

.eu Insights

# Internationalised Domain Names

## State of play

EURid, in collaboration with UNESCO, examines the global use of Internationalised Domain Names (IDNs), which support non-Latin scripts and multilingualism online.

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## .eu Insights

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The EURid Insights series aims to analyse specific aspects of the domain name environment. The reports are based on surveys, studies and research conducted by EURid in cooperation with industry experts and sector leaders.



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# Executive Summary

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Internationalised Domain Names (IDNs) have become strongly linked with Internet governance discussions on multilingualism. Of approximately 6 000 languages in the world, only 12 languages accounted for 98% of Internet web pages in 2008. English, with 72% of web pages, is the dominant language online<sup>1</sup>.

Although IDNs have been available for registration at the second level (IDN.TLD) for ten years, it was not until 2010 that it became possible to register IDNs under internationalised country-code top-level domains (IDN ccTLDs), such as .پڤ, .中國, .مصر, and .السعودية in the IDN.IDN form. This opened up the Internet's addressing system to the majority of the world's population, who have little or no comprehension of Latin scripts. In all, 17 IDN ccTLDs have since been entered into the domain name root and nine more are in the final stages of acceptance into the root (as of April 2011).

This study, undertaken by EURid, the .eu registry, in collaboration with the United Nations Educational, Scientific and Cultural Organisation (UNESCO), traces the history of IDN implementation and reviews early experiences of deploying IDN ccTLDs, in particular .السعودية (Saudi Arabia) and .پڤ (Russian Federation). Historical registration data from TLDs that have deployed IDNs at the second level reveals that nearly all limited their deployment of IDNs to support only local languages. In turn, this created a strong expectation of local language content at the IDN ccTLD level. Also, IDNs in European ccTLDs (deployed at the second level) enjoy a higher than average growth rate than the overall domain register. This is perhaps surprising, given the limited functionality of IDNs, which still do not support email. However, it indicates a higher than expected level of user acceptance.

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<sup>1</sup> UNESCO 2008: Securing a Place for a Language in Cyberspace, Marcel Diki-Kidiri (for technical reasons, there is no more recent data: the trend is clearly that the Chinese web presence and user base increases)



Early experiences from the .ar and .idn ccTLD deployment show strong public demand. In the case of the Saudi domain, it appears that the introduction of the IDN ccTLD has also had a beneficial effect on demand for the Latin script equivalent, .sa. In Russia, .ru domain names reached 800 000 registrations (March 2011), and current registration rates of .ru are 32 000 per month, compared with 40 000 for .ru. The registry for the .ru ccTLD attributes its success in part to a concerted information and marketing campaign, but also to user preference, with 71% of customers finding .ru domain names easy to spell and remember compared with Latin scripts.

Registries experienced in IDNs were asked for their opinions on aspects of implementation. The most positive responses came from those whose local scripts were right-to-left (such as .il for Israel), Cyrillic (.ua for Ukraine) and those that had supported their launch with a promotional campaign (such as .pt for Portugal). Registries identified the major barrier to user uptake of IDNs as being the lack of email functionality. Other barriers included the user experience in registration and use, browser support and a growing user preference for search rather than domain names as the principal means of identifying web resources.

Finally, the study briefly examines the link between IDNs and multilingual content. Given the challenges experienced by UNESCO in measuring linguistic diversity online, the emerging IDN.IDNs may be a fruitful source for research on multilingual content, relying on the strong links between IDNs and local languages.

# 1 Introduction

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In collaboration with UNESCO, EURid, the .eu registry, presents this study on Internationalised Domain names (IDNs). The study explains what an IDN is, gives a brief history and timeline of significant milestones and touches on the policy debate surrounding multilingualism on the Internet.

There follows an analysis of the data, which focuses on the deployment of IDNs over the past ten years and the strong linkages between country code top-level domain (ccTLD) registries' IDN deployment and local languages, and contrasts the experiences of Latin-based scripts with others. Moving on to deployment of IDN.IDN, the study also looks at the recent launches of [السعودية](#) (Saudi Arabia), and [.рф](#) (Russian Federation), reviewing registration figures, and other factors supporting growth. The study then looks at barriers to uptake, particularly the lack of email functionality for IDNs.

The study also explores the relationship between a multi-script addressing system and multilingual content. Next, it considers UNESCO's work in tracking multilingual Internet content and the challenges of finding accurate indicators of linguistic diversity. Given that there are strong links between ccTLDs and local languages and the availability of accurate, full data relating to IDN registrations, the study concludes that there may be benefits in targeting IDNs for research into the growth of multilingual content over time.

## 2 What is an IDN?

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Domain names, the Internet's addressing system, work because they are interoperable with IP addresses and resolve uniquely. This means that any user, anywhere in the world on any network, can get to the same destination by typing in a domain name (as part of a website or email address). The plan to internationalise the scripts supported within the Domain Name System (DNS) is almost as old as the Internet itself. However, technical constraints and the over-riding priority of interoperability resulted in a restricted script within the DNS: ASCII a to z, 0 to 9 and the hyphen<sup>2</sup>.

