

NEW MODES OF REGULATORY GOVERNANCE FOR THE INTERNET? COUNTRY CODE TOP LEVEL DOMAINS IN EUROPE

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Abstract

Discussion of the evolving system of Internet governance has become prominent in the academic literature over the last decade or so. However, the role of the state in the governance of the vital system for Internet naming and addressing has been comparatively under-addressed by political science. The commercialization of the Internet has seen a substantive growth in country code domain name registrations (e.g. dot uk, dot de) raising significant questions about appropriate governance forms and regulatory functions to allow for both an efficient domain name market and a robust public policy framework to cater for consumer and citizen interests. This paper draws on conceptualisations of 'new governance' in emerging global economic sectors to characterise emerging patterns in country code top level domain name (ccTLD) governance in Europe. It finds that states have chosen to devolve the governance of ccTLDs to independent privately ordered parties, in the process creating non-hierarchical systems of governance characteristic of those found in the 'new governance' literature. Nevertheless, the state is still an important actor in these systems, whose precise position varies according to the national case in question.

Introduction

Electronic communications - traditionally composed of telecommunications and mass communications media - is, in several ways, the epitome of a fast-moving, dynamic sector of the 21st century international economy. The Internet, arguably *the* blazon of innovation in communications technologies, services and markets over the last 15 or so years, was originally viewed by many as a new potentially global communications frontier with radical transformative potential. Most situations of dynamic movement in technologies and markets tend to call forth debates on regulatory governance, often resulting in innovative change. Electronic communications is historically a sector in which governance – and regulatory change in particular - have been particularly important issues. Recent technological developments in electronic communications with convergence characteristics, such as the Internet, have further complicated matters, raising issues of ‘cross-boundary’ regulatory governance.

Historically, the state in Europe has exercised a strong interventionist role in the electronic communications sector, something which the development of the Internet appeared as a radical challenge to, in the first instance at least. Though state-funded in its formative years, the Internet ‘grew up’ outside the confines of mainstream electronic communications in the USA. It developed a libertarian, even ‘counter-cultural’, communications philosophy in the days when utilised primarily by academics and computer enthusiasts. Its subsequent commercialisation, though challenging this original model, nevertheless too was radical and liberal in terms of the orthodoxy of free market capitalism it espoused. All this development suggested strongly that the Internet, though resembling other parts of the electronic communications sector, was developing in a radically different way from them, not least in terms of governance (or the lack of it) and the (potential) role of the state. John Perry Barlow, addressing the state even went as far as to assert, ‘I declare the global social space we are building to be naturally independent of the tyrannies you seek to impose on us. You have no moral right to rule us nor do you possess any methods of enforcement we have true reason to fear’ (<http://homes.eff.org/~barlow/Declaration-Final.html>).

This paper focuses on the development in Europe of one, to date under-addressed, aspect of the complex governance constellation developing around the Internet: its system of naming and addressing. At the international level, the Internet Corporation for Assigned Names and Numbers (ICANN) was formed in 1999 assuming governance responsibility for the critical technical and organisational resources required to facilitate this. As is explained in more detail below, two types of nomenclature evolved for Internet addressing: generic (for example dot com, dot net and dot org) and country code (for example dot de, dot uk and dot fr). The system was hierarchically ordered, with Top Level Domains (either generic or country code) at the root of a typical user’s Internet address and without which access to the Internet would be impossible (Mueller 2002). The organisation of Internet addressing through the country code system represented one obvious potential point of entry and influence for the state in Internet policy matters. Its commercialisation through the 1990s led to growing demand for ccTLDs by potential Internet users and governments which were not at the forefront of its early development. For governments, the ability to utilise ccTLDs as a means of creating a national identity in cyberspace and of ordering the nature of Internet communication undertaken by users, was obvious and proved attractive. To what extent, and precisely how, in Europe, would

the state try to bring itself back in (see Drezner 2004, 2007) to this aspect of Internet governance?

To tackle this question, this paper draws on recent findings from the literature on governance to characterize the development of ccTLD regulation in Europe. Recent political science work has paid considerable attention to the nature, and potential efficacy, of new kinds of regulatory governance, the outstanding feature of which is a modification to the traditional role of the state as evidenced in its hierarchical, directly interventionist form, characteristic of the corporatist era. Of particular interest in the last few years has been work which explores non-hierarchical regulatory governance which goes beyond the kind identified with the 'regulatory' state in Europe, itself a well-established replacement for the declining corporate state in an era of neo-liberalism. We posit in this paper that regulatory governance in the ccTLD sector and the role of the state in recent developments within this aspect of Internet governance, can be explained and understood within a spectrum inclusive of hierarchical governance at one end and non-hierarchical governance on the other. In the process, insights into the character and functioning of 'governance' might also be yielded from an exploration of the case of the Internet and the ccTLD sector specifically.

Although the research presented here is at an early stage, evidence suggests that non-hierarchical elements are recognizable in the governance of Europe's ccTLDs, although they do not take a standard 'government in absentia' form. They also vary on a case-by-case basis, despite a potentially strong policy convergence 'pull' from the global Internet governance level through ICANN. Thus, in a mixed picture, it is clear that, contrary to the predictions of advocates of (new) non-hierarchical governance, the state, or at least the public sector - is often a key player. The reasons for this paradoxical finding are explored in the paper, which proceeds structurally as follows. The next section of the paper charts the development of ccTLDs as resources of communication deemed to require a system of governance, and provides an understanding of the role of the state in the global and national aspects of ccTLD governance. Following this, the extent to which the Internet and its ccTLDs might be a suitable case to apply work on governance to yield explanatory utility is considered and an outline of the central aspects of and differences between hierarchical and non-hierarchical governance is provided. The penultimate section of the paper provides a brief overview of the features of ccTLD governance in Europe, paying particular attention to four cases which, taken together, provide examples of both similarity and variety to be found in current systems at the national level. They also illustrate the nature and extent of state involvement in this aspect of Internet governance. The final section of the paper explores the implications of the findings of the previous section and the case of ccTLDs for the study of new governance.

