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THE EVOLUTION OF NEXT GENERATION NETWORK ENVIRONMENTS IN
EUROPE - THE SIGNIFICANCE OF THE EU AS A POLICY ACTOR

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ABSTRACT

This paper undertakes an exploration of the current, and likely future, significance of the European Union as an actor in the emerging communication policy area of Next Generation Networks. In so doing, it explores the key approaches taken by the EU related to state aid that might be given to NGNs in respect of their construction, on the one hand, and the content that might be delivered through them, on the other. The paper also explores the idea of extended forms of 'regulated' competition that might be employed as NGN-related policies and the EU's likely position on them. Focus is here placed on the main aspects of the EU's recently articulated regulated NGN access policy, and, by contrast, the idea of the desirability of having to justify, and even to compete for available resources to deliver, public value media services in highly competitive NGN environments. The paper finds overall that the EU has already developed a significant presence in the NGN policy arena, notwithstanding the fact that it faces in the future the challenge of presenting itself as an actor with a coherent, coordinated remit and package in a diverse and complex area of communication policy

INTRODUCTION

The relatively new topic of Next Generation Networks (NGNs) is one which is ascending rapidly communications policy agendas in Europe and beyond. How these networks might be created and, beyond that, how they might function in a sustained and broadly useful manner, and the implications of this, are issues which crystallise a raft of often complex policy concerns that have emerged, for at least a decade, in historically distant, though increasingly connected, quarters of electronic network communications (mass communications broadcasting, telecommunications and, more recently, the Internet). At the root of these issues sit the even older, fundamental matters of the place of the market, on the one hand, and the public sector, on the other, in an evolving digital communications media landscape.

Having taken a keen interest in the evolution of communications media for some time, NGNs is a topic to which the European Union (EU) is paying considerable and growing attention, not least because of their international character and potential. It is by now a well established fact that the EU has proven eager to get involved in new areas of communications policy which might allow it to gain for itself new presence, and thus influence, at the supranational level. Such activity has been, at times, the subject of considerable criticism and controversy. This notwithstanding, the EU is now largely accepted to be a key player in the broad arena of European communication media policy within which NGNs is located and is developing.

Unsurprisingly, academic work on the emerging role and potential significance of the EU in specific area of NGN policy has barely begun. However, a considerable number of contributions, leaning towards either audiovisual policy or telecommunication policy perspectives, have addressed aspects relevant to the analysis. Here, topics include EU state aid in respect of the construction of NGNs infrastructure (Simpson 2009), regulated next generation broadband network access policy in Europe (Cave 2006; more broadly see Bauer 2010) and funding mechanisms such as digital 'taxes' and levies (Digital Britain Report 2010) on the telecommunication policy side. In respect of audiovisual

policy, specific studies of EU state aid to public service broadcasters (PSBs) (Donders and Pauwels 2008), the role of public service broadcasting in online environments (Trappel 2008; Van den Bulck 2008), the emergence of public service media (Bardoel and d'Haenens 2008) and new funding models for public service broadcasting contexts – for example public value tests - (Humphreys 2010; Radoslavov and Thomass 2010) are noteworthy.

This paper aims to take forward the analysis of the emerging role of the EU by exploring EU NGN policy through drawing together some of the insights of this work and, from this, providing a characterisation of the EU in NGN policy from a 'convergent' perspective. In the process, it aims to provide an assessment of the ability of the EU to become a leading policy player in the relatively new arena of NGNs. The paper takes forward its analysis by bringing together the key approaches taken by the EU in respect of the issue of state aid that might be given to NGNs in respect of their construction, on the one hand, and the content that might be delivered through them, on the other. It subsequently explores the idea of extended forms of 'regulated' competition that might be employed as NGN-related policies and the EU's likely position on them. Here, treatment is given briefly to the main aspects of the EU's recently articulated regulated NGN access policy, on the one hand, and, rather differently, the idea of the utility of having to justify, and even to compete for available resources to deliver, public value media services in what are likely to be highly competitive NGN environments. The final section of the paper draws some tentative conclusions on the current and likely future significance of the EU as a policy actor in NGN environments.