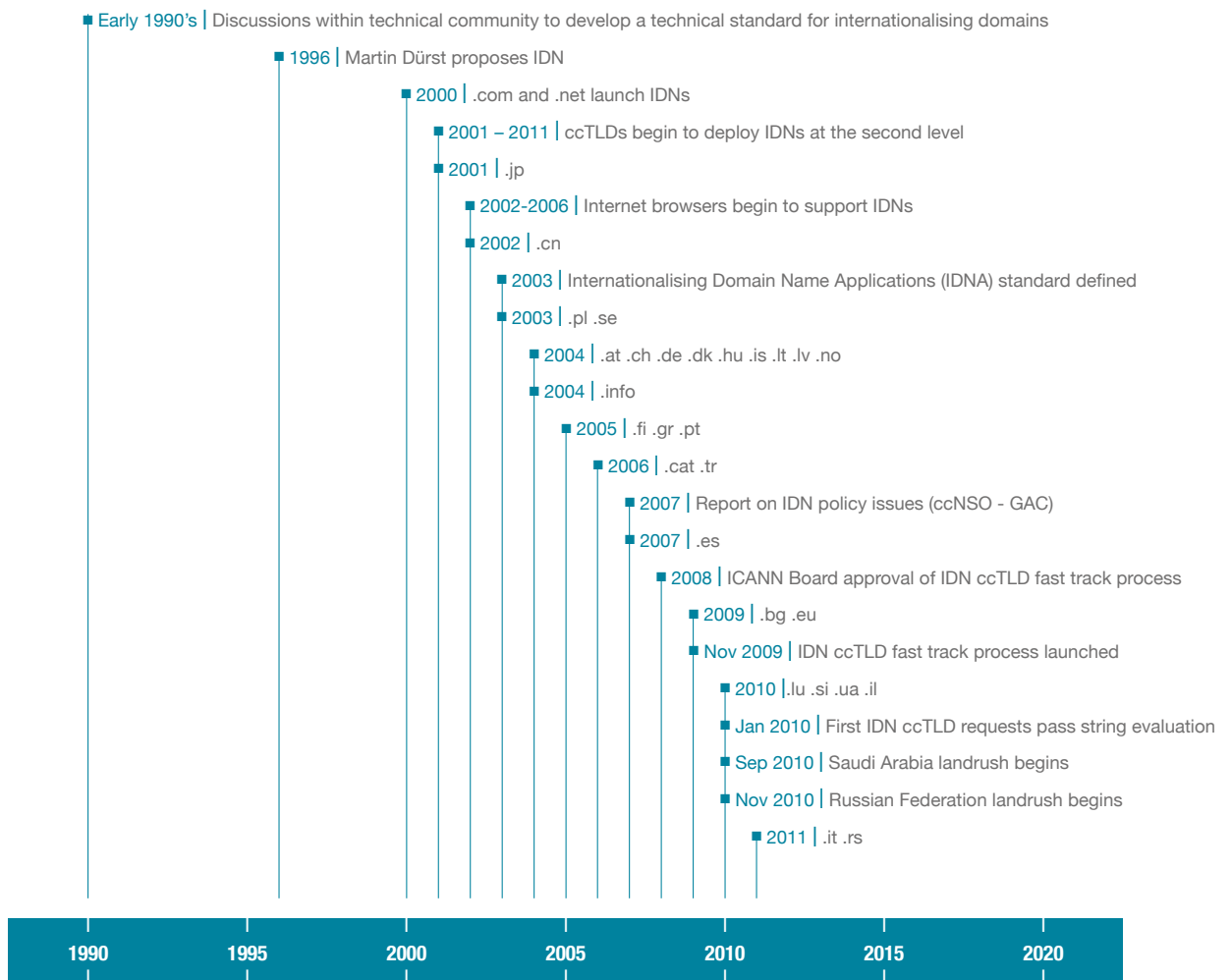
From the early 1990s, internationalised (non-Latin) scripts became available in email content (as distinct from addresses) through Multipurpose Internet Mail Extensions

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<sup>2</sup> See Internationalization of Domain Names; A history of technology development, Klensin, J and Fältström, P  
<sup>3</sup> See e-mail threads "Non-ASCII email addresses?" 1993 at <http://www.imc.org/ietf-822/old-archive1/msg03448.html>  
<sup>4</sup> See <http://tools.ietf.org/html/draft-duerst-dns-i18n-00>  
<sup>5</sup> See RFC 3490, 3491, and 3492

(MIME), but early proposals to use this technology for domain names were not adopted.<sup>3</sup> In 1996, Martin Dürst of the University of Zürich proposed a standardised approach to internationalising domain names<sup>4</sup>. Discussions within the Internet Engineering Task Force (IETF) eventually evolved into the Internationalising Domain Name Applications (IDNA) standard<sup>5</sup> which allowed the transliteration or conversion between Unicode domain names and their ASCII-based equivalents (prefixed with xn--), enabling users to navigate the Internet using their own language.

**Figure 1 – IDN introduction timeline**



Implementation of IDNs began in 2000 (.com and .net) and 2001 (.jp). In the ten years that followed, several ccTLDs also deployed IDNs, primarily supporting local languages.

However, those early deployments were done at the second level, within existing ASCII top-level domains (IDN.TLD), such as .com, .cn and .se (figure 1). IDNs were poorly supported by Internet browsers and IDN email did not work at all. For Latin-based scripts – for example, used by most European languages – IDNs reflected accents or some additional characters, but otherwise fitted well within the ASCII TLD system. Non-Latin scripts fared less well with the hybrid IDN.TLD system. Right-to-left scripts such as Arabic and Hebrew created bi-directional domain names when combined with left-to-right TLD extensions. These required users to switch keyboards when locating a single web page. The bi-directional domain names also made the strict hierarchy of the domain name system confusing, almost unintelligible, and in short they remain “barely usable”<sup>6</sup>.

This unsatisfactory situation was highlighted in Internet governance discussions as a key obstacle to reaching the goal of a multilingual Internet<sup>7</sup> and the years from 2005 onwards saw increasing political pressure on ICANN, the global coordinator of Internet

**Figure 2 – ccTLDs with IDNs in the Internet root zone, April 2011 (Source, ICANN)**


ccTLD	Country/Territory	String	ccTLD	Country/Territory	String
CN	China	中国	QA	Qatar	قطر
EG	Egypt	مصر	RU	Russian Federation	рф
HK	Hong Kong	香港	SA	Saudi Arabia	السعودية
IN	India	भारत	SG	Singapore	新加坡
		بھارت			சிங்கப்பூர்
		xn--fpcrj9c3d <sup>8</sup>	LK	Sri Lanka	xn--fzc2c9e2c
		भारत			இலங்கை
		ভারত	SY	Syrian Arab Republic	سورية
		xn--45brj9c	TW	Taiwan	台灣
		இந்தியா			台湾
JO	Jordan	الأردن	TH	Thailand	ไทย
KR	Korea, Republic of	한국	TN	Tunisia	تونس
PS	Palestinian Territory Occ.	فلسطين	AE	United Arab Emirates	امارات

6 Lipsicas, B., and Shikmoni, D., “Internationalized Domain Names: the long and winding road”, CENTR Domain Wire, Issue 1, 2007

7 See Internet Governance Forum, main session “Diversity” 2006, <http://www.intgovforum.org/cms/IGF-SummingUp-011106.txt>

8 Where the encoded script is not shown on the ICANN site, the IDNA code is substituted in this table





domain names, to implement IDNs in the root domain to alleviate the issues relating to hybrid IDN.TLD domain names and benefit the billions of people unable to read the Latin scripts.