Understanding ccTLD Governance

The development of the Internet and, in particular, its commercialisation in the mid-1990s, greatly increased its economic and political significance, not least that of domain names, the key strategic identifiers for users of the World Wide Web. The Domain Name System (DNS) was originally conceived in governance terms, within a 'post-governmental' architecture, reflective of the liberal, decentralised vision of the technical and academic communities which constructed it. Nonetheless, in technical terms, the system is hierarchically ordered, the main purpose of which was to act as a mechanism

for matching numerical Internet Protocol (IP) addresses that identified individual host computers on the Internet, with user-friendly domain names. At the core of the DNS at the top of the hierarchy is the authoritative 'root' computer server, holding the data which all other root servers copy in order to enable identification of information in the Top Level Domain, and subsequent levels below this (Second Level Domain, Third Level Domain etc).

The increased importance of domain names in the global electronic economy, paralleled with an expansion in the number of economic and political stakeholders, led in 1999 to the global institutionalisation of their management and administration within the private, not-for-profit Internet Corporation for Assigned Names and Numbers (ICANN). Prior to this, allocation of Internet addresses was done on an ad hoc basis through the Internet Assigned Numbers Authority (IANA). In ICANN are recognisable several elements of 'new governance': it was set up as a self-regulatory body with only an advisory function for governments exercisable through the Governmental Advisory Committee (GAC). Given the history of Internet address management, private interest governance was considered preferable to government control by those interests which held determining influence in negotiations leading to ICANN's creation (see Mueller 2002). This approach did not sit well with many states and international governmental actors, exacerbated by the fact that ICANN operated under contract with the US Department of Commerce, giving the US government a direct oversight role, and thereby effective control, over the regulation of Internet identifiers (Christou and Simpson 2006, 2007).

There are two main identifiable forms of TLDs in cyberspace: generic (gTLDs), of which there are now 19 and country code (ccTLDs), of which there are 245. The number of registrations for ccTLDs has tripled from 12 million in 2000 to 33 million in 2005 (OECD 2006: 10). TLDs are strategic: they provide identity and a platform for socio-economic development. This, plus the corollary that abuses of the system has led to increased concerns over user and system security has, led governments to take a much greater interest in gaining a stake in their governance. ICANN's legitimacy and authority has been challenged by nation states both internally - with regard to the remit of its GAC and the US government's oversight role - and in the external policy environment, through the process leading to the UN organised World Summit on Information Society (WSIS) (2003-2005) (Christou and Simpson 2007, forthcoming). Control over ccTLDs has also been a sight of contestation where territorial interest, national symbolism and access to the global electronic economy have been key issues. Matters have been further complicated in that ccTLD management, unlike the case of gTLDs, involved a significant role for national bodies (albeit ad hoc in nature) in early adopter Internet states outside the US.

Although the presence of the state in TLD governance was deeply contested by those within the Internet community correlating such intervention with inefficiency, censorship and control, over the last five years or so there has been a gradual recognition, and for some acquiescence, that: 'policy authority for Internet related public policy issues is the sovereign right of States' (WSIS Declaration, Dec 2003). The fact that global Internet policy decisions have direct impact on national domains by virtue of the Internet's technical and managerial architecture means that the precise nature and extent of state policy-making authority is still contested. Deliberations through the WSIS (2005)

sponsored Working Group on Internet Governance (WGIG) aimed at reaching a resolution resulted in the creation of the UN based Internet Governance Forum (IGF), a multi-stakeholder discussion-only platform for governments and other stakeholders that would not have any oversight functions nor any role in the 'day-to-day or technical operations of the Internet' (WGIG 2005: 12). The IGF, though not the subject of this paper, does in some of its core elements mark an attempt to create a global level governance structure whose features are recognisable in the new regulatory governance literature.

The relationship between ccTLD administrations, national governments and ICANN has also, at times, been fractious. The initial informal 'post-governmental' model for ccTLD administration and delegation developed by the US Internet pioneer, Jon Postel, in the mid 1980s - underpinned by the RFC 1591 document¹ and delivered through IANA - had become unsustainable once governments awoke to the strategic importance of the Internet (although a self-regulatory approach remained). ICANN's attempt to formalise its relationship with governments through its Corporate Policy (ICANN 1999) and GAC principles (ICANN 2000), the latter recognising the sovereignty of national governments over their domain names, led initially only to protracted disagreement between ICANN and certain ccTLD managers and governments over its authority and legitimacy in terms of the IANA function and the delegation/re-delegation of domain names (Christou and Simpson 2007, forthcoming).

In order to remedy this situation the country code Name Supporting Organization (ccNSO) was established in 2002 to provide a voice to ccTLD administrations within the ICANN process, and to enable ICANN to: provide better support to ccTLD managers in delivering its IANA (that is, delegation/re-delegation) function; develop proposals for best practice for ccTLDs; coordinate with other ICANN committees and bodies on ccTLD issues. New structures were also agreed providing more flexibility and choice for ccTLD administrations in terms of the engagement frame and relationship they wished to pursue with ICANN. For those that sought to establish a formal relationship, an 'Accountability Framework' was elaborated setting out clearly the responsibilities of both ICANN and ccTLDs. Alternatively, a system of 'letter exchange' was designed for ccTLDs that desired a more informal arrangement with ICANN, whereby there was agreement on broad guidelines for the respective responsibilities of each party (<http://ccnso.icann.org/workinggroups/accountframeworkwg.htm>)

