

GeoTLDs and Internet Governance

An overview of the development and potential of geographical top-level domains and how they are governed

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Introduction

The introduction of new domain extensions (so-called top-level domains) like .berlin, .nyc or .swiss by the Internet's administrative organization ICANN has been long awaited by cities, regions and language and cultural communities.

In 2013, for the first time in the history of the Internet, new top-level domains which correspond to the names of cities and regions were approved by ICANN. As a result, domain name registrars worldwide are offering Internet addresses in the eight German geographic endings .bayern, .berlin, .hamburg, .koeln / .cologne, .nrw, .ruhr and .saarland.

Germany is the pioneer and leader in the global development towards GeoTLDs and the world's first publically available geographic domain extension, .berlin, came from Germany. ICANN expects dozens of other cities and regions from many other countries to follow this path and apply for their extension in the next 5-10 years.

All geographic top-level domains (GeoTLDs) have to get the permission of the relevant government(s) to operate the respective geographic string. The string could be the full name of a place (e.g. .sydney), a short form of the name (e.g. .rio), a common or official abbreviation (e.g. .bzh or .bcn), a translation to a foreign language (e.g. .cologne or .tokyo) or any other kind of association with the place name.

The operation of GeoTLDs by the Registry Operator, which is the organization that was contracted by ICANN to operate a GeoTLD, touches various areas of Internet governance. These areas are the subject of this article.

Different categories of Top-Level Domains

Today ICANN differentiates between five types of top-level domains which are basically distinguished by their contractual relationship to ICANN.

The country code top-level domains (ccTLDs) are operating the respective ISO 3166-1 two-letter country codes in national sovereignty and with contractual relationships to ICANN. These relationships exist in a wide range of different types, from no relationship to a loose letter exchange with ICANN, and on to a trilateral contract between ICANN, the national government and the registry operator. The registry operators of ccTLDs are widely different

and range from sole private entities, foundations, and cooperatives, to academic institutions and governments. In terms of Internet governance, ICANN is not at all engaged in the governance of ccTLDs, but handles and supports transition processes from one to another registry operator.

The generic top-level domains (gTLDs) have a direct contract with ICANN which comes in four different types. The gTLDs that were introduced before the year 2013 (e.g. .com, .info or .cat) have historically very individual contracts with ICANN which are in the process of being harmonized with ICANN's standard contract for gTLDs that was approved in 2013.

With these so-called new gTLDs, three more contracts which are based on the new standard contract (Registry Agreement, RA) are in place. The first category are the GeoTLDs (with a letter of support of non-objection from the relevant government(s)), the second are the Brand gTLDs (based on a registered brand) and the third are Community gTLDs which represent a long-standing and clearly-defined community such as .eco, .hotel or .radio.

In the governance of gTLDs, there are different levels of engagement of other stakeholders. In particular, those strings that denominate place names, financial terms, medical topics, corporate identifiers or religious terms have seen the involvement of stakeholders from various backgrounds.

Governance in GeoTLDs today and tomorrow

Recently a discussion started within the ICANN community about whether country-related names other than the two-letter country-codes should belong to the ccTLD universe. One could imagine .german, .germany, .deutschland, .allemagne, .brd also being managed by DENIC, the national registry operator for .de.

The fact is that translations of various two-letter country-codes into other national scripts have already been delegated by ICANN to the ccTLD Registry operators as ccTLDs. For instance, the Bulgarian ccTLD .bg was translated into its Cyrillic version .бг.

On the other side, country names like .swiss or continental names like .asia and, in the future .africa, are already delegated by ICANN with a gTLD or GeoTLD contact and their operation runs smoothly.

Although all geographic gTLDs have agreements with the relevant government(s), the operation of the GeoTLDs is just as diverse as that of the ccTLDs. The relationship of GeoTLDs with their stakeholder community is even closer than the one the ccTLDs have. In fact, the management of many of the ccTLDs has eroded from what it should be according to RFC 1591. Many are managed by organizations located far away from the respective country, without the national community's involvement and quite often in registration regiments similar to gTLDs. Examples among many are .me, .tv, .ws, .tk.

The fight that has already begun for the delegation of upcoming new top-level domains into

one or the other of the ccTLD or gTLD categories is a really stupid and anachronistic idea, like the one to renationalize the Internet. A global Internet deserves global solutions and the only way forward is to harmonize all existing top-level domains and tear down the borders between ccTLDs and gTLDs.

The Experience with GeoTLDs so far

The use of information and communication technologies for the simplification of public administration processes and communication between governmental, municipal, and other governmental institutions and citizens or enterprises is referred to as e-government.

e-Government is combined with the expectation that a wide range of benefits for economies, citizens (efficiency, customer orientation, participation) and the state (cost savings) are created. Nevertheless, there are still obstacles to the acceptance of e-government offers, which result, for example, from uncertainty in the area of data protection, but above all also from the lack of awareness of many offers.