In 2009 the ICANN Board approved a Fast Track process for IDN ccTLDs<sup>9</sup>. This was the culmination of several years' policy development work by the ccNSO (country code Names Support Organisation) in collaboration with the GAC (Governmental Advisory Committee). As a result, 17 IDN ccTLDs have been created as of April 2011, and nine more are in the final stages of being entered into the root<sup>10</sup> (figure 2).

### 3 Data sources

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To understand the state of play relating to IDN deployment, EURid has drawn on the following sources of data:

- CENTR A-level survey, January 2010, completed by 49 TLD registries, containing registration data and information relating to IDN deployment as of June and December 2009
- A EURid-commissioned survey of CENTR members, 2011, seeking registration data relating to IDN deployment as of June and December 2010, as well as qualitative information. This was completed by 28 registries (known as the “EURID/CENTR survey”)
- Additional data gathered through one-on-one contact with registries and registrars experienced in IDN deployment and one of the authors of the IDNA standard. Also contact with the managers of .pф, China, United Arab Emirates, Saudi Arabia, and Egypt
- Analysis of publicly available registration data
- Collaboration with UNESCO and review of UNESCO materials relating to online multilingualism<sup>11</sup>
- The total number of registries surveyed was 50 in 2009<sup>12</sup> (ie the CENTR survey respondents plus figures relating to .com and .net obtained direct from VeriSign) and 52 in 2010<sup>13</sup> (as above with the addition of .me and .sa/السعودية). Where the statistical information is not otherwise publicly available, the results in this paper have been made anonymous.

9 See <http://www.icann.org/en/topics/idn/idn-activities-seoul-28oct09-en.pdf>

10 See <http://www.icann.org/en/topics/idn/fast-track/string-evaluation-completion-en.htm>

11 E.g. Pimienta, D., Prado, D., and Blanco, A., (2009), UNESCO Information Society Division.

12 CENTR A Level Survey, Jan 2010, supplemented with figures obtained direct from VeriSign relating to .com/.net registrations.

13 EURid survey, 2011, supplemented by registration data published by CENTR

## 4 IDN deployment - state of play

### 4.1 Adoption of IDNs

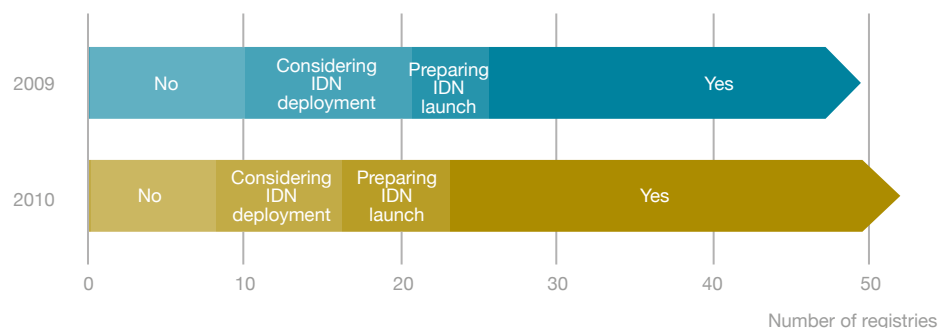
The first task was to determine how many registries offered IDNs to their customers (whether at second or top level), and to estimate the uptake of IDNs.

The registries surveyed managed a combined total of 163.7 million domain names as of December 2010. Not every registry in the survey provided IDN registration figures for December 2010, but the available figures indicate an IDN base of more than 2.8 million (including 600 000 under .pfp), accounting for 1.7% of the total registrations managed by the sample registries.

Given the limited Internet browser support for IDNs and lack of email services, it is perhaps surprising to see that the majority of the registries surveyed have implemented IDNs or are preparing to launch. Further, there continues to be a trend towards deployment. The number supporting IDNs grew from 23 to 29 between 2009 and 2010. In the same period, seven of the registries surveyed changed their IDN status from “considering deployment” to “implemented IDNs” (figure 3).

**Figure 3 – Deployment of IDNs by registry**

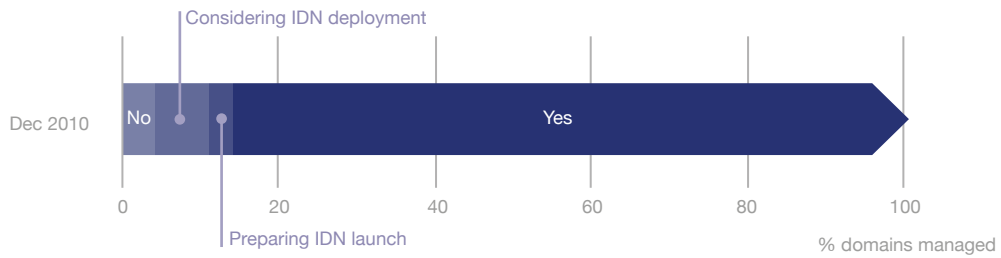
*Source: CENTR A-level Survey 2010, EURid 2011*



When viewed in terms of the number of domain names managed, it appears that, with a few exceptions, those registries with no plans to deploy IDNs tend to be smaller registries (figure 4).