In addition, voluntary guidelines setting out a rationale for ccTLD fee contributions to the ICANN budget (a source of great contestation for many ccTLD administrations) was established in order to provide an equitable distribution of cost across the ccTLD community based on size and revenue (<http://ccnso.icann.org/about/files/guideline-cctld-contribution.pdf>)². The relationship between the national and global level, however, despite these changes, has merely improved at the margins, and can still only best be described as in flux, reflective of the Internet governance regime more broadly. More specifically, whilst some ccTLD administrations advocate a stronger role and voice for themselves within ICANN and cooperate actively with the ccNSO to develop policy, the majority of ccTLDs are still not ccNSO members (only 55 out of the 264 that exist, and only 8 of the 55 are from Europe) and have not signed a formal contract with ICANN³. The reasons for this are twofold. First, there is dispute over precisely which ccTLD policy matters should be addressed globally rather than locally. Second, there is an

ongoing questioning of the legitimacy of ICANN to govern the DNS (OECD 2006: 37). Here, ccTLDs within Europe have developed a collective regional voice within and outside ICANN through the privately constituted Council of European National Top-Level Domain Name Registries (CENTR). CENTR has also been proactive in coordinating ccTLD policy, developing best practice, and undertaking projects on important organisational and policy issues impacting on ccTLDs in Europe (see <http://www.centr.org/>), and provides an example of a European transnational body involved in 'new' governance activities in the ccTLD sector.

What then of the role of national governments in ccTLD governance at the national /local level? It is clear that to create a commercially efficient and public policy protective TLD at the national level requires some degree of consensus and convergence on guiding principles and practical rules for ccTLD governance between the global, regional and national levels, and between public and private actors within the policy process. However, whilst for the non-territorial gTLDs clear rules were provided and implemented globally by ICANN at the outset for their governance, this has not been the case with ccTLDs. The revised GAC Principles and Guidelines for the Delegation and Administration of ccTLDs recognised explicitly the principle of 'subsidiarity' in the relationship between ICANN, ccTLD administrations and governments, whereby ccTLD policy should be set locally unless the matter in question had indisputable impacts beyond the national level (ICANN 2005). In addition, the GAC principles (ICANN 2005) call for the public interest to be secured in existing national public policy frameworks though the procedural detail specifying the attainment of this is left open (OECD 2006). As a consequence, the ccTLD system which has developed at the national level bears the hallmarks of Internet governance as it has evolved over approximately the last two decades at the global level as well as approaches developed by states to governance of critical (in this case communications) resources with international political economic characteristics. To what extent can work on new regulatory governance assist in characterising and explaining the development of ccTLD regulatory governance nationally in Europe?

Modes of Governance and the State

A critical question for this paper is precisely how, in Europe, the state is bringing itself back in to the ccTLD aspect of Internet governance across our sample case studies. Whilst this has been addressed at length in relation to the developing international regulatory regime for the Internet (see Drezner 2004, 2007; Christou and Simpson 2007 in relation to the EU), ccTLD governance remains relatively under-theorised. The nature of state involvement in Internet governance can be understood in the context of changing state functions (or modes) of governance in a globalising world on, the one hand, and the peculiarities that underpinned the commercialisation of the Internet on the other. We have argued elsewhere (Christou and Simpson 2006, 2007) that core aspects of Internet governance developed at the EU level, notably for its own 'ccTLD', dot eu, can be characterised by a cross-fertilisation of the, by now, well documented rise of the regulatory state - where governance is based on process and an increased role for non-state actors within a legal backdrop (business, civil society, courts, industry) and the role of the state becomes that of 'steering' (guiding and steering the economy) rather than 'rowing' (direct intervention) - and the governance traditions that characterised the

historical evolution of the Internet, including decentralisation and self-regulation. The dot eu top level domain name is a classic example of double-agencification and state shadowed or 'regulated' self-regulation.

As yet, there is no precise agreement on the meaning of the term governance in the literature. Broadly defined, it may incorporate the 'empirical manifestation of state adaptation to its external environment' and 'the conceptual or theoretical representation of the coordination of social systems' (Pierre 2000: 3). This accommodates a situation where non-hierarchical forms of governance are prevalent as well the interaction of public and private actors within a governance network. It also accommodates questions about the nature and capacity of the state (and related public institutions) to steer, and in turn, the relationship of non-state (private and semi-private) actors and interests to the state. Here both formal and informal aspects of the interaction between public and private actors, 'which are manifested in different types of networks and public-private partnerships' (Kohler-Koch and Rittberger 2006, 29) are of concern. Overall, such a broad definition allows the complexity of the ccTLD 'regulatory regime' (Eberlein and Grande 2005) to be captured: the variety of relevant actors, public and private working within formal and informal processes and institutions.

In this context, a distinction is often made in the governance literature between the hierarchical mode – characterised by direct or delegated intervention and formal regulation through law (identifiable within the corporate and regulatory state) – and the 'new' non-hierarchical or plurilateral mode (Zielonka 2007; Cerny, 1993) characterised by informal arrangements, and the use of 'non-legal' tools such as codes of conduct, 'soft' law and contracts developed outside primary and secondary legislation (identifiable in the post-regulatory state literature – see Scot (2004)). Whilst hierarchical governance is about compliance with clear lines of control and responsibility emanating from central authorities or their agents, non-hierarchical governance incorporates networks, involving both public and private actors (Hooghe and Marks 2001, Eising and Kohler-Koch 1999), and multidimensional governance. It is also more about the pursuit of negotiation and persuasion, with incentives, rather than compliance with the threat of sanctions, to achieve regulatory outcomes. There is a movement away from the pyramidal (top-down) structure of governance, to more of a 'junction box' (Richardson 2001), with emphasis on 'gardening' rather than steering 'reflecting principles of flexibility, subsidiarity, devolution and differentiation' (Zielonka 2007: 192). Such non-hierarchical governance chimes with the idea of a 'post-regulatory state' which emphasises alternative tools outside state law for influencing regulatory behaviour, and the role of community, practice and socialisation to incentivise actors to comply. New modes of governance within the EU space, such as the Open Method of Coordination (OMC), are also reflective of the key features of post-regulatory state methods outside formal EU law, including benchmarking, peer-review, and standard setting, and tend to rely on voluntarism to achieve compliance (Eberlein and Kerwer 2004; Lodge 2007).

