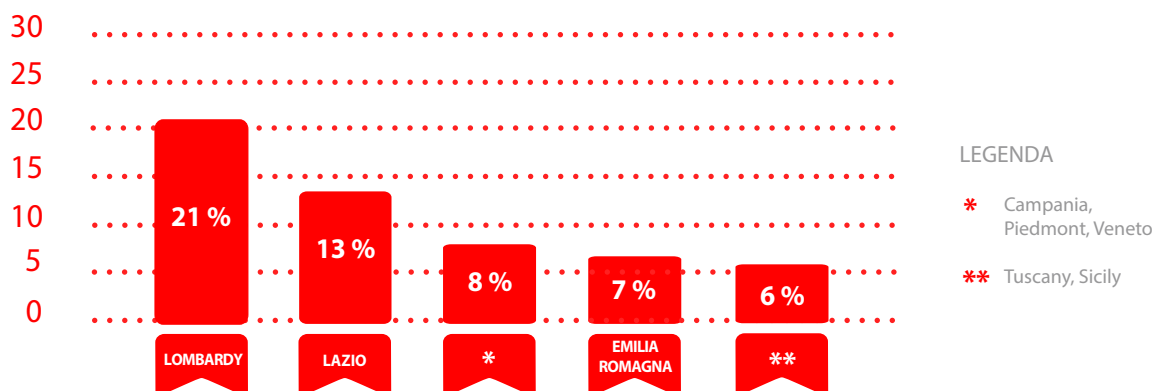
## ANNUAL GROWTH



At the end of the first four months of 2021, the total number of .it domains amounted to 3,436,180, a growth of 1.82% (+61,390 domains) compared to the end of 2020. Such growth, if compared to the growth rate registered in the first four months of the previous year, was slightly higher than the growth rate of the previous year

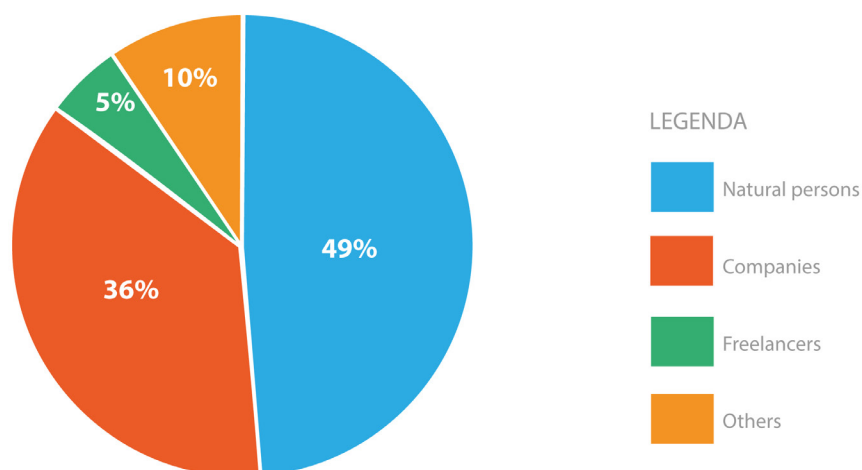
## STATISTICS

### TOP REGIONS



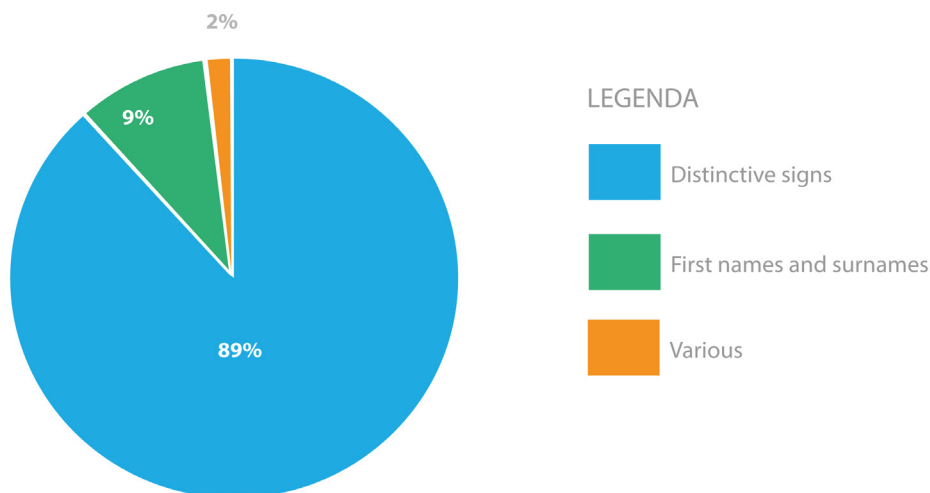
The regional ranking in terms of new domain registrations did not change even at the beginning of 2021. Lombardy continued to be the region with the highest number of new registrations, with an increase of one percentage point compared to the last four months of 2020. Lazio ranked second with 13%, although losing two points. Campania, despite remaining in third position, together with Piedmont and Veneto, lost two percentage points just like Lazio.

### ENTITY TYPES



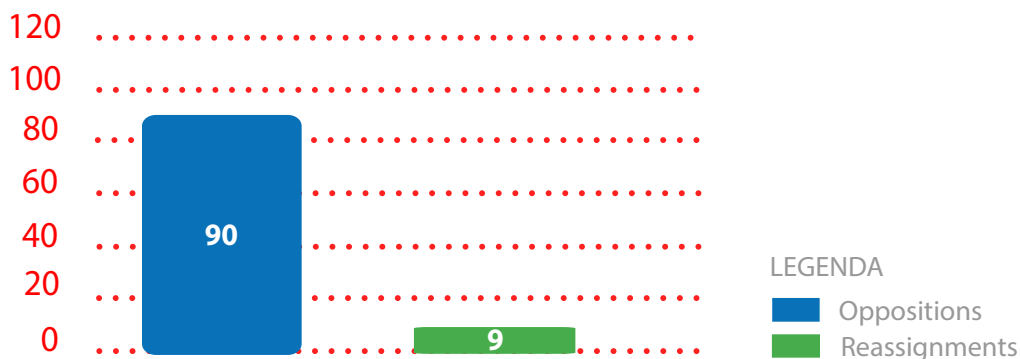
In the first four months of 2021, the percentage of natural persons making new registrations remained unchanged at 49% (almost half of all new registrations) compared to the previous four months. Companies, on the other hand, lost one percentage point, while the percentage of other categories increased. The percentage of self-employed professionals remained unchanged.