THE EU'S DIGITAL AGENDA AND CONVERGENCE

The EU's policy on NGNs has most recently been couched in a broader policy endeavour articulated as the *Digital Agenda for Europe* (DAE), launched in May 2010. From a communication policy perspective, the DAE is not a new development, per se. Rather, it can be viewed as the latest in a series of initiatives aimed at establishing the EU as a key actor in efforts to utilise information and communications technologies (ICT) for economic growth and social welfare enhancement. This stretches back to the early-to-mid

1990s in the shape of the landmark Bangemann Report (European Commission 1994), *Europe and the Global Information Society*, which spawned a succession of programmes on, variously, the Information Society, e-Europe and i-Europe. Set in the same vein as the new *Digital Agenda*, these initiatives, whilst exhibiting rhetorical strength and relatively high public presence, have suffered from being rather wide-ranging and diffuse in nature, thus militating against the achievement of policy coherence.

The DAE itself has seven broad goals, one of which is to provide EU citizenry with fast, and ultimately very high speed, Internet access. By 2020, the goal has been set to provide all users with download speeds of at least 30 Mbps, with half of these actually being able to download data from the Internet at the rate of 100Mbps (European Commission 2010a). The achievement of this goal might be regarded as germane to the delivery of several of the others in the agenda with a specific commercial and social bent, notably creation of a so-called Digital Single Market; enhancing digital literacy, skills and inclusion; and applying ICT to address social challenges such as climate change, rising healthcare costs and an ageing population (European Commission 2010b). More broadly still, and in the context of the global financial crisis of 2008 and subsequent economic recession affecting Europe, the EU set out, in March 2010, its *Europe 2020* economic growth package. One of the seven areas of priority outlined in the strategy is the DAE (European Commission 2010c; see also European Council 2009).

The creation of NGNs lies at the heart of the EU's goal of faster Internet access. In support of the latter, the European Commission, in September 2010, announced three complementary measures, aimed, respectively, at encouraging new investment by the public and private sectors in high speed broadband networks; creating a regulatory system for competitive access to NGNs; and a policy programme for the use of radio spectrum with a view to encouraging further growth in wireless broadband infrastructures and services (European Commission 2010d). In its communication on broadband investment, the European Commission gave what might be viewed as an important signal on its future approach to dealing with the role of the public sector in NGN delivery. Here, it argued that 'because of the critical role of the internet, the benefits for society as a

whole appear to be *much greater* than the private incentives to invest in faster networks' (emphasis added) (European Commission 2010e: 3). The Commission cited an estimate of the daunting cost of achieving its 2020 goals: the creation of ubiquitous 30 Mbs Internet usage speed would cost Euro 38-58 billion and to deliver 50% household coverage at 100Mbps would cost Euro 181-268 billion. As a consequence, it appeared to prescribe a dual approach, urging Member states to utilise the effective implementation of the EU's market-based Electronic Communications Regulatory Framework, on the one hand, and, on the other, its stipulations regarding state aid to broadband (see below).

In asking Member States to operationalise their broadband strategies, the Commission indicated that it would establish a system of cross-national peer review, and establishment and transfer of best practice, thus providing a clear indicator of the rising importance of 'soft' governance policy measures in the EU's interventions in communications media regulation. Recent work in telecommunication has found evidence that the EU has sought to employ soft governance measures to deal with policy matters whose detail proves either complex and/or controversial (see Simpson 2010) and there is also some evidence of this occurring in particularly thorny aspects of its audiovisual policy, notably media pluralism (Humphreys 2008). The issue of devising and executing an effective policy for NGN certainly fits in to this category.

It is useful to think of NGN as a key example of the policy challenges arising from the convergence of communications. Viewed broadly, NGNs present environments in which the long heralded convergence between IT, broadcasting, the Internet and telecommunication might actually be manifest. However, the still very much aspirational nature of the development was neatly (if perhaps inadvertently) summed up by the Commission recently when it argued that a key problem with current market led investment in NGNs is that 'outside areas where they face infrastructure competition, operators have been reluctant to move beyond their established...business. Most operators do not see a convincing business case for a large scale network upgrade...also considering that there are not, as yet, enough attractive services available that would make customers pay a premium price' (European Commission 2010e: 5).