Non-hierarchical governance, argue its advocates, provides greater flexibility and efficiency. It provides a context for 'thick' learning, allowing states to cope much better with the pressures emanating from globalisation and regionalisation. However, it is by no means uncontested, most notably by states with strong *dirigiste* traditions. Its efficacy is also open to question in terms of legitimacy and accountability. Whereas traditional or hierarchical governance enjoys legitimacy through its underpinning in a system of

majority rule and a common national purpose (Zielonka 2007: 191), this is not true of non-hierarchical modes which operate outside the legal and political framework. Additionally, whilst hierarchical governance enjoys a relative degree of transparency and accountability through elections, private, self-regulated, networks within non-hierarchical governance modes are neither democratically elected nor accountable. Furthermore, non-hierarchical modes of governance raise questions of effectiveness and compliance.

The strict dichotomy between a hierarchical top-down public model, and a private non-hierarchical networked model, whilst heuristically useful, tends to belie reality. Whilst new non-hierarchical governance modes to meet public policy goals in a globalised era (Howlett and Rayner 2006:170) inevitably point to reduction in state capacity (and law to ensure compliance) through reliance on private actors, it has also been recognised that the distinction between the public and the private sphere is by no means clear (Black 2002:3; Ronit 2005). Often public and private spheres interact (Zielonka 2007): private governance not only needs recognition by the state but often ‘the state remains a central feature in understanding the governance functions undertaken by private actors in both domestic and international affairs’ (Graz and Nölke 2007, 20, forthcoming). Furthermore, Stone-Sweet (2006: 627) argues that private governance systems are ‘parasitic on state authority’. Given the aim of this paper to characterise and explain the role of the state in ccTLD governance, it is thus important to provide further analytical benchmarks for analysing the public:private relationship (see Table 1).

Table 1 – The relationship between public and private

Hierarchical ←-----→ **Non-hierarchical**

Corporatist State

Regulatory State

Post Regulatory State

‘Concerted action’	‘Subcontracting’	‘Market-based regulation’/Coerced Self-regulation	‘Voluntary Action’
Where the state sets both formal and substantive conditions for rule-making	Where state involvement is limited to setting formal conditions for rule-making with private actors then shaping the content.	Involves industry-setting, monitoring and enforcing standards in the knowledge that if it fails, state intervention could be imminent, that is, self-regulation in the shadow of the state	Self-regulation can occur in a purely voluntary way with no direct state stimulus or intervention.

Source: Derived from ‘Self-regulation of Digital Media’ (2004, p.11) and Verhulst and Price (2005)

The two diametrically opposite types here are those of ‘voluntary action’, which occurs very rarely, and is germane to the idea of non-hierarchical governance, and that of ‘concerted action’, corresponding to a hierarchical mode of governance, whereby the state sets the legal and regulatory backdrop for rule-making and enforcement. Such typologies are not rigid, and the exact nature of the relationship between public and private actors can only be determined in the process of empirical investigation, which constantly reveals new often hybrid forms. The types identified, however, serve as

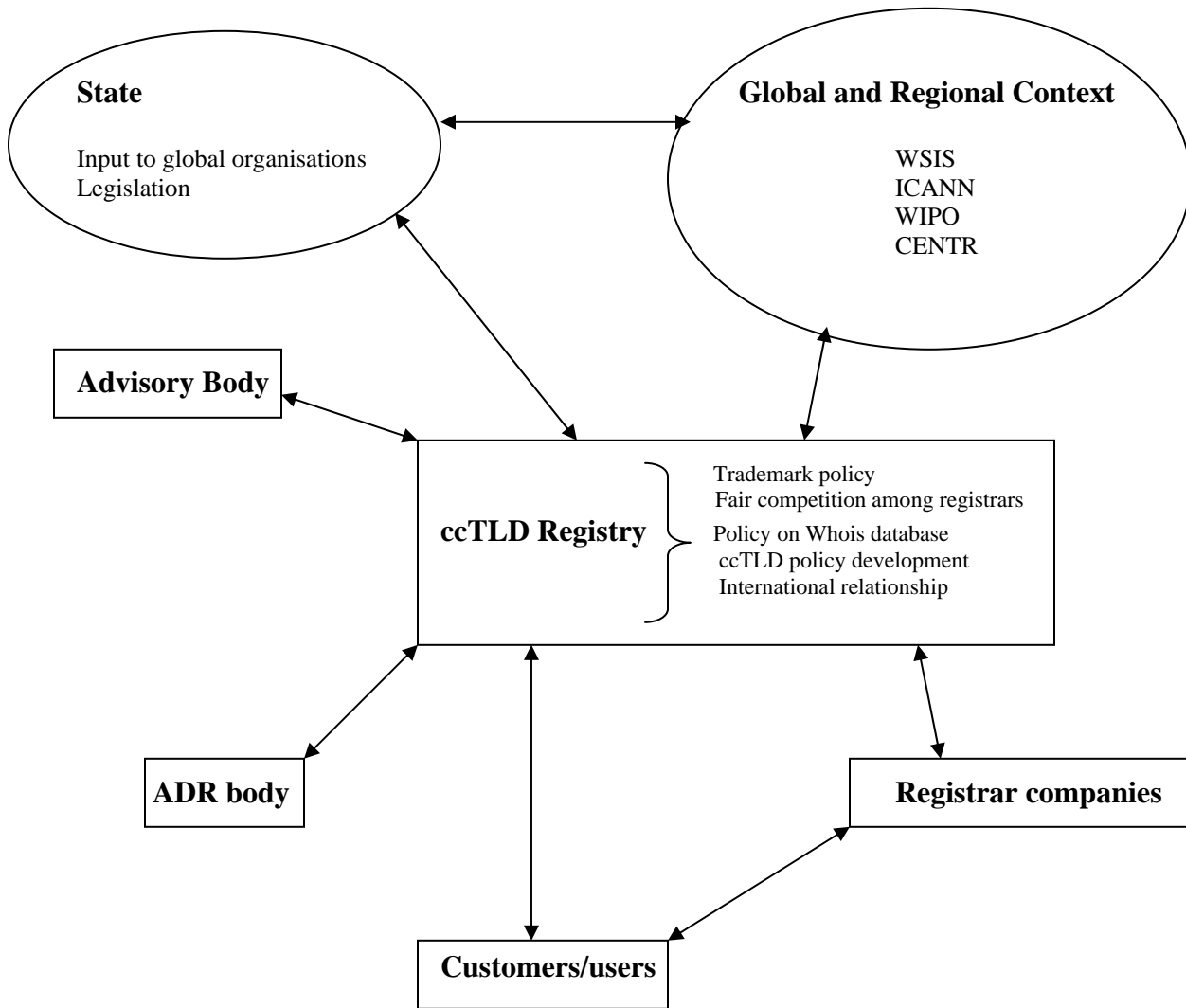
analytical benchmarks and are a useful starting point for conceptualising the regulatory governance regime in the ccTLD sector at the national level in Europe. Furthermore, they provide an indication of how much distance there is between the two extremes of the spectrum, the key features of what is likely to exist in-between, and directions in which development of regulatory governance modes can occur.