## REASONS FOR OPPOSITIONS



The largest number of oppositions activated in the January-April 2021 four-month period, corresponding to 89% of the total, concerned the infringement of distinguishing marks. The remaining 11% can be broken down as follows: 9% involves requests to protect first and last names, and the remaining 2% concerns miscellaneous reasons

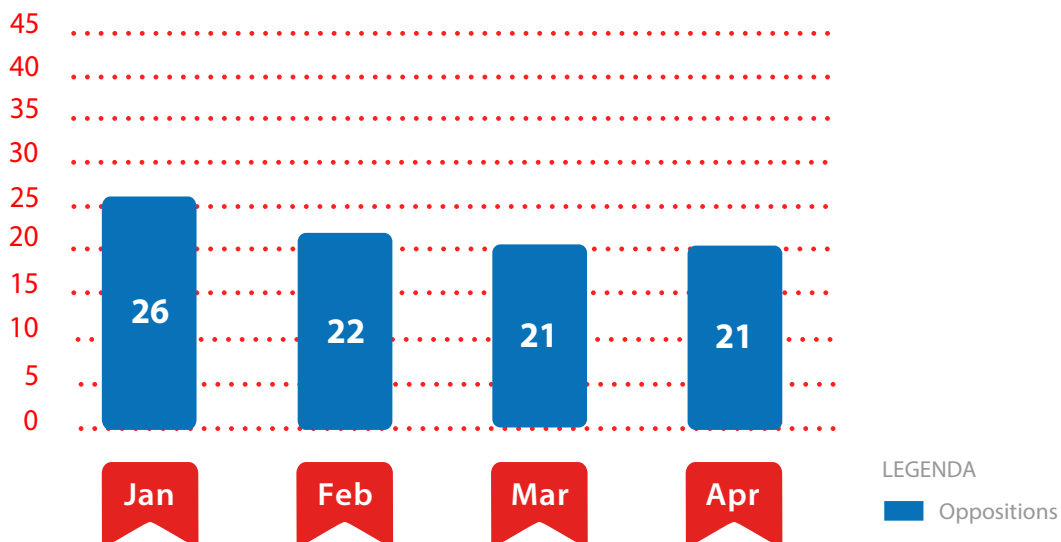
## OPPOSITION-REASSIGNMENT RATIO



JANUARY - APRIL 2021

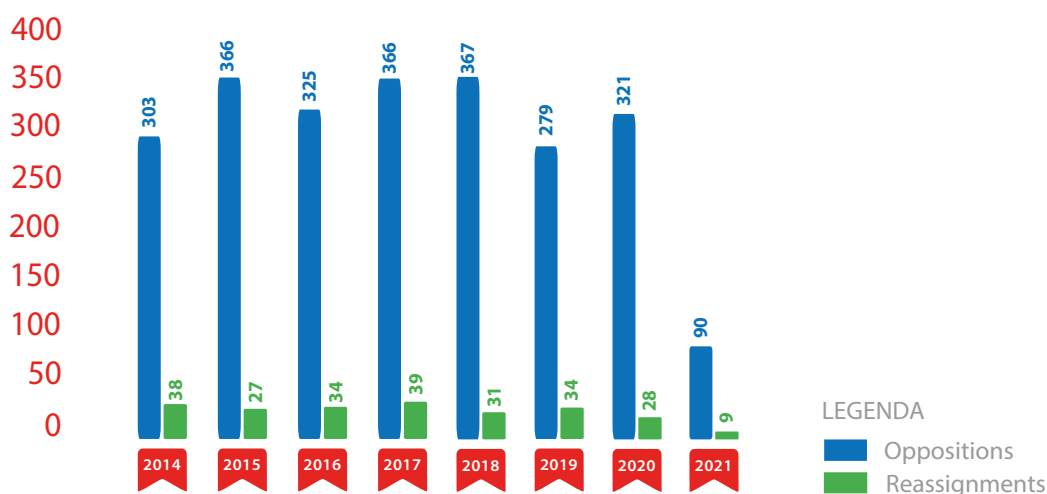
Opposition procedures (90) continued to be the most common, as opposed to reassignment procedures (9). Out of the 90 opposition procedures, 30 were brought by Italian subjects against foreign assignees; only in one case did a foreign subject oppose the assignment of a domain name to an Italian subject. Finally, 6 oppositions concerned foreign subjects, with both registrant and opponent being non-Italian. Of the 9 reassignment procedures, 4 were brought by Italian subjects against foreign assignees, another 4 involved national subjects, and only one case involved a foreign subject as the opponent

## TREND OF OPPOSITIONS



January saw the highest number of procedures. However, the trend remained constant from February to April. The monthly average for the period thus equates to 22 opposition procedures initiated

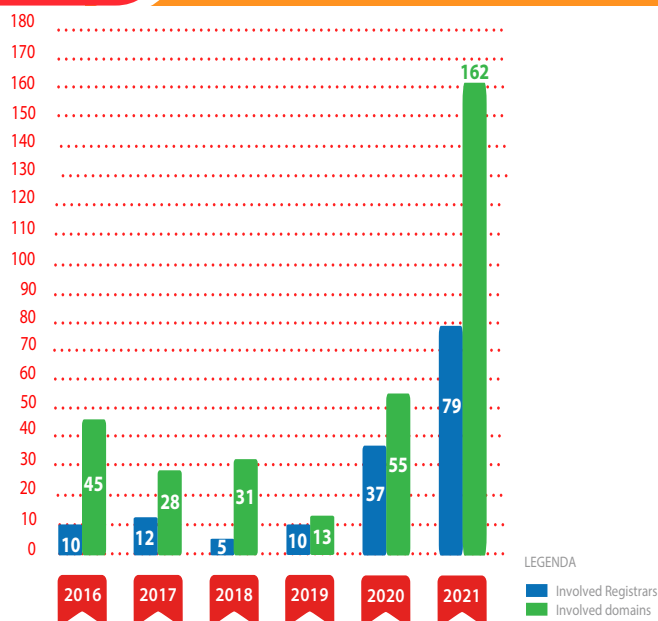
## OPPOSITION-REASSIGNMENT TREND



In the first four months of 2021, out of 90 oppositions, 9 reassignment procedures were filed with the PSRD. At the end of the procedure, only 3 cases saw the upholding of the opposition, as the rights of the opponent/complainant were recognised. In only one case did the Board reject the procedure; as a result, the opposing party was not reassigned the domain name, which was retained by the assignee. In another case, the Board declared a procedure extinguished. Lastly, four procedures are waiting for the Board to rule on them