In dealing with the kind of communications convergence policy challenges which a holistic - that is a network creation and effective service provision and content – approach to NGN requires, the EU has had mixed success at best to date. A somewhat notorious policy foray into the territory of creating an EU regulatory framework to cater for convergence through a Green Paper and subsequent consultation of the late 1990s (European Commission 1997), exposed the fact that whilst Member States at that stage were willing to countenance the creation of an EU level regulatory framework to cater for electronic communications networks (and associated services), there was considerable antipathy towards any move in this direction in respect of content, most clearly related to broadcasting (see Levy 1999; Michalis 1998). The limited ensuing policy compromise in the shape of what become known as the Electronic Communications Regulatory Framework was convergent only to the extent that it covered communications infrastructures. The episode merely served to point up, at the time, the weak position of the EU found itself in when attempting to exercise control over the evolution of electronic content services (or put more traditionally, broadcasting) in its Member States (Simpson 2000). However, almost a decade and a half later, and with the movement towards digital convergence having proceeded apace across the EU, to what extent is the EU now better placed to be able to develop as an effective policy actor in the essentially convergent communications landscape of NGN in which it is predicted a plethora of audiovisual services, old and new will increasingly be provided?

EU APPROACHES TO STATE AID IN NGN ENVIRONMENTS

Analysis of the EU's approach to state aid provides some answer to this question. The legitimacy or otherwise of state aid is determined through a well established legal framework ensconced in the EC Treaty, thus giving the EU considerable legitimacy and scope for action. Central to this are articles 87 and 88 dealing directly with state aid and article 86(2) on the application of the Treaty to services of general economic interest (SGEI), covering public service provision. Article 16 of the Treaty of Amsterdam introduced a specific provision on SGEI and, in 2005, the European Commission created an SGEI framework. The Commission has argued that state aid can ameliorate market

failures, though it has also recently gone further than this by contending that, even in cases where market efficiency is evident, societal gain might not be maximised, thus leaving grounds for state intervention to ensure that market effects generate enhanced social outcomes (European Commission 2009a).

Very clearly, however, even this approach is underscored by strong normative assumptions of the superiority of the market. As might be expected, therefore, the conditions under which state aid is deemed permissible are limited. Under article 87, a number of cumulative conditions need to pertain for state aid to be deemed to exist. The measure must be funded by the state and confer and provide economic benefits to those parties receiving it. It must in its effects or potential be competition distorting, in the process affecting intra EU trade (European Commission 2009a: 3). Article 86 of the EC Treaty deals with the application of state aid rules as public services (European Commission 2001) alongside the findings of the 2003 Altmark ruling, which focused specifically on services of general economic interest (SGEI). In order for a measure to lie outside the scope of article 87 (and thus remain beyond a Commission investigation), four Altmark criteria must be met. First, the state must have undertaken a formal entrustment of a service in question to the recipient of its resources alongside clear statement of its obligations. Second, there must be a transparent and objective system in place to establish the appropriate figure to compensate the service provider with for delivering the SGEI before any resources are transferred. Third, the compensation must not be excessive. Fourth, if the system does not operate along clear, competitive public procurement lines, the determination of appropriate compensation must occur by calculating the typical costs of providing the service allowing for a reasonable level of profit (European Commission 2009a: 5-6).

In any assessment of the compatibility of a state aid measure with article 87(3), the Commission undertakes a so-called 'balancing test' to compare the benefits of the measure against any competition distorting costs. In the important matter of national culture, Member states are permitted to view aid aimed at cultural promotion as appropriate as long as it does not affect trade and competition to an degree that might be

considered counter to the common (European Union) interest, though the Commission has made the point that public service broadcasting (PSB) revenue tends not to differentiate between the cultural, educational and democratic goals which it might aim to further (European Commission 2009b). Overall, the EU's approach is underpinned by two key ideas – maintaining the primacy of market based competition, where state aid is viewed as distortive, though necessary, and ensuring appropriate returns (value) for any state resources which are invested. In the context of NGN environments, this legal framework is supplemented by two key specific European Commission Communications on state aid to public service broadcasting (European Commission 2001 and 2009b) and another on broadband (European Commission 2009a) .

Infrastructural Issues – the EU's Approach to Public Sector Involvement in the Creation of NGN

The EU, through the European Commission, has recently provided an indication of how important a policy actor in NGN it can become by turning its attention to developing a policy position on the possible role which state aid might play in the crucial task of constructing NGN infrastructures. As noted above, pursuing the development of EU policy authority over the functioning of electronic communications infrastructures is an area in which the EU can be regarded as having been particularly successful. The Electronic Communications Regulatory Framework (ECRF), which came into force in 2003, covers all network infrastructures, including those used for the transmission of broadcast and Internet services (which are themselves excluded), though the ECRF regulatory agenda has tended to be dominated by telecommunication policy matters. This has involved a weighty and elaborate policy agenda around creating and adjusting a system of market based regulation framed at EU level and implemented nationally. Thus, unsurprisingly, the evolution of the ECRF and the creation of NGN environments has recently become a subject of some importance for the EU (see below).