One of the most dominant discourses on globalisation⁴ emphasizes the decreasing role of states, and a commensurately enriched role for non-state actors in governance. In the Internet sector, the more radical elements of the Internet community predicted that ‘Government sovereignty, already eroded by forces such as trade liberalisation, will diminish further...no longer will governments be able to set...the standards they want’(cited in Drezner 2007: 93). To what extent has this been the case in ccTLD governance in Europe? To what extent can the literature on new regulatory governance explain the pattern of ccTLD governance which has emerged at the national level and what are the implications of this? The remainder of the paper moves to address these two questions.

Patterns of ccTLD Governance in Europe

As might be expected, based on existing research on the governance of global(ising) industrial/commercial phenomena at the national level in Europe (see Borzel 1993), the organization and governance of ccTLDs across Europe exhibit commonalities and distinct differences. In a field very much under-addressed by political scientists, two recent studies of ccTLDs worldwide by Geist (2003; 2004) and the OECD (2006) provide an opportunity to develop a picture of the broad characteristics of ccTLD governance. Figure 1 outlines the basic structural characteristics of ccTLD governance in a typical European national case. In terms of establishing the nature of ccTLD governance in Europe along our ‘hierarchical’ or ‘non-hierarchical’ spectrum, the two core criteria are, first, the nature and role of the ccTLD registry organization and, second, the relationship between the state and the registry. As the OECD (2006: 19) has shown, in Europe, for the most part, registries have been established as private commercially oriented entities, though operational on a not-for-profit basis (that is, cost recovery with some provision for financial contingency). The registry plays the pivotal role in the functioning and management of ccTLDs and is the central node in the ccTLD governance network (see Figure 1). It is the guardian of information, through stewardship of the ‘Whois’ database, on users who have registered names under a typical ccTLD and makes decisions on how much, and what kind, of information on users is made publicly available. It is responsible for regulating the behaviour of the ccTLD registrar industry – those companies which compete, often aggressively, to register a name for a user under the ccTLD. The registry has been responsible for setting the price for registrations per name and, in many cases, establishing a code of conduct for registrar companies to comply with. The registry is also responsible for hearing complaints from commercial players and customers involved in the ccTLD business. This has involved matters such as receiving submissions about commercial mal-practice and infringement of claimed legitimate rights to a name, principally trademark but also public sector. The registry, in

Figure 1: Core Features of ccTLD Governance in Europe



many cases is responsible for overseeing the system which has been set up to adjudicate on disputes between parties regarding domain names. Here, Alternative Dispute Resolution (ADR) services are offered where (often online) hearings are held to resolve conflicts without recourse to the formal legal system. Occasionally, registries have aimed to settle disputes on a more informal basis prior to ADR being operationalised.

Table 2 - Main Features of European ccTLDs.

COUNTRY	REGISTRY	TYPE	RELATIONSHIP WITH GOVERNMENT	INPUT OF GOVERNMENT
Austria	auDA	Not-for-profit corporation	Informal	Observer
Belgium	Nic.at	Not-for-profit corporation	Informal	None
Czech Republic	CZ.NIC	Not-for-profit corporation	Formal	Management
Denmark	DK Hostmaster	Not-for-profit corporation	Formal	Legislation
Finland	Ficora	Part of government	Formal	Legislation
France	AFNIC	Not-for-profit corporation	Formalizing	Council representatives
Germany	DENIC eG	Not-for-profit cooperative	Informal	Observer
Greece	FORTH-ICS	Foundation	Formal	Legislation – contract with national regulatory authority
Hungary	Domain.hu	Unspecified	Formal	Legislation
Ireland	IEDR	Not-for-profit corporation	None	Legislation
Italy	NIC.IT	Not-for-profit corporation	Formal	Management
Luxembourg	RESTENA Foundation	Academia	Unspecified	Unspecified
Netherlands	SIDN	Not-for-profit corporation	Joint project	Cabinet review
Norway	Norid	Not-for-profit corporation	Formal	Legislation
Poland	NASK	Not-for-profit corporation	Formal	Endorsement
Portugal	FCCN	Not-for-profit corporation	Unspecified	Unspecified
Spain	ES-NIC	Part of government	Formal	Legislation
Sweden	IIS	Not-for-profit corporation	Informal	Legislation
Switzerland	SWITCH	Academia	Formal	Legislation
UK	Nominet UK	Not-for-profit corporation	Informal	Advisory

Source: Adapted from OECD (2006: 19)

The aim in these instances is to achieve a swifter, cheaper, resolution of disputes, and is a clear example of private interest-delivered, sectoral self-regulation.