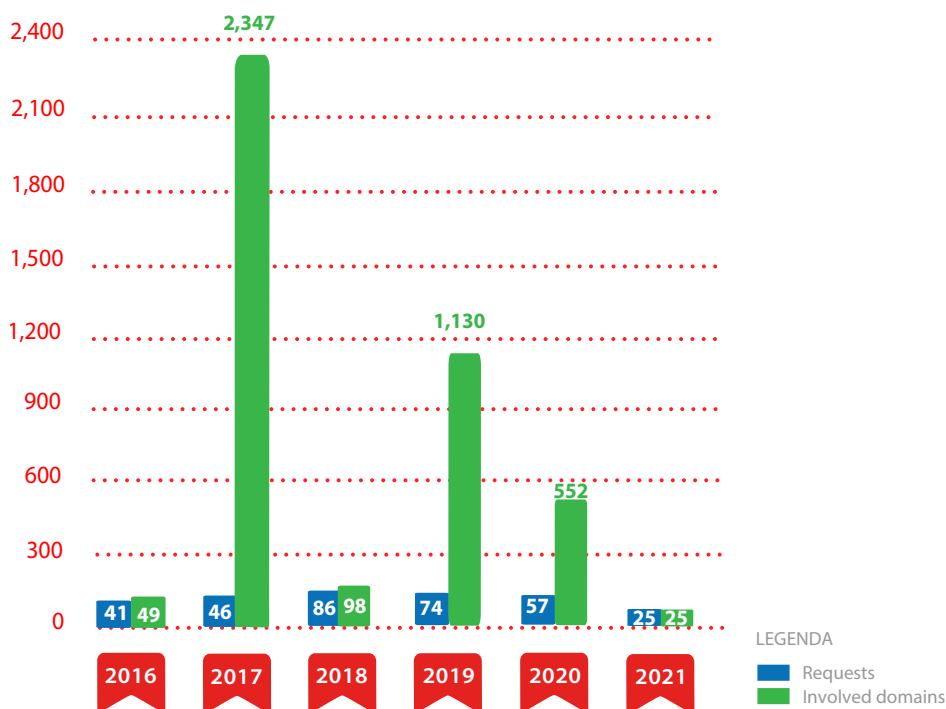


## AUTHINFO REQUESTS



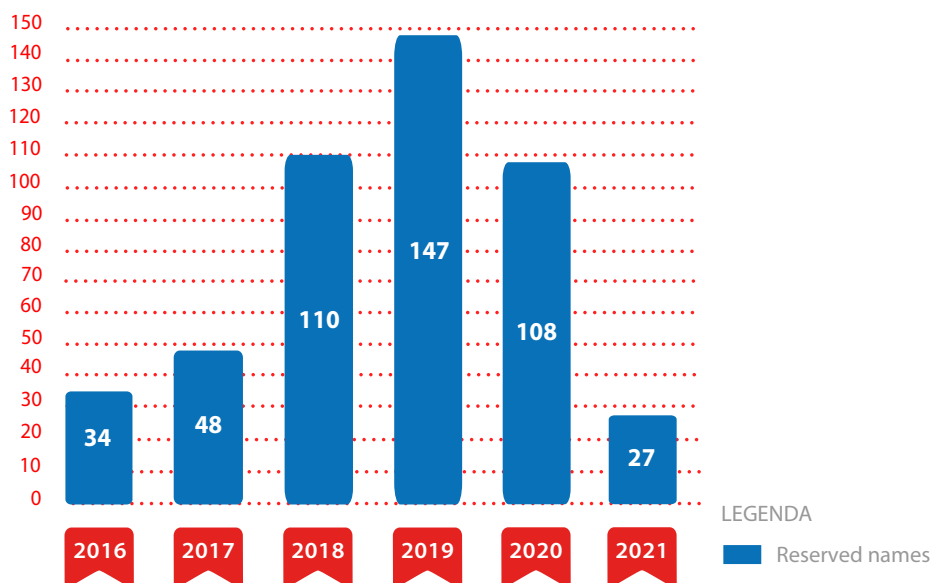
Compared to 2020, the number of Authinfo codes issued by Registro .it increased significantly in the first four months of 2021: this occurred because some “Registrars” that managed dozens of domains were closed down and therefore the Registry had to issue Authinfo codes directly to Registrants

## REQUESTS FROM COMPETENT AUTHORITIES



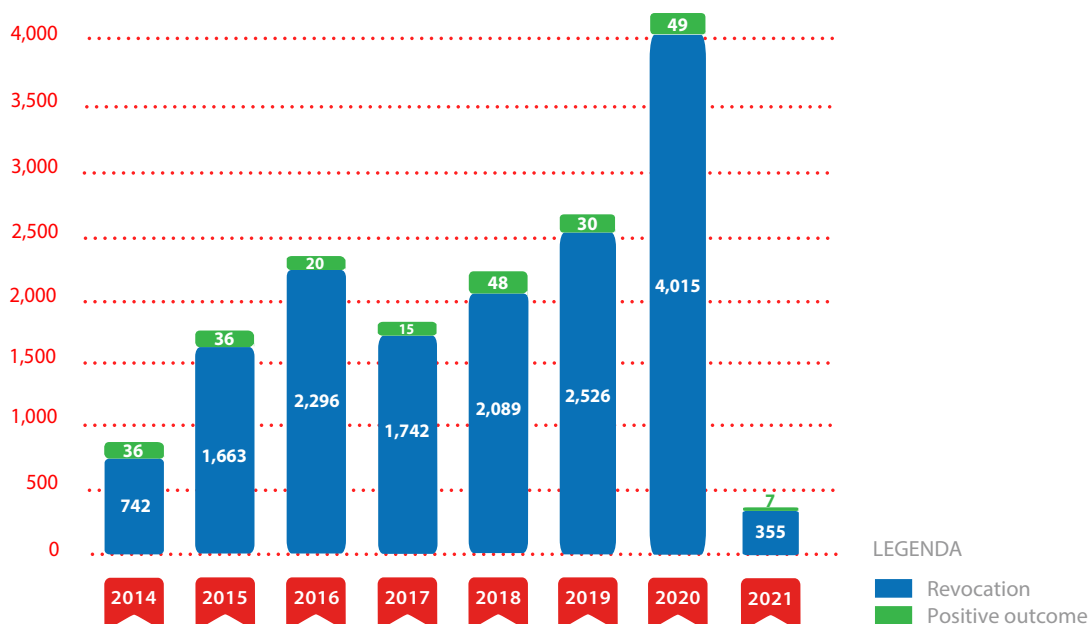
During the first 4 months of 2021, the number of information requests from the competent authorities was in line with recent years

## RESERVED NAMES



The number of registration requests for domain names reserved for municipalities, provinces and regions has slightly decreased compared to last year. Statistics show that almost all domain registrations were made by municipalities and, in only one case, by a province

## VERIFICATION OF DOMAINS BY THE REGISTRO



The number of names involved in subjective requirements checks went against the trend compared to 2020, thanks in part to the joint work carried out by the Registry and the Registrars. The latter, in fact, in response to accurate reports on registrant data that were not entirely accurate, proceeded to update such data or to cancel or not renew domain names upon their expiration

# 2021 PMD WEB TALKS: FOCUSING ON DIGITAL IS PARAMOUNT

Stefania Fabbri

**PICCOLE MEDIE DIGITALI**

WEB TALK

MARZO 2021

**25**

**ORARIO**

**18:00**

**INTERVISTA**

ENRICO PAGLIARINI

**OSPITI**

ANNA VACCARELLI

PIERO MUSCARÀ

NICOLETTE MANDARANO

CHRISTIAN GRECO

PAOLO E MARTINA GASPAROLI

CAROLINA DONZELLI

**PMD 2021** Il marketing digitale per un mondo che cambia

Registro.it

Registro.it è partner di

Consiglio Nazionale della Pubblica Amministrazione

The aim of the project is the same as always: to talk about the individual key sectors of the Italian economy and the way they can evolve thanks to digital technology, as well as the use that SMEs can make of said technology to improve their business. The Web Talk focus on the role of domain names, as enhanced by marketing tools and strategies designed specifically for micro, small and medium-sized enterprises.

In each instalment of the 2021 edition, Radio 24 journalist and presenter Enrico Pagliarini talks to opinion leaders, influencers and SMEs from various fields to identify the strong points of digital technology in all its facets.