A much less high profile area has been the EU's policy toward state aid in respect of the construction of broadband telecommunication networks and, lately, NGNs, specifically

what are referred to as Next Generation Access (NGA) networks (put simply, that part of the network closest to the end-user). This can be explained simply by the overwhelmingly liberal market agenda of EU telecommunication policy, where state intervention has been de-emphasised and even viewed with antipathy. Nonetheless, the EU has developed a set of rules for the consideration of state aid to broadband network construction and made (mostly favourable) judgements in a relatively modest number of cases¹.

Due to its liberal market framing, the circumstances in which state intervention in the construction of broadband networks can be sanctioned by the EU, like state aid in general, are very limited. Thus, paradoxically, the EU has strongly developed legal powers here but with limited scope for policy action (Simpson 2009). The EU has designated three kinds of system or 'area', denoted 'white', 'grey' and 'black' respectively. Each area reflects the degree of network competition pertaining in any particular case and is the basis from which judgements are made by the European Commission on whether state aid is permissible. White areas are defined as those in which no network infrastructure of the kind proposed through state aid exists, with no prospect of any being developed through other means in the near future. Grey areas have one broadband network in operation, thereby creating an undesirable monopoly situation which might be rectified through (partial) state assistance, where there is evidence that customer demand is not being met and where the state aid in question could be proven to be the least distorting of a range of measures that might be employed, not least market regulation. Thirdly, black areas are those in which there are two or more already functioning broadband networks in which service providers compete directly with each other. These areas will most likely not be considered appropriate for the receipt of state aid to create broadband networks (PLC 2009).

The recent examination by the EU of the potential scope for state intervention to assist the realisation of very high speed broadband, or NGN, suggested that this conservative perspective might be loosened and broadened to some extent. The growing realisation of the future importance of NGN development to economic growth lay behind the EU's thinking, given more urgency by the realisation of the likely medium to long term effects

of the international financial crisis on the EU's economy. The European Commission, in late 2008, urged investment in broadband infrastructures as part of an outline strategy for economic growth (European Commission 2008). In 2009, it produced consultative proposals (European Commission 2009a), followed by a finalised set of guidelines on state aid to broadband, a significant element of which addressed the issue of NGNs (European Commission 2009a).

In its analysis, the Commission made the important point that some key public work necessary for the creation of Next Generation Access networks, namely civil construction, can be undertaken without it being considered state aid as long as the work in question was not sector specific in nature. In other words, the infrastructural facility created by the work would have to be made available for use to entities beyond the communications sector. Beyond this, in its consideration of possible state aid for the construction of NGA networks, the Commission adopted a modified version of its 'traditional' broadband classification system. Here, in so-called 'white' areas, no NGA networks would be in existence with no likelihood of them being created through the market in the near future. The Commission in its final agreed rules shortened the definition of the near future from 5 to 3 years which pointed towards a loosening of the criteria that might permit state aid to be sanctioned (PLC 2009). In these areas, no basic broadband infrastructure may exist or there may be one or more provider of basic level broadband services. The Commission made it clear that it will consider the effects of any proposed state aid on existing broadband networks, as well as undertaking a balancing test. Where one basic broadband service provider exists, states must be able to show that the level of service does not meet private and business consumer needs and that the policy goal in question cannot be achieved through non state aid means.

For so-called NGA network 'grey' areas, any state aid towards building a new network would have to demonstrate its necessity in terms of the existing NGA infrastructure being insufficient to satisfy demand, which suggests a (possibly contradictory) tolerance of regulated network monopoly (Simpson 2009). Regarding NGA network 'black' areas, the agreed Commission guidelines declare state aid for the provision of a *new* network

unacceptable in terms of competition distortion. However, the guidelines also indicate possible scope for state assistance regarding the transition from ‘traditional’ broadband network ‘black’ areas to NGA network ‘black’ areas where the timeline is judged too lengthy and thus unresponsive to user demands. Those receiving assistance in these circumstances would have to make available wholesale access to their network for seven years and the network would have to allow complete unbundling.