What of the role of the state in the governance of ccTLDs in Europe? A cursory examination of the position might suggest that a search for evidence of new non-hierarchical modes of regulatory governance here yields little. Work by the OECD (2006) argues that in Europe the state has a *formal* relationship with its ccTLD registry as often as it has an *informal* one. As shown in Table 2 above, formal relationships vary and can comprise: direct input to the management of the ccTLD registry found in the Czech Republic and Italy; the creation of directly applicable legislation as in the cases of Switzerland, Spain, Norway, Hungary, Greece, Finland and Denmark; and what is described as ‘endorsement’ in the Polish case. Informal relations range from nothing whatsoever as in the Belgian and Irish cases; observer status as in the cases of Austria and Germany; working in an advisory capacity as in the case of the UK; and through legislative input in the case of Sweden. The French case is described as a ‘formalising’ relationship where the government supplies Ministry representatives to the registry’s management board. The Dutch example is described as a ‘joint project’ in which the governing cabinet undertakes a periodic review of the running of the ccTLD.

This overview suggests a relatively strong presence of the state in the governance of its national ccTLD. The cases of Switzerland, Norway, France and the UK provide useful examples of the range of public sector involvement in the governance of the sector and its relationship to actors with private governance responsibility and are examined in more detail below.

In Switzerland, the Swiss Education and Research Network (SWITCH) as the registry for dot ch (Switzerland) and dot li (Lichtenstein), plays the pivotal role in ccTLD governance. An interesting ‘hybrid’, it was established in 1987 by the state and the university sector as a foundation of the private sector, and may be best be categorized as a form of ‘subcontracting’. In 1996, the Swiss introduced the idea of ‘holdership’, that is a right of use of domain names where these are not sold to customers but instead a fee is charged for services around their usage (Schneider 2005). In 2003, a set of regulations for dot ch were laid out in law in the Federal Constitution through the Telecommunications Act. An administrative contract between the Swiss telecommunications national regulatory authority OFCOM, which plays a public oversight role, and SWITCH was established. The Swiss system has been viewed as a public-private partnership with shared responsibilities between the state and the ccTLD registry where, together, the public policy and operational aspects of dot ch are delivered. The latter are conducted according to a ‘business-like’ modus operandi. Unlike in most European cases SWITCH undertakes registration functions from domain name applicants which apply directly to it (OFCOM and SWITCH 2003). A system of ADR exists whose first phase, mediation, is mandatory (Schneider 2005) and is carried out by the WIPO Arbitration and Mediation Center which provides a list of experts for approval by OFCOM. As of 2005, merely six cases had been dealt with, five of which resulted in the transfer of holdership rights. The underpinning goals of the Swiss system are to ensure credibility for the registry, transparency in the system of registration; to create shared responsibilities between the registry (functional and operational mostly) and government (representational in international fora mostly) (Schneider 2005).

The Norwegian registry for dot no, Norid, claims that it is a ‘neutral actor’, ‘anchored in a strong social responsibility’ (Norid 2007), and provides another example of a form of ‘subcontracting’ by the state. The registry’s main tasks concern processing applications for registration under dot no, which it receives from companies in the competitively ordered domain name registration business, begun in 1999, with now more than 400 firms in it. A detailed set of operational guidelines has been produced for registrars which must enter into an agreement with Norid. It also has the broader role of developing Norwegian domain name policy. Norid is regulated by the Domain Regulation and, like the Swiss case, is under the aegis of the national telecommunications regulatory authority. Norid is part of UNINETT AS, the National Academic Research Network, which was delegated responsibility for dot no in 1987. This is a parent company containing four subsidiaries which supply universities and research institutions ICT services, as well as undertaking what are described as ‘national ICT tasks’ under which the dot no registry function falls. UNINETT is owned by the Norwegian Ministry of Education and Research. Like the Swiss case, Norid, created in 1996, operates as a not-for-profit company. The system contains an ADR function in which Norid acts as a secretariat in collating necessary statements from parties to a dispute. There is an independent ADR body which adjudicates disputes, having handled 82 cases (Norid 2007) at the time of writing. The Norwegian system has undergone considerable liberalization and movement towards a market model, albeit delivered by a public sector company. From 2001, it became possible to register multiple names under dot no and from 2003 Norid’s status changed into a separate limited-liability company (Norid 2007b).

Created in 1987 also, the French ccTLD registry, AFNIC, was, until 1998, under the control of the French National Institute for Information Technology and Automation research (INRIA). It now, however, operates as a not-for-profit association without shareholders (Gorichon 2005). AFNIC’s management structure is a reflection of the dilemma of a traditionally mercantilist state such as France in the governance of a communications asset with social and now to a very considerable extent, commercial, imperatives. On the one hand, the presence of the state is very much in evidence in the management structure of the registry, the aim being to secure ‘co-development’. Here, as much as half the board of management of AFNIC come from the public sector, or ‘founder members’, as they are described: two representatives from INRIA and three from French government through, respectively, the Ministries for Telecommunications, Industry, and Research. Article 22 of AFNIC’s *Articles of Association* states that it, ‘may be dissolved at the request of the founder members of the association in order to entrust the continuation of the Association’s activity to a general interest legal entity with a similar purpose’. In France, ‘the ccTLD is held to be a public or collective resource that cannot come under the heading of private property and must be managed in the general interest...governments in the final instance have authority over the ccTLDs pertaining to their territory’ (French government 2003: 2).