The first four months of 2021 featured three events:

- 25 February – The first instalment was dedicated to agri-food and the importance for companies in this sector to present themselves with a .it website that is able to represent the ‘Made in Italy’ brand, which is a true asset for farms to make themselves known and build and/or consolidate their reputation;
- 25 March – The second instalment focused on the art sector, which, despite the forced shutdown due to the pandemic, has continued to breathe life into Italy’s artistic and cultural heritage using digital technologies. Italian art and culture are famous throughout the world, and one’s belonging to the Bel Paese can also be made clear on the Web by registering a .it name;

**PICCOLE MEDIE DIGITALI** WEB TALK

**Healthcare, il paziente al centro: il ruolo della digitalizzazione**

**APRILE 2021**  
**22**

**ORARIO**  
**18:00**

**INTERVISTA**  
ENRICO PAGLIARINI

**OSPITI**  
SILVIA MAZZANTI  
LORENZA PRATALI

BARBARA SALA  
GRAZIELLA BILOTTA  
ALBERTO TRUSSARDI

**PMD21**

**PMD 2021** Il marketing digitale per un mondo che cambia

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- 22 April – The Web Talk focused on healthcare and the way this sector, which is increasingly characterised by a patient-centred approach, is changing thanks to digital support for diagnostics, customised prevention and virtual and remote assistance. The pandemic has inevitably also affected the way in which citizens approach healthcare practice, thereby providing momentum for telemedicine, which sees the presence of doctors mediated by digital channels and new platforms.

The Web Talks consist of live events that can be watched on the main social media channels of Registro .it. You can also review the episodes by visiting our YouTube channel or the section of our website dedicated to [PMD](#).

The next appointments, all scheduled at 6 pm, will focus on publishing and sustainable tourism, and will be held on 25 May and 24 June, respectively.

**PICCOLE MEDIE DIGITALI** WEB TALK

**Agrifood tra digitalizzazione e sostenibilità**

**FEBBRAIO 2021**  
**25**

**ORARIO**  
**18:00**

**INTERVISTA**  
ENRICO PAGLIARINI

**OSPITI**  
ANNA VACCARELLI  
MARIANNA PALELLA

FRANCESCA ZAMBONINI  
ELISA MORETTO  
STEFANO CACCAVARI

**PMD21**

**PMD 2021** Il marketing digitale per un mondo che cambia

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The story of Italy's first connection to the Internet is similar to that of many cutting-edge projects in the field of research; at first, such a 'discovery' (which was rather the result of studies carried out simultaneously in various parts of the world, with the United States playing the main role thanks to the funds employed by the US Ministry of Defence and its rich research community) did not appear to be useful outside the academic and military world, and only revealed its full potential in 1991, when Tim Berners Lee invented the World Wide Web, thereby delivering the Internet to the whole world.



The history of that research path, which is rich in documents and testimonies, has been recorded in the *Le origini di Internet in Italia* (The Origins of the Internet in Italy) project, which has been carried out in recent years by the Institute of Informatics and Telematics of the CNR in Pisa, in collaboration with the University of Pisa.

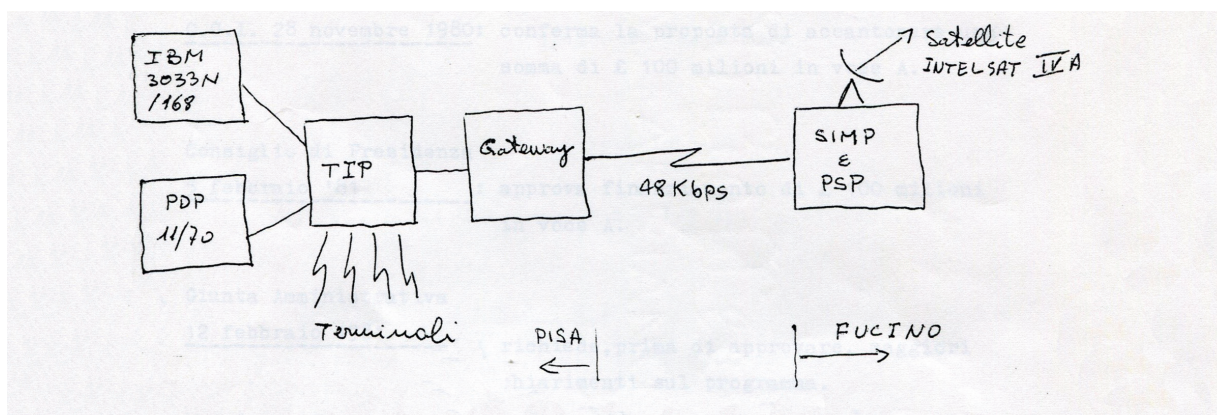
On 30 April 1986, Italy's first connection to the Internet was not really celebrated, not even by those behind it. There are no photos or videos of that moment: the people involved at the time remember their excitement and curiosity, but certainly not the feeling of having made history. Blasco Bonito, namely the technical programmer who launched the command, was the only member of the group in the engine room at the time of the crucial 'Ping', while Luciano Lenzini, namely the researcher who had led the project, and Stefano Trumpy, namely the Director of the CNUCE who had supported him, were already busy with other activities.

There was no mention of the event in the newspapers: in those days, the news was full of disturbing news from the Chernobyl nuclear power plant, whose reactor exploded on 26 April. Pisa carried on with its studies and research in the field of information technology, which had already been consolidated with the creation of the CEP (Calcolatrice Elettronica Pisana, Pisan Electronic Calculator) in 1961 and the birth of the first Italian university course in Information Science in 1969.

After more than a decade, the CNUCE was dissolved, thereby leading to the creation of two new CNR institutes, namely ISTI and IIT, which have taken up its legacy and are continuing the CNR's research into tomorrow's Internet.

In 1987, as a result of the CNUCE's connection to the Internet and following the registration of the first Italian domain, namely "cnuce.cnr.it", IANA entrusted the Institute of Informatics and Telematics of the CNR in Pisa with the management of Registro .it. Today, the Italian Registry comprises more than 3.4 million domains: according to the ccTLD (country code Top Level Domain) ranking, the .it domain ranks sixth in Europe and tenth worldwide.

See also [30 April 2021, the Internet turns 35 in Italy](#)





# TEN YEARS OF LUDOTECA: KEEPING DIGITAL EDUCATION GOING

Giorgia Bassi

**6 - 12 - 17 MAGGIO**



Segui l'evento su facebook, twitter, youtube  
e sul sito [www.ludotecaregistro.it](http://www.ludotecaregistro.it)

The protagonists of this initiative, namely the over 14,000 children and young people who have enthusiastically participated in digital education workshops throughout Italy, should be the ones to recount the 10-year story of Ludoteca del Registro .it.

These workshops have always aimed at entertaining and inspiring young Internet users by providing them with technical knowledge and encouraging a critical approach to the use of digital resources.

The project made its official debut in May 2011, on the occasion of the first edition of the Internet Festival. Therefore, in May 2021 we celebrated the 10th anniversary of Ludoteca with three events on digital education, on 6-12-17 May.