Content Issues – Evidence from the EU’s approach to State Aid to PSB and its Extension into PSM Environments

The domain of state aid to public service broadcasting is one in which the EU’s policy powers, derived from its legally established remit, are as in the case of communications infrastructure, relatively strong and have a direct influence on content in NGN environments as they develop. Perhaps more significantly than in the case of infrastructure, they commence from the starting point assumption of the EU acting as a set of institutions with market integrating, shaping and policing goals. This has been very clearly illustrated in the EU’s consideration of the movement by public service broadcasters towards developing new digital content and services, part of which would be delivered online. The matter addressed directly, and controversially, the extent to which current online – and by extension future NGN – environments are, in the EU’s perspective, a legitimate space within which public service media activities can be sanctioned at the national level.

Historically, as is well established, Member States have maintained tight control over the development of public service broadcasting in their territories, resisting strongly, for the most part, any efforts made to transfer regulatory sovereignty to the EU level. The Commission, in an important recent update of its 2001 Communication on state aid to public service broadcasting, in part aimed at dealing with new public service media environments of the kind expected to be delivered through NGNs, has stated its support for broadcasters with a public service remit taking advantage of :

‘the opportunities for [delivery of] services offered by digitalisation and the diversification of distribution platforms on a technology neutral basis, to the benefit of society...public service broadcasters may use state aid to provide audiovisual services over new distribution platforms, catering for the general public as well as for special interests, provided that they are addressing the same democratic, social and cultural needs of the society in question, and do not entail disproportionate effects on the market, which are not necessary for the fulfilment of the public service remit’ (European Commission 2009a: 11).

Nevertheless, despite the policy rhetoric, previous evidence suggests that the EU, based on the legal-economic tools at its disposal through the state aid framework, has been considerably more conservative in its consideration of developments in new media and the possible role of public service broadcasters across the EU in delivering public service media (PSM). Conscious of strongly guarded national Member State role in determining public service broadcasting, the Commission underlined the fact that its role here is ‘limited to checking for manifest error’ (ibid: 10). However, providing an important signal of its possible future policy leverage in NGN environments and the intention to use this, the Commission also argued that the ‘definition of the public service remit would...be in manifest error if it included activities that could not reasonably be considered to meet – in the wording of the Amsterdam Protocol - the “democratic, social and cultural needs of each society”’ (ibid: 8). The Commission went on to mention specifically advertising, e-commerce, teleshopping, premium rate numbers in game shows and sponsorship or merchandising, though clearly this also leaves scope for other matters to be included, that might not pass muster in terms of ‘public value’.

In their analysis of the application of EU state aid rules to PSB and, specifically, possible extensions of it into the public service media environment, Donders and Pauwels (2008) argue that in respect of the key criterion of definition, the European Commission has, in practice, merely expressed doubts, but not directly challenged, instances of public funding of broadcasters. In its 2009 guidelines, the Commission has stated that ‘the definition of the public service remit may also reflect the development and diversification of activities in the digital age and include audiovisual services on all platforms’ (European Commission 2009b: 7).

When considering the important criterion of proportionality, by contrast, negative decisions have been taken by the EU in respect of the new media activities of the Dutch broadcaster, NOS, and the Danish broadcaster, TV2. However, the extent to which the Commission is able to undertake accurate calculations in its decisions here has been called into question. Beyond this, perhaps the most important issue for the delivery of public service media in NGN environments concerns the requirement in EU state aid rules for a modification of definition and entrustment arrangements in respect of the public service provider, to take place. In its protracted and controversial examination of the digital media expansion of German broadcasters ZDF and ARD, the Commission argued against bestowing a general authorisation to PSBs to deliver the kinds of new services that will characterise NGN environments (Donders and Pauwels 2008: 302-4). This case also generated a very significant outcome in respect of the creation of so-called public value tests at the national level (see below).

The Commission has also made some interesting comments on the possibility of PSBs charging personal subscriptions to customers for individual services, a situation likely to be highly characteristic of future NGN service contexts. Here ‘a direct remuneration element in such services – while having an impact on viewers - does not necessarily mean that these services are not manifestly part of the public service remit provided that the pay element does not compromise the distinctive character of the public service in terms of serving the social, democratic and cultural needs of citizens, which distinguishes public services from purely commercial activities’ (European Commission 2009b: 12). It went on to argue, perhaps somewhat contradictorily, its familiar refrain that PSBs could be entrusted with these services by states as long as there were not disproportionate effects on competition and intra-EU trade. The Commission claimed that it was up to Member States when considering any new audiovisual service in this manner to undertake a consultation and evaluation of whether or not the service met the specifications of the Amsterdam Protocol. This is clearly an area in which the EU is likely to try to exert its policy presence in the future.