On the other hand and by contrast, there has been a very significant move in the direction of liberalization in the ccTLD market in France in recent years. Once one of the most restrictive ccTLDs in Europe, in May 2004 it was made bureaucratically less burdensome (more flexible) for companies to register under dot fr, which resulted in an 88% growth in registrations in the following year (OECD 2006: 17). In June 2005, a

further liberalisation occurred when the AFNIC board decided to open up dot fr to private individuals to register third level domains (that is a domain sold under the second level e.g. .co.fr under dot fr (ibid). It is also clear that a much more market-oriented approach is being developed by AFNIC. In 2005, it launched a brand image survey, a procedure for the selection of publicity agencies and began to draft a new communications plan. It also created a series of relations support measures with the French registrar business, involving meeting them, consultation to determine their expectations and assembling a network of AFNIC correspondents in them to deal with information dissemination and feedback (AFNIC 2005: 12-13). AFNIC has also set up 'technical, marketing and communications working groups and legal workshops' (Weill 2005: p7). These would appear to be classic non-hierarchical governance measures.

AFNIC also claims to rely on recommendations made by two 'consultative committees' which meet regularly to discuss the major avenues of development and the structural choices envisaged by AFNIC (AFNIC 2005: 9). AFNIC has an ADR procedure which draws on the World Intellectual Property Organization's Universal Disputes Resolution Policy. Since 2006, AFNIC and the Internet Rights Forum have operated the 'Mediateur du Net' service (AFNIC 2007), though disputes have also been dealt with in the French courts particularly since liberalization of the ccTLD has occurred. An important further liberalizing change appeared to occur in 2007, when the French Telecommunications regulation, which sets out the basic principles relating to domain name governance, was modified to introduce a future selection procedure which is likely to involve the French minister for electronic communications choosing the company to act as the registry for dot fr. This suggests the creation of periodic competition to become the registry and was described as a profound change to the French ccTLD regulatory environment by the AFNIC president (Gorichon 2007: 6). It appears that the French model, due to the pressures of the global market in ccTLDs, has developed towards an operating environment resembling a liberal, non-hierarchical subcontracting model, with the state, nevertheless, still playing a strong role in setting the formal conditions under which AFNIC can operate and maintaining a strong presence on its board of management.

The UK ccTLD provides an example of a very liberalized and commercially successful entity, the closest to our 'voluntary action' category, but perhaps more accurately described as 'market-based' governance because of the possibility of the government intervention that looms in the UK internet economy should self-regulation be deemed to have failed. In July 2007, there were six million registered domain name holders under dot uk and it was reported that UK users were six times more likely to opt for the dot uk TLD as the dot com generic TLD (Nominet 2007). Dot uk was first administered on a voluntary basis in the 1980s by an organization known as the Naming Committee. As the 1990s proceeded, the domain name selling industry grew in commercial stature and it was decided that the management of domain names through the by now well-established registry functions needed to be organized differently. As a consequence, the dot uk registry, Nominet, was created in 1996 as a private not-for-profit (that is, cost neutral) concern (Nominet 2007) over which its members have ultimate control. In 2006, Nominet initiated steps to create a voluntary independent code of practice in which it aimed to act as a facilitator of discussions between different parties involved in the domain name business (Nominet 2006). Nominet adopts a highly commercial approach to its activities. For example, in 2005, it undertook a 'brand' re-

launch involving an attempt to improve its commercial image and, in 2006, appointed a director of marketing and communications with the aim of analyzing its current and future market to develop a better knowledge of 'purchasing and renewal behaviours'. An interesting goal is the pursuit of 'thought leadership', where the registry aims to express views on key issues. Nominet has declared itself interested in 'bring[ing] together different stakeholders to encourage solutions, debate and discussion through dialogue and information sharing' (Nominet 2006: 7). Nominet has recognized the tension existing in its governance role between balancing 'the requirements of stakeholder participation with the need to make decisions within acceptable timescales'. It has declared a wish to be an 'informed and sensible commentator...promoting self-regulation and an enabling environment for innovation and growth' (Nominet 2006: 9). It has argued that its 'unique position in the internet industry in the UK means that it has to liaise frequently with, and attempt to influence, government' (Nominet Council of Management 2002a: 1).

In 2002, the then Nominet Council of Management called for the creation of a UK domain industry code of practice (Nominet Council of Management 2002b). Nominet has a Policy Advisory Board which was created initially to allow a channel of communication from Nominet's membership to its Board, 'a forum for honing policy and a formal mechanism for member consultation' though it now contains a wider representation from UK industry and government (Nominet Policy Advisory Board 2007a: 1). The Nominet PAB at the time of writing contains a member of the UK government Information Commissioner's office, the UK Department of Trade and Industry and the UK All Party Internet Group (Nominet Policy Advisory Board Reports, 2007a and b). The recently created PAB Code of Conduct defines the PAB's role as 'assist[ing] with policy decision-making at Nominet' where the PAB is seen as a representative body for interests 'who include Nominet and its staff, its members, .uk domain name registrants, internet users, the PAB members' employers, or the organizations they represent, fellow PAB members...civil society, industry and the government' (Nominet Policy Advisory Board 2007c: 1). Clearly government is only one actor among a wide miscellany in this advisory only body.

Recent research by Geist (2003: 4) found that 'virtually every government that responded...either manages, retains direct control, or is contemplating formalizing its relationship with its national ccTLD'. The evidence from Europe presented above suggests a much more complex picture in which governments, whilst taking a keen interest in the development of their ccTLD, have taken pains to organize its governance in a non-hierarchical fashion which aims to create a negotiated position between different national public interest penchants and the features of Internet governance developed at the international level. In the consequent governance models, (quasi) private actors play the key roles. The voice of private interests in ccTLD governance was certainly clearly evident in the response to Geist's survey by CENTR, the European peak level organization for ccTLD registries. The report was claimed to be 'misleading: insisting on the involvement of governments on the Internet denies the crucial part the private sector played historically and the one it still has today in the growth and continued stability of the Internet' (pg 3.). CENTR went even as far as to claim that 'without substantiation by the facts, it appears that [Geist's] report has simply been written to encourage governments to take over the running of their ccTLD registry' (CENTR 2004: 1-2).