6 MAGGIO   ORE 16.00	12 MAGGIO   ORE 17.00	17 MAGGIO   ORE 17.00
<p><b>LA CYBERSECURITY È UN GIOCO DA RAGAZZI!</b></p> <p><b>MODERATORE</b> ANDREA PLAZZI EDITOR E FUMETTISTA   FOUNDER COMICS&amp;SCIENCE</p> <p><b>RELATORI</b> STEFANIA FABBRI DEPUTY MANAGER UNITÀ RELAZIONI ESTERNE, MEDIA, COMUNICAZIONE E MARKETING DEL REGISTRO.IT GABRIELE PEDDES FUMETTISTA E ILLUSTRATORE DI "NABBOVALDO E LE STAGIONI A INTERNETOPOLI", "NABBOVALDO CONTRO I PC ZOMBIE", VIDEOGIOCO "NABBOVALDO E IL RICATTO DAL CYBERSPAZIO" GIOVANNI ECCHER SCENEGGIATORE E GAME DESIGNER VIDEOGIOCO "NABBOVALDO E IL RICATTO DEL CYBERSPAZIO" CRISTIANO CONVERTINO PROJECT MANAGER E RESPONSABILE DELLO SVILUPPO GRIFO MULTIMEDIA SRL</p>	<p><b>DIVENTARE CITTADINI DIGITALI TRA OPPORTUNITÀ E RISCHI</b></p> <p><b>MODERATORE</b> MARCO FERRAZZOLI CAPO UFFICIO STAMPA DEL CNR</p> <p><b>RELATORI</b> ERSILIA MENESINI DIRETTORE DEL DIPARTIMENTO DI FORMAZIONE, LINGUE, INTERCULTURA, LETTERATURE E PSICOLOGIA DELL'UNIVERSITÀ DI FIRENZE GIOVANNI VESPOLI COORDINATORE SAFER INTERNET DAY GENERAZIONI CONNESSE AUGUSTO CHIOCCARELLO RICERCATORE DELL'ISTITUTO PER LE TECNOLOGIE DIDATTICHE DI GENOVA ILARIA MATTEUCCI RICERCATRICE DELL'ISTITUTO DI INFORMATICA E TELEMATICA DEL CNR ANNA VACCARELLI RESPONSABILE LUDOTECA DEL REGISTRO.IT</p>	<p><b>CULTURA DIGITALE A SCUOLA: STRUMENTI E NUOVE SFIDE</b></p> <p><b>MODERATORE</b> AURELIO CALAMUNERI PR &amp; MEDIA RELATIONS DIRECTOR SPENCER &amp; LEWIS</p> <p><b>RELATORI</b> GIORGIA BASSI, BEATRICE LAMI, CLAUDIA MAZZANTI, MANUELA MORETTI STAFF LUDOTECA DEL REGISTRO.IT ALESSANDRO BENCIVENNI DOCENTE, FORMATORE, YOUTUBER E BLOGGER PROF. DIGITALE SU WWW.PROFDIGITALE.COM SUSANNA COMPARINI REFERENTE CYBERBULLISMO ISTITUTO COMPRESIVO TORRE DEL LAGO ANGELA FRANCESCHI ASSEGNIATA CNR E PHD STUDENT DI FORMAZIONE, LINGUE, INTERCULTURA, LETTERATURE E PSICOLOGIA UNIVERSITÀ DI FIRENZE</p>

Ludoteca's project began in 2011 with a proposal that included activities and games to explain the Internet and its opportunities to young people, starting from its operating mechanisms. One of these games is the 'wire game', which is still one of the most po-



*Autorità Garante  
per l'Infanzia e l'Adolescenza*

pular among children and teenagers: through it, a small model of the Internet can be created (the children themselves are the nodes in the Web), and data transmission can be explained in a simple way.

Schools immediately showed interest in the initiative, and the classroom activity was initially launched at a regional level. Participation in fairs and events in the industry (Science Festival, Internet Festival, Expo Scuola, ABCD scuola, Go on Italia, Smart Education& Technology days) subsequently made it possible to considerably expand the network of contacts and make the project nationally relevant.

The first important milestone was reached in 2013, namely the patronage of the Italian Authority for Children and Adolescents, which confirmed the importance of continuing to invest in digital culture, starting with young Internet users.

In the following years, the Ludoteca mainly sought to innovate its tools and methodologies, also thanks to discussions with teachers, which were another fundamental factor in the development and growth of the project.

One of the Ludoteca's most important teaching tools is Internetopoli, that is, a multimedia web app dedicated to the Internet that was launched in 2015 and now boasts around 10,000 registrations.

From a methodology standpoint, the peer education model gave the project momentum, with the 'Let's Bit!' initiative involving secondary school pupils as 'junior digital educators' in primary school classes.

2017, namely the thirtieth anniversary of .it domains, was the year of .itContest, a competition open to primary schools and the first years of secondary schools, and the Roadshow of Ludoteca del Registro .it, a travelling event that further expanded the network of contacts with schools throughout the country.

Starting with the 2018/19 school year, Ludoteca del Registro .it also launched cybersecurity workshops for primary and secondary school classes involving around 1,000 children: through group games and comic strips, the children were able to learn about

the main cyber threats, the corresponding technical countermeasures and, above all, the good practices to be adopted for making safe use of digital devices.

In order to expand the range of teaching resources, two comics entitled 'Nabbovaldo, ovvero le stagioni a Internetopoli' (Nabbovaldo and the seasons in Internetopoli, 2016) and 'Nabbovaldo contro i pc zombie' (Nabbovaldo versus the zombie laptops, 2018), with drawings by Gabriele Peddes, have also been produced and published in the CNR magazine Comics&Science. The comics recount the adventures of Nabbovaldo, a young man who is passionate about the Web but unaware of the possible risks. The same character also became the protagonist of the video game 'Nabbovaldo e il ricatto dal cyberspazio' (Nabbovaldo and the cyber blackmail), which was published in April this year and is dedicated to cybersecurity issues.

Finally, during the pandemic, the workshops have been held in schools of various levels using distance learning, thereby reshaping some of the activities and launching an effectiveness evaluation project in collaboration with the Department of Education, Languages, Interculture, Literature and Psychology (FORLILPSI) of the University of Florence.



(illustrations by Gabriele Peddes)



# **THE DIGITAL VILLAGE OF THE LUDOTECA: FROM CHILDREN TO ADULTS**

*Claudia Mazzanti and Manuela Moretti*



*(Ludoteca's experts, from left, Beatrice Lami, Manuela Moretti and Claudia Mazzanti)*

Since its inception, the aim Ludoteca del Registro .it has been to disseminate Internet culture and promote a responsible use of the Web among the new generations, with an initial focus on primary school children. The success of the project required a re-shaping of the initial programme, which was enriched with new activities, such as 2015's 'Let's Bit!', and thus began to involve teenagers (based on the peer education model), who were entrusted with the task of 'tutoring' and educating children.

However, in a globalised and digital society, for education on the correct use of the Internet and the tools used in the classroom and in everyday life to be possible, it is essential to also involve and educate teachers and parents, namely the first, essential points of reference for young people. Parents and teachers are not always able to keep up with the technological evolution of schools, social 'relationships' and digital tools.

For this reason, as part of Registro .it Ludoteca project, talks, seminars and debates have been organised over the years within the schools themselves or at events promoting digital skills, such as Didamatica, Docenti Virtuali&Insegnanti 2.0, Safer Internet

day, and Children's Book fair; these occasions have seen the presentation of projects and activities by the Ludoteca.

Since 2013, as part of its activities to disseminate digital culture, the Ludoteca has provided primary and secondary school children with the opportunity to visit Registro .it headquarters within the Research Area of the Pisa CNR, in order for them to learn more not only about ICTs and the activities of Registro .it, but also for them to come into contact with the world of research.