**Figure 4 – Deployment of IDNs by domains managed**

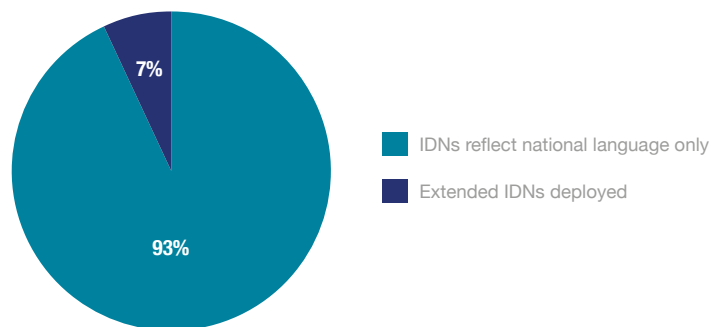
Source: CENTR A-level Survey 2010, EURid 2011



## 4.2 Link with locality

Excluding .com and .net, which are global in nature, the TLDs surveyed in the study strongly tended towards a minimalist approach when deploying IDNs. 93% deployed only the minimum scripts necessary to support national or regional languages<sup>14</sup>.

**Figure 5 – Link with locality – IDN deployment (2010) and local language**



The correlation between local languages and ccTLD IDN deployment in part reflects IETF advice that registries should deploy IDNs only in languages with which they are familiar.

<sup>14</sup> Source: CENTR A-Level Survey, Jan 2010, EURid/CENTR survey 2011

## 4.3 Growth rates

Growth rates are a useful indicator of user acceptance. In many ccTLDs, IDNs have been available for up to ten years and have gone through multiple renewal cycles. It is therefore justifiable to compare the growth rate of IDNs with that of the larger data set of overall registrations.

**Figure 6 – Annual growth rate (entire register) of TLD registries, with comparison IDN growth rates**

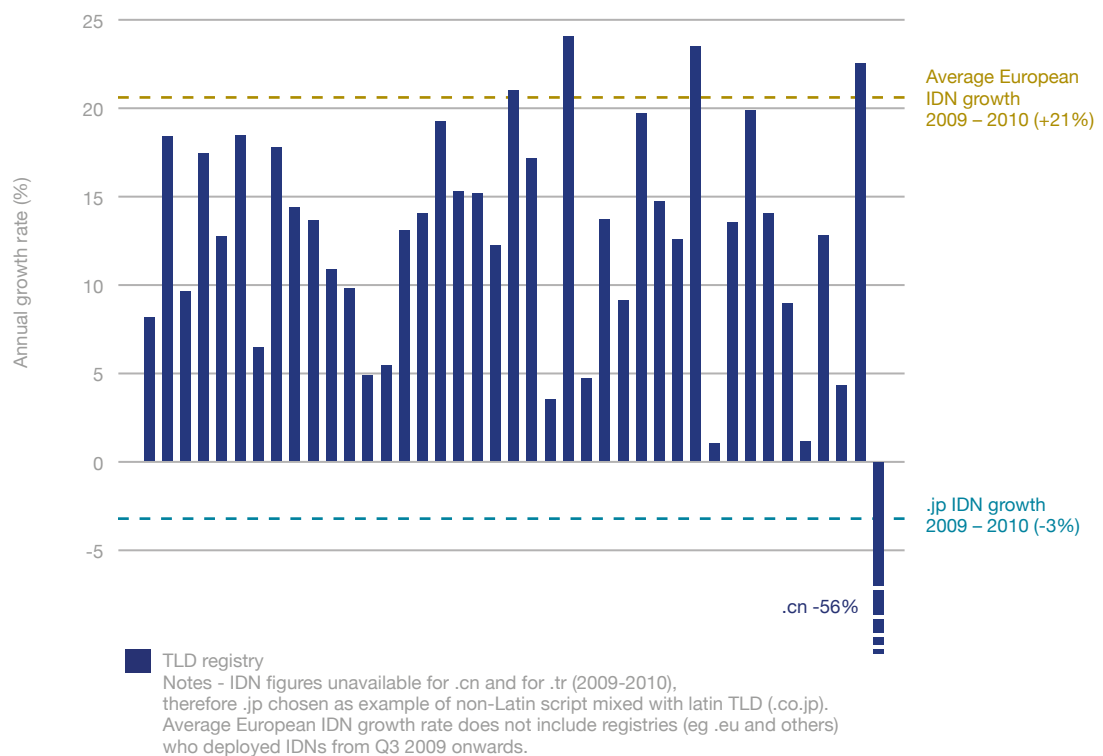


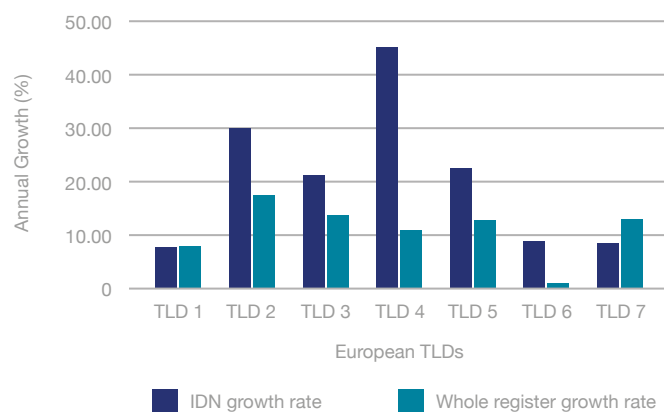
Figure 6 plots, in random order, more than 40 TLD registries (x-axis) which have implemented IDNs at the second or third levels for more than one year. The y-axis shows the annual growth rate of the entire register between December 2009 and December 2010, which averages 13% (with a standard deviation of 6). The two horizontal dotted lines measure the average growth rate of IDN registrations amongst European registries (21%), and the growth rate of IDN registrations under .jp (Japan), at -3%.

In terms of general growth, the outliers on the graph are .cn, which has diminished from over 13 million in 2008 to 6 million in 2010 through a combination of rules and pricing changes.

In terms of IDN growth, the Latin-based European IDNs generally outperformed others, reflecting the synergy between most European scripts and Latin-script TLD endings. In contrast, the IDN growth rates under .jp<sup>15</sup> were 8% lower than the growth of the general .jp register for 2010 (- 3% versus +5%), despite significant efforts by the Japanese registry in the field of IDNs for the past decade. This may be due to the hybrid nature of IDN.TLD registrations, for example 米谷嘉朗.jp.