Conclusions

The, albeit preliminary, findings in this paper have implications on a conceptual level, in terms of the characterisation of governance for the Internet, and also a practical policy level, in terms of the efficacy of the ccTLD regulatory regimes evolving in different parts of Europe. Theoretically, it seems that in the case of governing the ccTLD sector in Europe the prediction that governmental activity would be sidelined has turned out to be grossly inaccurate in practice. The regulatory regime for ccTLDs has, on a general level, strongly featured non-state, private actors operating within a broader public-private network, with a contrasting role for the state in terms of direct and indirect involvement, and the separation of administration and policy, as is illustrated above. At the very least, our evidence demonstrates that the state is exercising a presence in the form of a shadowing role, even though the level and nature of that presence is characterised by variation along the governance spectrum (see Table 1).

The case of ccTLD governance provides an important piece of evidence on how new more flexible and devolved non-hierarchical regulatory governance is being practised in relatively novel policy domains. In the case of ccTLDs, we see a form of private interest ‘management’ and ‘stewardship’, which is governance. Here the pursuit of public interest goals, on the one hand, is evident: protection of information and intellectual property rights of individuals and corporate public and private entities; promotion of ‘national’ Internet presence; an attempt to preserve a ccTLD as some form of collective ‘resource’ to be used by the so-called ‘Internet community’. On the other, the ccTLD in Europe is a commercial phenomenon in which image and marketing, growth in terms of the number of registrations, issues like customer service, efficiency, corporate accountability and accrual of capital through enterprise for future investment are considered to be measures of success.

Within each of these ‘public interest’ and ‘neo-liberal-commercial’ dimensions, the state clearly has a vested interest in creating a successful, robust and efficient environment. However, the decision made by the state has been to devolve the mechanics of activity related to this to the private domain occupied by the ccTLD registry, registrar companies and ADR providers. This model represents a clear step beyond the kind of well-recognized ‘regulatory state’ capitalism which, whilst at one remove from the state, had largely hierarchical features, with a strong steering role still remaining in terms of administration and management. In addition, the highly competitive global ccTLD market – there are many alternatives for users in deciding which TLD they register their name under – has meant that governance of ccTLDs is predominantly moving towards more flexible, non-hierarchical governance. For government, this is manifest in new governance terms as ‘gardening’ in the case of the UK, but more ‘hybrid’ governance in the case of Norway, Switzerland and France. In the latter cases, the public sector presence still can provide a steering role, albeit within a more liberalized and devolved ‘subcontracting’ context.

An important research question raised by the modes of regulatory governance identified within our case studies is the extent to which the evolving systems have proven efficacious. Wigger and Nolke (2007: 506) argue that the professional and technical character of private interest regulation makes it more difficult to criticize whilst, in such systems, ‘the use of an apolitical image serves to hide the wider consequences of new regulation, thereby preventing the mobilization of negatively affected groups’. There

have been cases of attempts to abuse ccTLDs where the registry has had to resort to the formal legal system. Elsewhere, registries have documented cases where the ADR process has settled disputes between parties satisfactorily and others still, notably in France, where agreement has been reached in cases of conflict before convening an ADR panel was considered necessary. Thus far, it does appear that the system has functioned with sound practical efficacy. Zielonka (2007: 204-05) argues that non-hierarchical, decentralized systems of governance may promote enhanced deliberation reducing the likelihood of abuses of power and accountability where 'different centres watch each other's moves and publicize abuses of power. Enhanced deliberation also contributes to accountability because issues are considered in more depth by a variety of actors'. However, in the case of ccTLDs, the more commercialization proceeds, the greater is the prospect that public interest issues will struggle to maintain a presence. For example, whilst a reduction in requirements for registration may reduce red tape and bring the costs, and thus the price, to users of registering under a domain name down, this may also reduce the ability to curb the kinds of crime related to ccTLDs which may make them unattractive to users. There have also been examples of unfair commercial behaviour on behalf of registrars, where those with direct access to databases have been able to determine names whose renewal date is close with a view to acquiring them immediately on expiry because of their commercial potential (OECD 2006: 7). Another practice is to use the ability to query the system to buy up valuable names when a new second level domain is introduced. This then increases the cost to those wishing to purchase the domain in the secondary market (ibid: 22).

In any event, it is clear that ccTLDs provide an interesting example of a form of 'new' governance in which the presence of the state has been far from abandoned. Rather, in Europe, the state sits at the margins of a series of non-hierarchically ordered systems which, in operational and managerial terms, have been entrusted to private interests. This is distinctly different from merely creating a free market governed by competition law – instead the ccTLD registry, privately ordered, non-profit-making yet underpinned by a commercial ethos plays a key governance role in the functioning, but also the evolution, of the sector in question. The system relies on a balance between the functional dynamism and managerial efficacy of the registry, on the one hand, and its willingness to listen to the advice given by the often pluri-interest characterized advisory boards which often monitor sectoral activity. Much will hinge on the extent to which the pluri- and multi stakeholder governance characteristic of the Internet's recent development can survive in an increasingly commercial and competitive domain name market.

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ENDNOTES

¹ To avoid any potential political controversy, the established United Nations International Organization for Standardization codification (ISO 3166-1) was utilized to define what could and could not be a ccTLD

² According to the OECD (2006) the issue of financial contributions of certain ccTLDs to ICANN's budget is still unresolved, despite this. A budget working group within the ccNSO is therefore still working on 'providing ccTLDs with costs associated to ICANN in performing IANA functions that are in the interest of ccTLDs'.

³ Details of those ccTLDs that have signed an agreement with ICANN can be found at: <http://www.icann.org/cctlds/agreements.html>

⁴ Other works in this context have focused on the enduring role of the state in economic policy more generally (Hirst and Thompson 1996), whilst others still emphasise, in governance terms, the role states play in (re) producing and sustaining the global order (Rosenau and Czempiel 1992) and the close relationship between states and markets in the process of globalisation (Germain 1999; Held et al 1999).