In 2017, on the occasion of the 30th anniversary of the registration of the first domain name, the Ludoteca organised a Road Show that travelled the whole of the Italian peninsula and made it possible to meet more than 400 teachers and parents; the stage cities of this event were Udine, Turin, Rome, Pescara, Bari, Lecce and Catania.

The Ludoteca has also held seminars in schools of all levels, mainly in Tuscany, at the invitation of the teachers. Among the participating schools, witness the 'Falcone e Borsellino' comprehensive school in Navacchio (Pisa), the 'Torre del Lago' comprehensive school (Lucca) and the 'B. Telesio' comprehensive school in Cosenza.

The seminars, which initially focused on the presentation of the activities of Ludoteca del Registro .it (the binary language, games, videos, comics, etc.), have been enriched and expanded in parallel with the development and adoption of new educational tools, thereby highlighting their goals, contents, paths, tools, educational approaches and themes.

The first multimedia tool provided as a support, not only to young people but also to other figures involved in their education, was the Internetopoli Web App, in which the world of the Web is depicted as a large city with streets, squares, rules and correct behaviours to be followed.

The App soon began to be used as a basic training tool for both the children taking part in Let's Bit! and teachers and parents, who can still use it at school and at home.

Through targeted educational tools and the related training courses, digital topics can continue to be explored in depth.

By means of primary school seminars, the Let's Bit! project and workshops for teachers and parents, the Ludoteca strives to give shape to an all-round digitally aware society in which everyone, from children to adults, from schools to families, can get to know the risks posed by the Web, but also the great potential and opportunities it offers.

## **EDUCATIONAL TOOLS: THE VIDEOGAME THAT “TEACHES” CYBER SECURITY CONCEPTS**

*Stefania Fabbri*



The Ludoteca's family of educational tools has been enriched with the videogame 'Nabbovaldo e il ricatto dal Cyberspazio' (Nabbovaldo and the cyber blackmail), which is aimed at 11 to 13 year olds.

Through the game, boys and girls will be able to discover concepts that are usually difficult to explain and understand, such as computer terms, basic notions of cybersecurity and proper web surfing behaviour.

The decision to develop an educational videogame entirely dedicated to these topics is a further step in the dissemination of cybersecurity culture through a teaching method that is both innovative and rich in potential.

The video game – which is inspired by the comic strip 'Nabbovaldo contro i PC zombie' (Nabbovaldo versus the zombie laptops), published in the CNR's 'Comics & Science' series – features the same protagonists and settings as 'Internetopoli', whose totally fictional environments and characters reflect the complex world of the Web, which is often represented as a city.

The protagonist of the video game is thus Nabbovaldo, who will move around the city to solve a Ransomware problem by performing a series of actions, as prompted by the player, and solving a number of puzzles to proceed with his challenge.





Both old and new friends will join the main character in his quest to discover who is keeping the city in check with a diabolical plan aimed at gaining total control of Internetopoli.

The structure of the game is a hybrid between ‘fixed route’ and ‘open world’. Indeed, the player can move freely around the map, talk with the characters and solve the mini games in the order they want, but the game’s plot is developed in four main ‘chapters’, plus a fifth (epilogue) in which the player can only engage in a final dialogue.

These sections are complemented by a fifth one, called Nabbopedia, which basically consists in a small dictionary gathering the definitions of ‘Internet’ terms mostly related to cybersecurity, which the player will collect during the game and will be able to consult at any time.

A final score will indicate the user’s knowledge of the dangers of using the Internet, with a special focus on social networks, viruses, online scams, file sharing, mobile data, Wi-Fi hotspots and the netiquette.

The video game is available on Apple’s App Store and Google Play and is released for Windows and MacOS desktop environments on demand. It is suitable both for teaching purposes during lessons and workshops and for individual use by children and young people.

# THE LUDOTECA STARS ON RAI GULP

Giorgia Bassi

The Ludoteca is making waves, this time doing one the most important things there is, namely delivering a lecture on how the IP protocol works.

Since its inception, the Ludoteca has always tried to provide children with a simple explanation of the basic workings of the Internet, because, even in the digital field, there can be no awareness without adequate knowledge, hence the decision to explain concepts such as IP addresses, domain names and the domain name system as part of classroom workshops. Of course, these concepts are illustrated in a simple and intuitive way, through metaphors and references to everyday life.

The Ludoteca's participation in the RaiGulp show 'La banda dei fuoriclasse' on 22 February was an opportunity to explain to a large audience of young viewers a fundamental notion concerning information technology, namely protocols, with a special focus on TCP/IP.

However, the concept of protocol is not limited to IT, but refers to a set of rules (the children were presented with a picture of 'class rules' in order to make the concept more straightforward). In the case of data transmission on the Web, protocols are the set of rules applicable to all devices that ensure that information travels and is delivered correctly and reliably. To make this concept even more understandable, the TCP and IP protocols were compared to two post offices, each with different tasks but closely linked. The use of pictures to accompany the explanations and the interaction with the host in the studio helped to enhance the informative content.

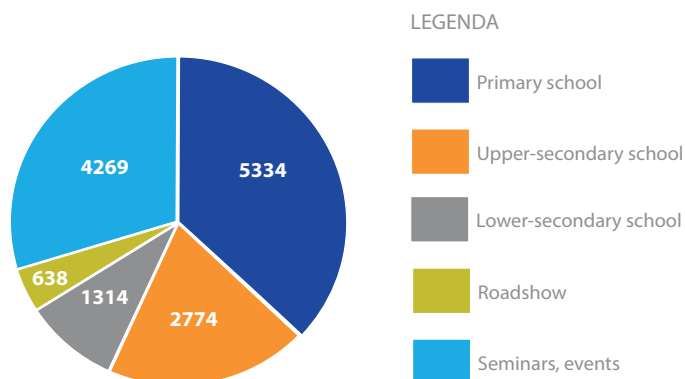


(Giorgia Bassi, Ludoteca's expert, live on Rai Gulp)

# HISTORICAL DATA: FROM 2011 TO TODAY

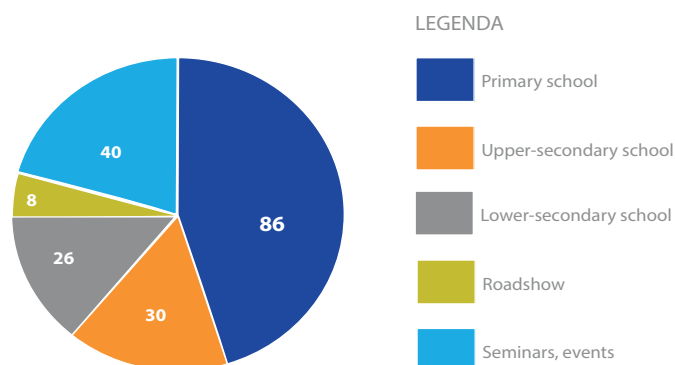
Beatrice Lami

## PARTECIPANTS 2011-2021



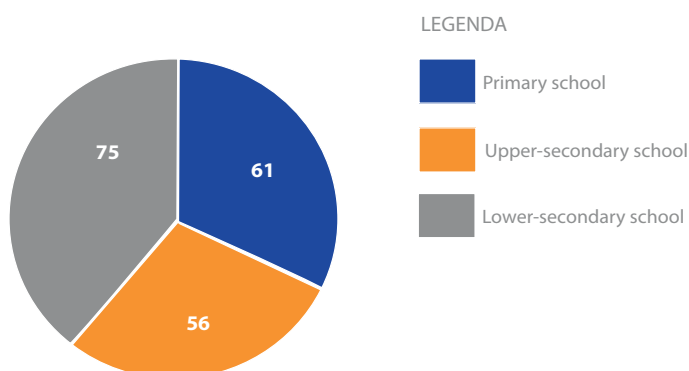
From May 2011 to spring 2021, more than 14,000 children and teenagers have taken part in the workshops of the Ludoteca: 37% of them were primary school children (aged 6 to 11), followed by a further 30% of children and teenagers who took part in seminars and events organised for them, including the Ludoteca's Roadshow in 2017. Lower-secondary school children (aged 11 to 14) accounted for 19%, while secondary school children (aged 14 to 19) accounted for 9% as they were involved more recently, since the 2015-2016 school year