The IDN data in figure 6 carries a number of potential biases. The data set for IDN growth rates is limited, and the standard deviation (>13) indicates a fairly wide distribution around the mathematical mean. However, a cross-check against the individual European registries which have been offering IDNs for more than one year, shows that IDN registrations tended to outperform general growth. In some cases, this reflected a promotion for IDNs (such as by the Portuguese registry), but otherwise there was no such explanation.

**Figure 7 – European TLDs:  
comparison of IDN growth rate versus whole register growth rate 2009-2010**



<sup>15</sup> Source: <http://jprs.co.jp/en/stat/domains.html>, accessed April 2011

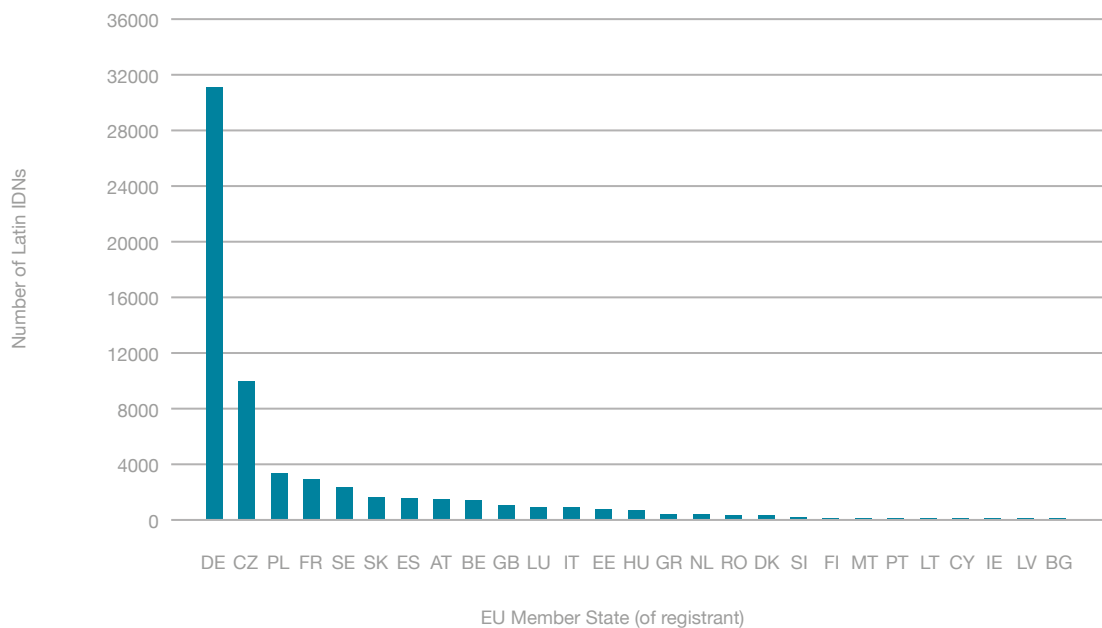
## 4.4 .eu and IDNs

In December 2009 EURid launched its landrush for IDN registrations at the second level (IDN.TLD) in three scripts (Latin, Cyrillic and Greek), reflecting the official languages of the EU Member States.

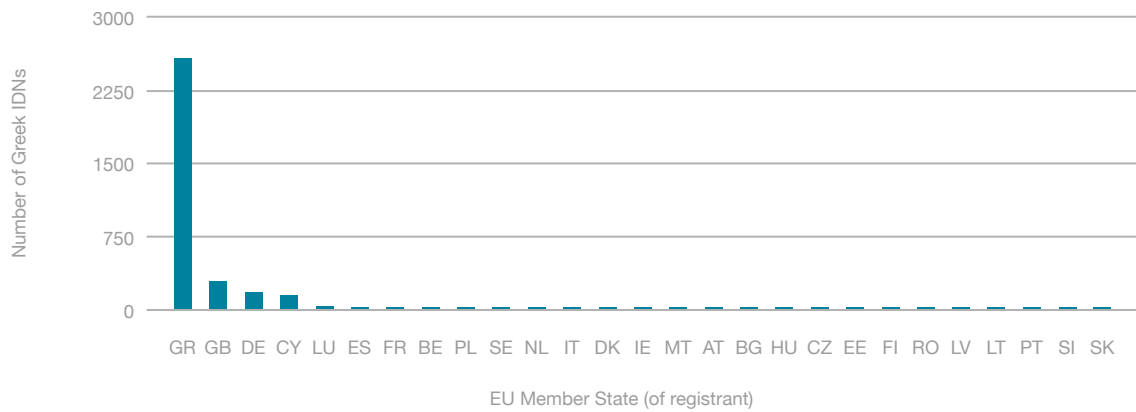
By December 2010, nearly 69 000 .eu IDNs had been registered. The broad base of nationalities and languages within the EU offers another opportunity to test the hypothesis that there is a strong link between locality and IDN registrations.

Latin-script domains make up 90% of all .eu IDNs. Analysis of the number of words in the .eu domain containing specific IDN characters, shows that the two most popular characters are ü (contained in 13 341 domains) and ä (in 12 655 domains), both of which are frequently found in German words. Measured by country of registrant, 31 729 .eu IDNs are from Germany, of which 31 242 are in the Latin script (figure 8).