Studies show the obstacles in the acceptance of e-Government

The e-government monitor, which is produced annually by the D21 e.V. and the ipima initiative, comes to the conclusion that the use of e-government offers in Germany has remained at the same low level for some years and is even partially declining. Compared to other countries such as Austria or Sweden, Germany is just luke-warm in accepting such offers. The studies identified the lack of awareness of many state-owned online services as a major obstacle.

This central finding is by no means new and has also been recorded in previous years and in many other studies.^{1,2,3,4,5,6,7,8} While users primarily use search engines to find offers, the administrative side seems to lack clear and strict concepts for improving online communication. In particular, the results associated with the concepts of user-friendliness, accessibility, findability, and communication are seen as important criteria for the success and acceptance of e-government offers in most studies.

In addition, the so-called media break (the jump from offline media to online media) is another

¹ McKinsey (2015): E-Government in Deutschland. Eine Bürgerperspektive. Berlin.
² European Commission (2004/2011): User Satisfaction and Usage Survey of eGovernment services
³ Accenture (2005): E-Government
⁴ European Commission(2007/2011): Breaking Barriers to eGovernment
⁵ Accenture (2008): From e-Government to e-Governance
⁶ Eurostat (2011): Internet use in households and by individuals in 2011
⁷ European Commission (2013): eGovernment in Germany
⁸ European Commission (2015): eGovernment in Germany

major barrier. A media break occurs, for instance, if an Internet user finds a long Internet address in a brochure of his city, which he has to type without errors before he can use the e-government offer, or to print out a form which must be sent to the authority after filling it out by hand or signing it.

Internet search as starting point in e-Government

According to the results of the D21 study, the focus is on the straightforward findability of e-government offers on the Internet as a central barrier to usage. For example, in the countries compared, Germany, Austria, Sweden and Switzerland, Internet searches via search engines are the most important starting point for finding authorities.⁹

At the same time, however, e-government offers are now facing growing competition with many other websites on the same or similar topics. For example, with much sought-after information and services related to the issues of birth, marriage, and funerals, the public offerings compete with those of websites of commercial private providers, which devote considerable resources to a good placement on search engines like Google.¹⁰

In the light of this background, cities and municipalities must strive to be as effective as possible in the competition for the leading positions in search engines. The service portals should be search engine optimized so that the information and services are also found by the search engines.

Currently, cities such as Berlin, Hamburg, Munich and Cologne are successful in relevant ranking criteria such as "content" and / or "backlinks" in the search engines of Google, Bing, Yahoo et al. and score points and achieve a good position with many inquiries from citizens. However, weak points are often noted in the fields of "technology (e.g., domains)," "user experience (e.g., responsive design)," and "social (e.g., Facebook etc.)".

As search engines continually adapt their criteria catalog, comprehensive vertical city portals are at a disadvantage in the long run against small and specialized private providers, which can identify individual areas of urban information, e.g. maps, transport or tourist information with apps and other features that portals cannot map for either technical or legal reasons.

Municipalities and federal states with their own domain endings - these being Bavaria, Berlin, Hamburg, Cologne, NRW and Saarland - have a new comparative advantage. In communication, you can use memorable web addresses with clear local references. If there is no stand-alone website, requests can be forwarded to the corresponding pages of the service portals. Examples of this are the cultural offers of the city of Cologne, which can be found today at www.buehnen.koeln, www.oper.koeln or www.schauspiel.koeln, or the Bavarian web portal www.freistaat.bayern, where the e-services of the Freestate of Bavaria are

⁹ Initiative D21 (2015): eGovernment Monitor 2015

¹⁰ PWC (2015): Deutschlands Städte werden digital

bundled. Concise, easy-to-remember web addresses also counteract the media break.

Concise Internet addresses with geo Domain Names

A total of 41 cities and 22 regions currently offer new domain names for citizens, businesses, and public authorities under a geographic ending. Operational models are different: 34 geographic domain extensions are operated by organizations from the private sector and 26 by public authorities; 3 GeoTLDs work as a public-private partnership. Re-financing the elaborate application process and the technical operation is usually done by the proceeds from the registrations of domain names by organizations, companies, and citizens.

However, all operators of GeoTLDs had to submit a letter of support from the relevant local authority, e.g. the mayor, the prime minister of the regional government or a corresponding federal ministry. In some countries, the letter of support has been awarded by a tender.

Most private operator organizations have also signed a contract with the respective local authority, which regulates charges, reservation of domains in the public interest or other conditions. For some geographical endings, there is the requirement that the owner of a domain also has a seat or place of residence in the respective city or region.

Particularly in Catalonia, the linguistically and culturally inspired .cat ending has been very successful for more than 10 years.¹¹

The cities of Barcelona and Istanbul have chosen an interesting approach of their own. The approach of Barcelona and Istanbul is that two domain extensions have been applied for at ICANN: one for the exclusive use of the administration (.bcn or .ist) as well as one for the use by private persons, companies and for the location marketing (.barcelona and .istanbul).