## SCHOOLS IN 2011-2021



Over the years, as many as 190 schools of all levels and all over Italy have embraced the project of the Ludoteca. Most schools (45%) were primary schools, followed by schools that participated in the organised events (21%), then by lower-secondary schools (16%) and upper-secondary schools (14%)

## HOURS OF LESSONS 2011-2021

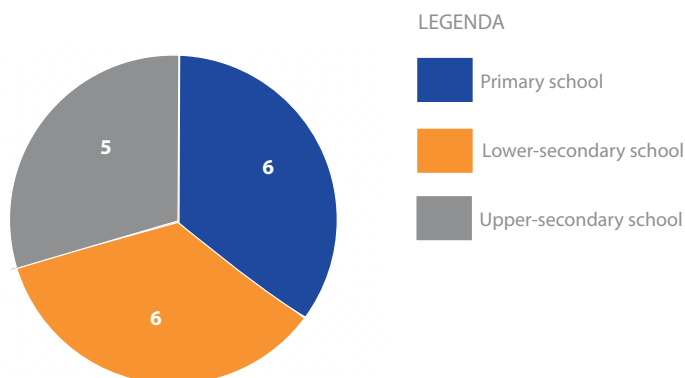


In 10 years, more than 1,400 hours of lessons were taught, the highest number being in primary school (34% of the total), followed by secondary school (29%). This significant figure showed that, considering the number of classes involved, an average of six hours of lessons were taught in each class

# WEBINAR ON DIGITAL CITIZENSHIP IN JANUARY-APRIL 2021

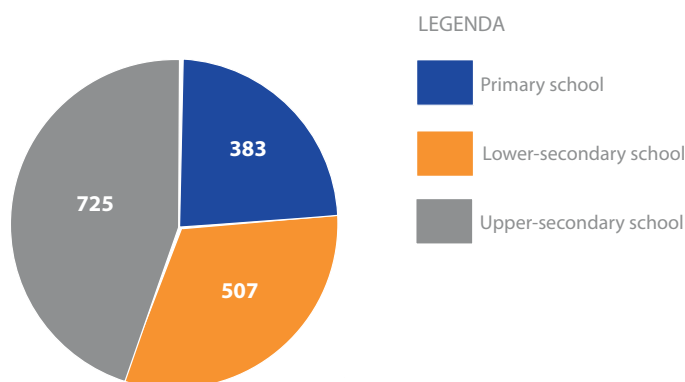
Beatrice Lami

## SCHOOLS



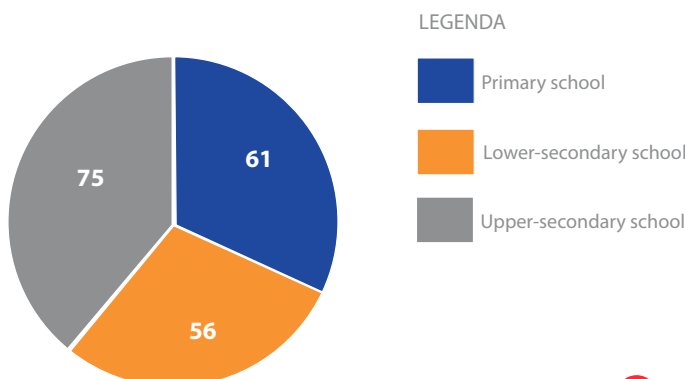
In the 2020-2021 school year, due to the pandemic, all workshops offered by the Ludoteca turned into online webinars on the theme of 'Digital Citizenship' for students of all school levels. The new format was a great success during January-April 2021, with 17 schools taking part in the activity

## PARTECIPANTS



The webinars on 'Digital Citizenship' were held in quick succession: in just four months, the experts at the Ludoteca taught over 1,500 children and teenagers. The largest number of webinar participants were upper-secondary school students, aged 14 to 19 (45% of the total), followed by lower-secondary school students, aged 11 to 14 (31%)

## HOURS OF LESSONS



During the first four months of 2021, the webinars were held regularly and frequently, thus bringing the total number of learning hours to 192. The highest number of webinars was delivered to upper-secondary school students (39% of the total), followed by primary school children (32% of the total)



## SURVEY FOR THE REGEID PROJECT

*Gino Silvatici*

The Registro .it has agreed to Centr's request to participate in the RegelD project survey, that will thus enable the cross-border use of eIDs (digital identifiers) issued according to the eIDAS (electronic IDentification Authentication and Signature) regulation for services such as domain name administration and registrant data validation. This means that a European citizen could manage a domain registered in another country using their own digital identifier without the need for re-authentication.

The project, which is promoted by Signicat and the four European Registries (.cz, .dk, .ee, .nl) and presented at the Centr Registrar Day in October 2020, is particularly relevant today, as people are increasingly turning to the digital sphere when it comes to their work, shopping, social life, entertainment and daily administration due to the Covid-19 pandemic. This has led to an increased overall use of eIDs, so RegelD aims at helping to boost this digital transformation.

The RegelD project survey was launched to gather as much information as possible on the expectations and requirements for Registrars to use eIDAS.

For more information, please [visit](#).

The survey can be filled in at the following [link](#).

## CENTR AND THE UPDATING OF THE BUDAPEST CONVENTION

*Gino Silvatici*

The Council of Europe has recently published a new version of the draft Second Additional Protocol to the Budapest Convention on Cybercrime.

More information is available [here](#).

The latest draft includes a section on the 'Request for information on domain name registration' (Article 6), which was added to the provisional text of the Protocol in November 2020. Centr participated in the previous round of stakeholder consultations by submitting the [following response](#).

Based on the latest available information, it is not yet clear how the measures proposed in Article 6 can be reconciled with primary and secondary EU law, including the GDPR and adequate data protection guarantees. For these reasons, Centr intends to submit a new official feedback before the deadline of 2 May 2021 in order to safeguard the interests of the entire domain name community.

# IL CCPDP4 AND THE MANAGEMENT OF IDN COUNTRY CODE TOP LEVEL DOMAINS

*Arianna Del Soldato and Adriana Lazzaroni*

The ccPDP4 (country code Policy Development Process 4) is an internal Iann working group that was set up in May 2020 as part of the ccNSO policy development process with the task of recommending a policy for the selection and withdrawal of strings for internationalised top-level domain names associated with country codes (IDN ccTLDs). The solution proposed by the ccPDP4 will replace the 'IDN ccTLD Fast Track Process' launched in 2009, which currently guides the string selection process for IDN ccTLDs and is not actually a policy but an agreed method.