**Figure 8 – Latin .eu IDNs per EU Member State, December 2010**



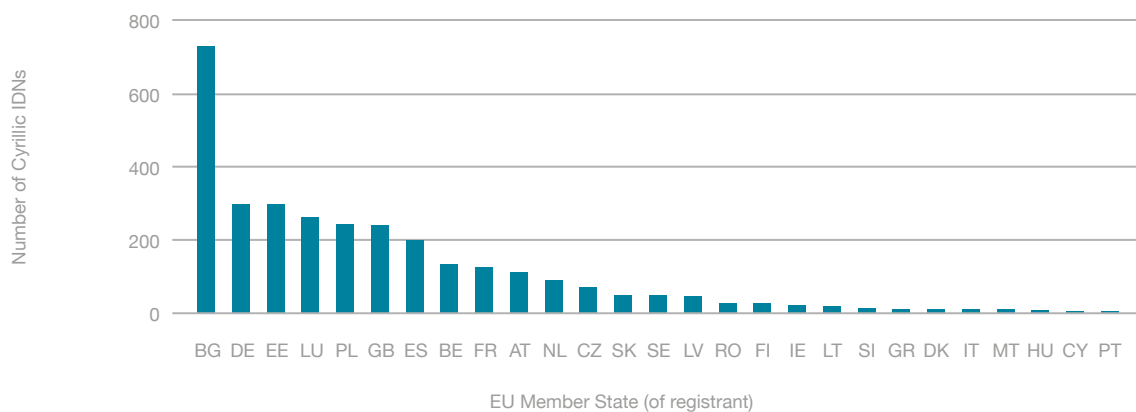
**Figure 9 – Greek .eu IDNs per EU Member State, December 2010**



Greek and Cyrillic IDNs under .eu are low, 3 455 and 3 127, respectively. However, for 75% of Greek .eu IDNs, the registrant is located in Greece (figure 9).

Cyrillic scripts are more evenly distributed than Greek scripts within .eu. The most popular country of registrant in terms of Cyrillic .eu IDNs is Bulgaria, with 23% of total Cyrillic IDN registrations. This is more than double that of the next most popular, Germany (figure 10).

**Figure 10 – Cyrillic .eu IDNs per EU Member State, December 2010**



The .eu domain provides an opportunity to observe user IDN registration patterns across all the EU Member States. Even though all three scripts (Latin, Greek and Cyrillic) are available across all the Member States, high volumes of IDN registrations are only seen in particular Member States where those scripts are most meaningful to local users. These examples support the view that IDN registrations correlate with local language use in the country of the registrant.

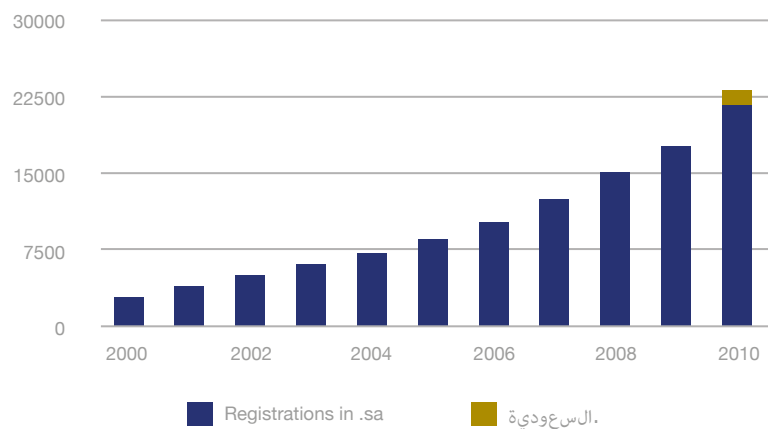
## 4.5 Case studies: IDN.IDN first experiences

For this study detailed feedback was received from the managers of .pڤ and one of their largest registrars, while some statistical information was provided by the managers of .السعودية (Saudi Arabia). The managers of the .مصر (Egypt) domain communicated that their planned landrush has not yet been implemented due to 2011's political changes in the country.

### 4.5.1 .السعودية (Saudi Arabia)

The landrush for .السعودية began on 27 September 2010. By the end of 2010, 1 441 Arabic domain names had been registered in just over three months, 35% of all domains registered under the Saudi TLD during the entire year. However, monthly registrations are stronger than in previous years. For example, 896 domains were registered during March 2011<sup>16</sup>, compared with an average of 205 per month between 2007 and 2009 (figure 11). Figures for 2011 will be a more accurate indicator of user acceptance, as they will not be distorted by the market shock of a landrush (see .pڤ example).

Figure 11 – Growth in .sa domain name registrations

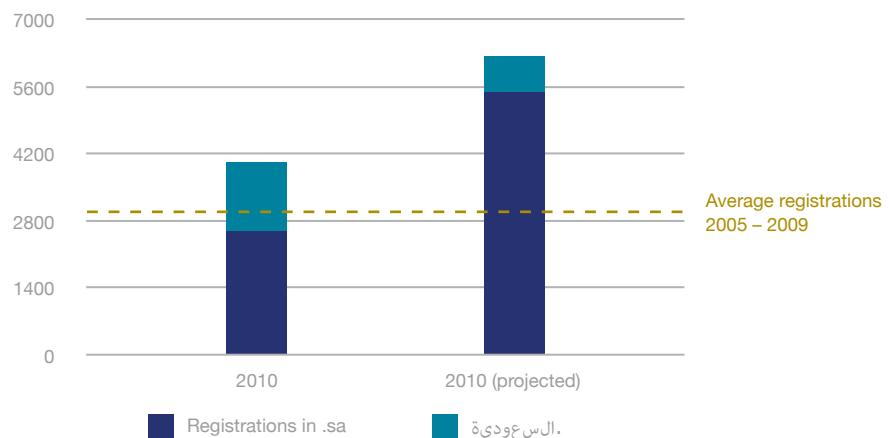


<sup>16</sup> <http://www.nic.net.sa/page.php?page=9&lang=1>



According to the [السعودية. registry](#), the Saudi Network Information Center, [السعودية. domain names](#) currently account for 7% of all registrations. Using this percentage and the overall growth of the TLD to date, registrations for 2011 are projected to more than double the average registration rate (2006 to 2009) on the assumption that current registration rates remain constant (figure 12).

**Figure 12 – .sa and السعودية. registrations, 2010-2011**



By the end of 2011 the actual registration level for [السعودية.](#) will have settled to a steady state. However, it seems that its launch has invigorated interest in Saudi domain names as a whole.