The emergence of local digital identities

Search engines like Google have accepted the new domain extensions positively and, according to initial findings, rank these as well as .de or .com.¹² The renowned search engine expert Searchmetrics has examined the new geographic endings and found that for example .berlin domains in the local area search better than .de or .com domains.¹³

At the local level, the geographic domain extensions represent an important complement to the Internet and communications infrastructure – similar to the telecommunications or electricity networks. In addition, local authorities have a differentiation factor in the

¹¹ <http://fundacio.cat/en/press/puntcat-foundation-media>

¹² <https://plus.google.com/+MattCutts/posts/4VaWg4TMM5F>

¹³ <http://blog.searchmetrics.com/de/2014/10/07/ranking-analyse-neuer-top-level-domains-berlin-tlds-in-der-lokalen-google-suche>

international location competition with the digital infrastructure of a domain ending, which has so far only been available in a few metropolises and regions worldwide.¹⁴

With the new endings, public bodies have the opportunity to use powerful and well-known Internet addresses, such as www.be-digital.berlin, www.freistaat.bayern or www.opendata.nrw. The public administrations of cities and regions with their own domain ending have reserved Internet addresses for these purposes, which correspond to sovereign tasks or are otherwise of public interest. But the majority of the reserved domains are still not used by most local authorities.

Especially active in Germany are the City of Cologne (www.stadt.koeln) and the federal states of Saarland (www.land.saarland), Bavaria (www.freistaat.bayern, www.zukunftskongress.bayern) and North Rhine-Westphalia (www.land.nrw).

They have begun to actively use their new endings. In Cologne, for example, the new domain www.stadt.koeln is currently automatically redirected to the existing www.stadt-koeln.de. In the medium to long term, however, the City of Cologne plans to completely switch to the new domain. In addition, many urban projects and topics are already active as a redirect to the existing website, e.g. wirtschaft.koeln, soziales.koeln, wahlen.koeln, umwelt.koeln, gesundheit.koeln, verkehr.koeln and many more.¹⁵

In the summer of 2015, North Rhine-Westphalia became the first federal state to gradually switch its IT infrastructure to its new domain extension .nrw. The state's central domain is now www.land.nrw. For example, other public bodies are addressed at www.kommunen.nrw or www.mais.nrw (Ministry of Labor, Integration and Social Affairs).

NRW Minister of Economic Affairs, Garrelt Duin, said at the presentation of the new domain extension: "With .nrw North Rhine-Westphalia gets a new virtual home on the Internet. Our companies in North Rhine-Westphalia now have the chance to place themselves on the Internet with the prominent abbreviation .nrw. In the worldwide address space of the Internet, the domain extensions ".de" or ".com" are scarcely available. The ending ".nrw" now also offers small and medium-sized companies from North Rhine-Westphalia the opportunity to acquire a meaningful address with a home address. Whether business, tourism, health, transport or administration in North Rhine-Westphalia – all industries can now benefit from the opportunity to be found quickly and regionally on the Internet".

Internationally, Rio de Janeiro launched its site campaign with www.visit.rio in time for the 2016 Olympic Games, and the international capital Brussels is promoting itself with www.visit.brussels, as is Cologne with www.visit.koeln.

In metropolises such as London, New York and Paris, where the city itself is the operator of the new digital identity, there are also numerous, predominantly new websites and projects of the administration addressed by a domain with its own ending. Examples are

¹⁴ <http://placebrandobserver.com/geographic-domain-extensions-for-place-marketing>

¹⁵ <http://www.stadt-koeln.de/politik-und-verwaltung/presse/koeln-statt-de>

www.gotogrow.london, www.digital.nyc or www.climatesummitlocalleaders.paris.

Since numerous endings only started a year ago and some will only start in the coming months, there will certainly be many exciting developments.

Summary

Following the successful introduction of the new geographic domain extensions, the first interim results indicate that their use by different local authorities follows different concepts of governance. While a few are governed more openly, like .com, and some are restricted, like .gov, the majority operate in a multi-stakeholder manner involving the local authorities, business associations, cultural groups, and citizens.

Comparing the domain registrations per inhabitants, those GeoTLDs that are operated solely by private organizations are more successful than those operated by the local government. This mirrors the experience in ccTLDs where business-driven extensions like .de have contributed much more to the country's identity than those strongly influenced by the government, like .fr or .it.

Meanwhile it is indisputable that new extensions have considerable potential for the communication of authorities with businesses and citizens in the context of digitization, smart city and e-government. They enable a significant improvement in the communication and findability of e-government services through Internet addresses which are brief and descriptive and which the target groups can very well remember (for example, www.gewerbeanmeldung.hamburg).

The new Internet addresses also provide a unified infrastructure for the digital connection of business and citizens to services of the administration and others, and can thus make an important contribution to improving the awareness and use of e-government services.

Other cities and regions which are also interested in introducing their own domain ending have to be patient for the moment. ICANN has not yet set a specific timetable for a further round of applications. However, in view of the complexity inherent in the entire application procedure for a new domain ending, local authorities are well advised to discuss early on possible operating models and the financing possibilities for their own future domain ending.