The ccNSO policy development process, which is carried out by sub-working groups following a pre-defined timeline, envisages the publication of a draft final report in August 2021. Meanwhile, in December 2020, the basic principles of the policy were approved, and the IDN ccTLDs were equated with ASCII ccTLDs, thereby ensuring consistency in delegation, transfer, revocation and withdrawal processes, as well as participation in the ccNSO.

Furthermore, criteria and procedures for the string selection process have been adopted, in which it is established that an IDN ccTLD can only be declared as such if it contains at least one 'non-ASCII' character and significantly represents the name of a territory in a language that is legally recognised within the territory itself or used in official communications. To date, it has been established that only one IDN ccTLD may be registered per territory.

Issues relating to the management of variants and the procedures for assessing the similarity between two strings are still being discussed, as are the conditions for the withdrawal of the ccTLD. In particular, the technical, political and operational aspects arising from the existence of different writing methods used to express the same language must be outlined (for instance, the Japanese language has three writing methods: kanji, hiragana and katakana); furthermore, the risk of an IDN ccTLD being visually confused with another ccTLD by an Internet user unfamiliar with the selected writing method is to be avoided. The risk of confusing strings is not a technical problem concerning the DNS, but it can have a negative impact on the security and stability of the domain name system and, as such, should be minimised and mitigated, possibly in collaboration with the GNSO.

The adopted principles underlying the policy and the criteria and procedures for string selection will be the subject of an informal consultation during the next ICANN71 meetings in order to receive feedback from the community in view of the issuance of the final proposal.



# **“DNS ABUSE” AND EUROPEAN REGISTRY REGULATIONS**

*Arianna Del Soldato and Adriana Lazzaron*



A recent study published in the Internet Policy Review journal as a result of a research project funded by Innovation Fund Denmark and the Danish Internet Forum (DIFO) examined the role of ccTLD registries in relation to malicious or illegal use of a domain name or the content of the website linked to it. This is an empirical contribution that enriches the current debate on the regulation of online content, with a particular focus on ccTLD registries.

The study shows that there is a relatively wide range of responses to malicious use of a domain name. Examination of the regulations of 30 European ccTLD Registries shows that slightly more than a third of their Terms of Service contain provisions relating to the content or use of the domain, accounting for 47.04% of the European ccTLD Registry market analysed (as opposed to 59% of the Registrar market).

A comparative examination of the regulations of the registries examined shows that they can be grouped into three main categories that: (1) address the malicious use of the domain or the illicit content linked to it in a broad sense, (2) contain specific provisions relating to both use and content (3) do not include provisions relating to DNS abuse.

The first category includes registry regulations containing extensive provisions on the illegality of the content or malicious use of the domain name, ranging from use for illegitimate purposes to flagrant violations or manifestly illegal or illicit acts (.nl, .uk, .be, .ie, .eu, .se, .dk).

The second category includes regulations covering specific cases of illegal or even undesired use of a domain name, ranging from offensive content to the dissemination of viruses and malware, phishing and service denial and botnet attacks (.sk, .cz, .hu, .dk, .nl, .uk, .ch).

These two categories are confronted with a large number of registries (19 out of 30), which do not seem to include any provision for malicious use of the domain name (.es, .mt, .lu, .lt, .lv, .ro, .si, .gr, .fr, .it).

An alternative answer coming from the registries surveyed seems to be the 'creative use' of registration data validation.

In other words, even without explicitly regulating the use of the domain and its associated content, this option is increasingly becoming a practical solution to minimise malicious use of geographical domain names.

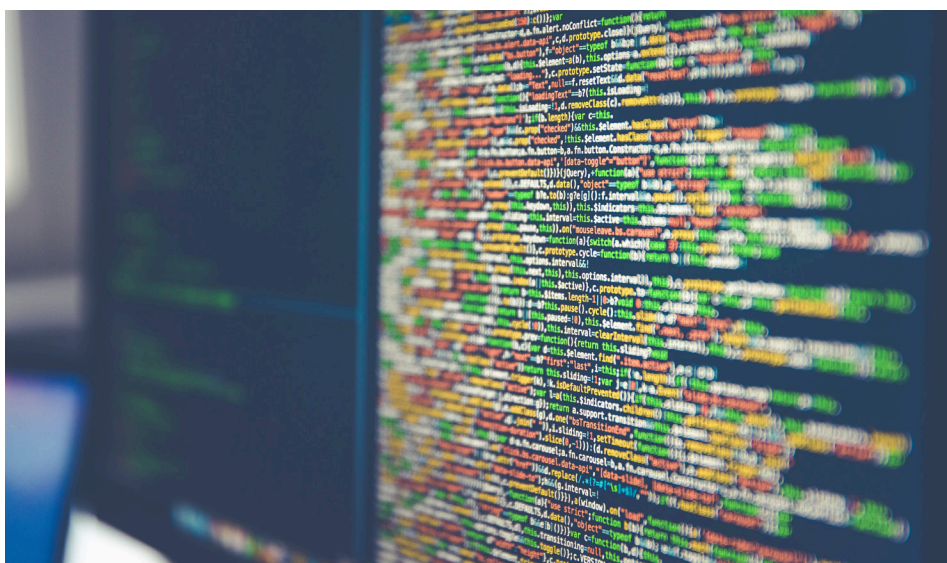
Some registries, such as .dk, have identified a plausible correlation between domains used for illicit purposes and the quality of registration data.

Others reserve the right to complete a registration if this latter relies on incorrect or incomplete information (.be, .se, .nl, .dk, .is, .eu, .it).

Ensuring correct information on the Registrant has thus been identified by some registries as one of the methods to mitigate the problem.

Finally, some registries analyse or proactively monitor the use and accessible content of a domain name in order to detect any abuse (.eu, .be, .nl).

Given the topicality of content regulation, it is plausible that this practice will become more widespread among the registries rather than disappear.



# INTERNATIONAL APPOINTMENTS IN THE WORLD OF THE WEB

*Gino Silvatici*

## ICANN ([WWW.ICANN.ORG](http://WWW.ICANN.ORG))

**14-17 June**, 71st ICANN Meeting, Online

**23-28 October**, 72nd ICANN Meeting Annual General Meeting (23rd), SEATTLE (Usa)

## IETF ([WWW.IETF.ORG](http://WWW.IETF.ORG))

**26-30 July**, 111 IETF, Online

**6-12 november**, IETF Meeting, Madrid (Spain)

## CENTR ([WWW.CENTR.ORG](http://WWW.CENTR.ORG)) - (for members only)

**31 May**, 5th CENTR Academy - Online

**1-3 June**, 2021 CENTR Member's Days - Online

**3 June**, CENTR Registry Day - Online

**6-7 December**, 7th CENTR WG Chairs/Vice-Chairs meeting - Bruxelles (Belgium)

## RIPE ([WWW.RIPE.NET](http://WWW.RIPE.NET))

**7 - 8 June**, ENOG 18/ RIPE NCC Regional Meeting - Online

**23 - 24 September**, RIPE NCC Day Tashkent - Tashkent (Uzbekistan)

**27 - 28 September**, SEE 9 / RIPE NCC Regional Meeting - Ljubljana, (Slovenia)