#### 4.5.2 .рф (Russian Federation)

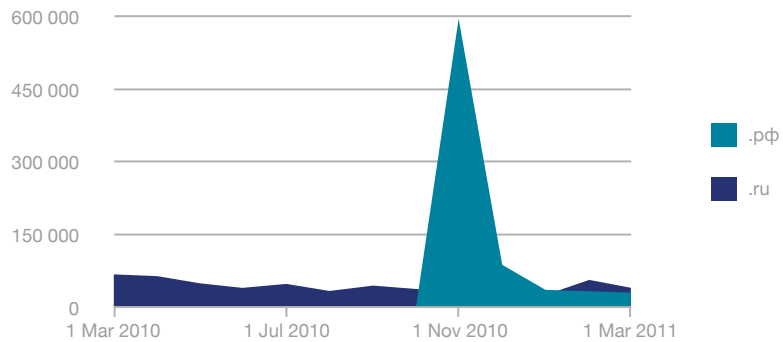
The launch of the [.рф](#) TLD followed a standard landrush pattern, with a huge spike in registrations in November 2010, which then settled into a steady state. According to the Russian registrar, Reg.Ru, the landrush surpassed even their most optimistic forecasts (figure 13).

Registration figures for [.рф](#) in the first quarter of 2011 show its continued popularity, averaging at 32 000 registrations per month, compared with 40 000 [.ru](#) domain names (figure 14).

Initially, Internet users and businesses were sceptical about the value of the new [.рф](#) domain. The registry therefore invested heavily in marketing, running a nationwide campaign prior to the launch<sup>17</sup>.

<sup>17</sup> Domain Wire, Issue 1, February 2011 <https://www.centr.org/main/domainwire.html>

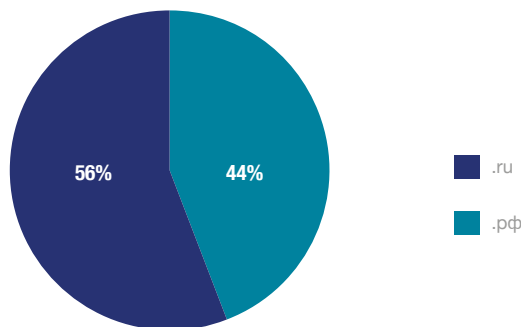
**Figure 13 – Growth in .рф and .ru domain name registration, 2010-2011**



The rate of domain names in use, known as a delegation rate, is a good indicator of the impact of a new domain, because domain names that are being used are more likely to be renewed<sup>18</sup>. Whereas in November 2010, less than 10% of the .рф domains were delegated, this had grown to 50% by late January 2011 (compared with around 70% in .ru). This is a high level of use, especially considering that lack of email functionality limits the utility of IDNs.

A poll conducted by Reg.Ru indicated that Internet users found it much easier to work with .рф domain names that 'spoke' their native language. The majority (71%) highlighted the advantage of Cyrillic domain names over Latin, as being easier to remember and spell. Many users found that Cyrillic domain names reduced searching times.

**Figure 14 – Registrations under .ru and .рф, Jan-Mar 2011**

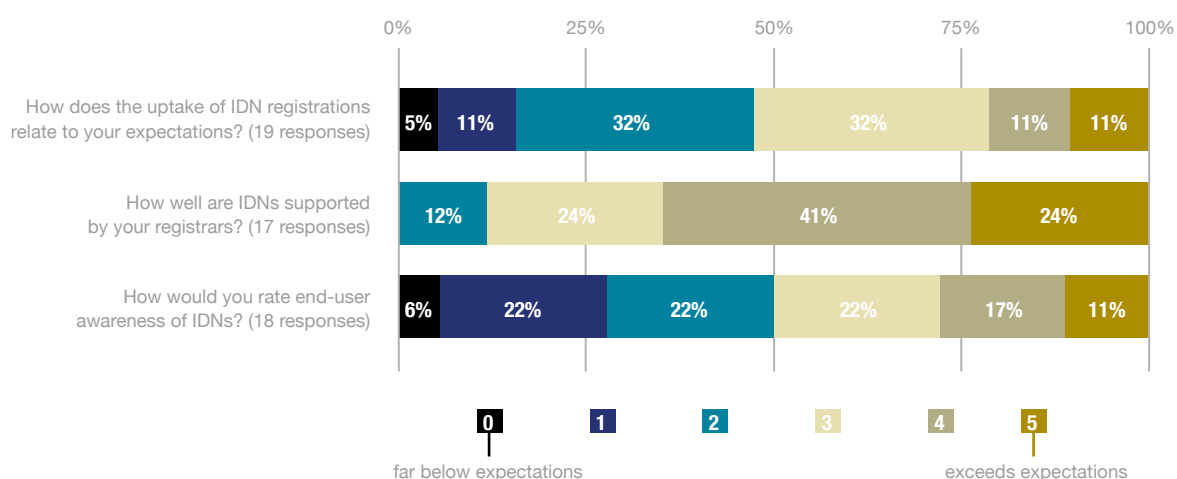


<sup>18</sup> VeriSign, The Domain Name Industry Brief, February 2011, page 4

## 4.6. Registries' views on IDN uptake

EURid/CENTR's survey of TLD registries asked for opinions on aspects of IDN implementation. For the purposes of this qualitative feedback, responses from the ccTLD manager for Russia relate to the .рф domain. Views on uptake varied, rating 2.7 out of a possible 5 (figure 15). The most positive responses came from registries that supported right to left local scripts, such as .il (Israel), Cyrillic scripts, such as .рф (Russia) and .ua (Ukraine), and those who supported their IDN launch with a promotional campaign, such as .pt (Portugal). At the other end of the scale, .at (Austria) commented that, having initially given away IDNs for free in 2006, resulting in 125 000 registrations, most were not renewed the following year.

**Figure 15 – TLD registries IDN uptake opinions**



The views on channel support for IDNs were more consistent, averaging at 3.8. End-user awareness rated 2.55, suggesting that there is still work to do to ensure that users are aware of the availability of IDNs.

Another factor in IDN uptake and popularity is the ease, or complexity, of transliterating or converting a particular script into ASCII code. For example, in a one-on-one interview, the Greek ccTLD registry manager described the complexities of Greek IDNs, which made it necessary to “bundle” at least two domain names for every registration to reflect the variation in accents (tonos) according to the positioning of letters within a word. In the manager's view, the bundling added complexity to the setup, maintenance and synchronisation of the domain names.

## 5 Barriers to uptake of IDNs

### 5.1 Email and other applications

In the EURid/CENTR survey, 82% of participants highlighted the addition of email functionality as the single change that would improve IDN uptake. The basis for this view is that email is a key aspect of domain functionality and while it is unavailable for IDNs their usefulness is limited. This is the case also with IDN ccTLDs. For example, the email service on Cyrillic domains operates in the form name@домен.рф, although some hosting companies can already support the email service имя@домен.рф.

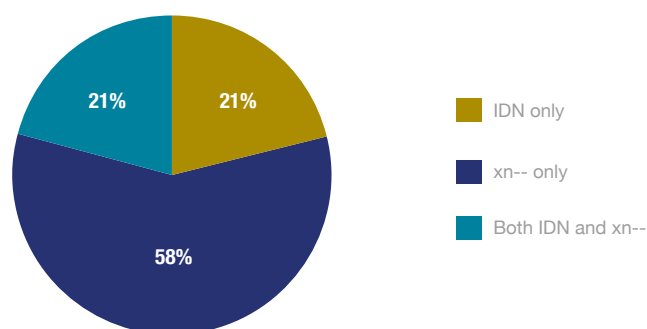
Work on IDN email compatibility continues. The IETF is currently working on the standards for IDN email and it is anticipated that full email functionality will be available by the end of 2012. Advances in this area will show the extent to which the email issue has been the barrier to uptake of IDNs.


Other suggestions for improvements were “full support by the mobile environment” and the “ability to use IDNs in all applications including WHOIS and web browsers”.

### 5.2 User experience – registration and use

In general, the easier it is to register in a domain, the more popular it becomes. Ease of IDN registration varies across the industry. One of the world's largest registrars told us that they only accept IDN registrations in their ASCII-based (xn--) form and provide no feedback to users as to the internationalised Unicode version. According to the EURid/CENTR survey, TLDs take a variety of approaches in registering IDNs (figure 16).

Figure 16 – Form of registration





Although the form of data recorded in the underlying TLD database does not necessarily reflect the user interface when making a registration, the different forms of registration show that a single industry standard has yet to emerge. Some registries, such as Veri-Sign, provide a local language interface for registrations, while some individual registrars provide transliteration (Reg.RU), or even translation services (e.g. 101domain.com).

### 5.3 Search and other alternatives

According to John Klensin and Patrick Fältström, users increasingly rely on search engines and portals rather than domain names as their main navigation tools<sup>19</sup>. Browser support for multiple scripts is improving and advances in search technology and predictive results are reducing the typing that a user has to perform. While this does not affect the fundamental reliance on the DNS as the Internet's addressing system, it does reduce the necessity for memorable domain names, and may in turn impact on registration behaviours.

## 6 IDNs and multilingual content

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One of UNESCO's key focuses is to enhance cultural diversity, including multilingualism. There are approximately 6 000 languages in the world, but only 12 languages accounted for 98% of Internet web pages in 2008. English, with 72% of web pages, is the dominant language online. UNESCO's report, *Twelve Years of Measuring Linguistic Diversity in the Internet* (2009), demonstrates the difficulties of finding reliable metrics for measuring the presence of languages on the Internet, especially as search engines no longer capture the majority of web pages. The report notes that the digital divide "is as much if not more about content production, as it is about access to the Internet"<sup>20</sup>. The study is transparent in describing its methodology, and its limitations, and is focused only on a small number of languages.

It may be that, in the search for more effective measurement of linguistic diversity in cyberspace, the emerging IDN.IDNs could provide a route for research, relying on the strong links between IDNs and local languages.

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<sup>19</sup> See Internationalization of Domain Names; A history of technology development, Klensin, J and Fältström, P  
<sup>20</sup> Pimienta et al (2009), page 37



## 7 Conclusions

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The introduction of IDNs in the Internet root domain is an important milestone in the development of multilingualism on the Internet. This is especially so for non-Latin scripts, including Arabic and Cyrillic. The success of the .pqf landrush highlights the impact of user education and marketing on public demand. Implementation of key services like email will further benefit uptake, making IDNs fully useable for the first time.

Early experiences of deploying IDN.IDN are exciting, despite the lack of email functionality. As the IDN.IDNs go through a full registration lifecycle, the degree of user acceptance will become clearer, for example through an analysis of renewal rates. The experience of European ccTLDs that have deployed Latin-script IDNs at the second level (IDN.TLD) suggests that IDN registrations tend to enjoy a higher growth rate than their general register and it will be interesting to compare the IDN.IDN renewal rates with those who have deployed at the second level.

IDNs are only one factor in achieving a multilingual Internet. There is still much to do, including securing basic Internet access for the majority of the world's population, and strengthening the environment for creating local language content. However, IDNs do provide an easy to measure, reliable up-to-date source of data. Furthermore, the links between IDN registrations and local languages are strong: eg the intensity of .eu IDN registrations in Greece (Greek script) and Bulgaria (Cyrillic script). This link opens up the potential for further research into multilingual content, using the "universe" of IDN registrations as a starting point to detect content in languages matching particular IDN scripts.

## Learn more

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The latest statistics on .eu performance and other .eu Insights reports are available at: <http://link.eurid.eu/insights>.

## About EURid

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EURid is the not-for-profit operator of the .eu top-level domain. Set up in 2003, EURid started general registration of .eu domain names in April 2006. More than 3 million domain names have been registered to date. To find out more about .eu and EURid, please go to [www.eurid.eu](http://www.eurid.eu). You can contact us directly in any official EU language by email to [info@eurid.eu](mailto:info@eurid.eu).

## Credits

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