REGULATED COMPETITION IN NGN ENVIRONMENTS: NETWORK AND SERVICE DELIVERY POTENTIAL

Regulated Competition and Next Generation Access Network Creation

The use of state aid as an EU policy lever to deliver NGN environments is overshadowed - and to a significant degree circumscribed - by the regulatory package that has been constructed at the EU level to deliver competition in electronic network communications. As noted above, the origins of the EU's Electronic Communications Regulatory Framework (ECRF) lie in a body of policy work developed since at least the mid-1980s whose aim has been to liberalise and harmonise the telecommunications markets of EU Member States (Michalis 2007). The ECRF is a broad and detailed framework whose legislative parameters are operationalised at the national level by a series of National Regulatory Authorities (NRAs). The EU, through the European Commission, has also the responsibility to ensure that the ECRF is implemented effectively at the national level (see Goodman 2006). Overall, therefore, in respect of the infrastructures and associated services that will make up the NGN environment, the EU can be seen to have developed considerable policy leverage through playing a key role in setting out and monitoring the regulated competition that characterises overwhelmingly an important part of any future system. In this context, what is in the public interest is viewed firmly through an end-user-consumerist, market, lens which eschews state intervention of the kind envisioned, albeit in a very limited way, in the EU's state aid policy for broadband infrastructure.

Around the same time as the EU began to develop its thinking on state aid to NGN, it also addressed the issue of regulated market competition as a route to their creation, with specific focus in this case on NGA networks. Unsurprisingly, it soon became clear that regulated competition was to be the main strategic route to the realisation of NGN infrastructural environments from the Commission's perspective. In 2008, it produced a draft Recommendation which approached NGA networks from two closely related angles. First, there was a strongly perceived need to incentivise those market players with enough investment capacity - essentially former telecommunications incumbents - to create them. Second, in tandem with this, the Commission sought to stimulate an

environment in which access to these core infrastructures could be afforded to the competitors of the incumbents which would have invested in upgrading their networks to NGA network specifications.

The problem faced by the EU and Member states alike centres on undertaking successfully a fine balancing act to realise each of these objectives. The answer, according to the Commission, should entail providing a strong regulatory system with features such as lowest level access (in this case to the incumbent's network ducts) to afford competitors the facility of installing their own fibre; access to unused fibre of the incumbent, as well as to its 'live' bitstream capacity (European Commission 2008). Overall, this essentially amounted to a system of asymmetric regulation aimed at mitigating the potentially excessive power of incumbents in NGA network environments. As such, the Commission's proposals were strongly criticised by the European Telecommunications Network Operators, the peak level representative body for the former incumbents (EurActiv.com, 12.6.09). Despite this, in September 2010, as part of its strategy for the realisation of the *Digital Agenda for Europe*, the Commission published final Recommendations for regulated access to NGA networks. Reflecting the fact that little, if anything, had changed in its thinking, the Commission noted at the outset that it wished to promote 'efficient investment in new and enhanced infrastructure, taking due account of the risks incurred by all investing undertakings and the need to maintain effective competition' (European Commission 2010f: 35).

Focusing its attention on two particular markets – respectively for wholesale network infrastructure access and wholesale broadband access – the Commission argued that NRAs should *inter alia*: provide, through mandated regulatory measures, access to existing civil engineering infrastructure at prices reflective of costs; ensure where legally permissible that the incumbent operators when building civil engineering infrastructure create space to allow alternative operators to use the facilities in question; mandate access to the terminating element of the incumbent's access network at cost oriented prices; encourage or, if legally possible, mandate incumbent operators to employ multiple fibre lines in the terminating part of the NGA; mandate, in principle, unbundled cost oriented

access to the fibre loop of incumbent operators plus co-location and back-haul measures (European Commission 2010f: 41-42). With respect to wholesale broadband access, the Commission recommended that incumbent operators be obliged to make new wholesale broadband access products available to competitors at least six months in advance of the incumbent offering its own services, unless other clear ways were available to ensure non-discrimination. These products should be regulated to mandate cost orientation in their pricing (European Commission 2010f: 42-43).

Given the economics of NGA network and NGN creation, there is little scope for creating much more than duopolistic network competition and significant arguments exist against doing so in the current economic climate. The policy alternatives for NGA are, thus, relatively few. Heavily engineered regulatory competition involves a political struggle between what the regulator wishes to impose and what the incumbent regulatee is capable of resisting. Regulatory network duopoly or oligopoly is far from the realisation of the neo-liberal market dream that has underpinned much telecommunication policy thinking in the EU since the late 1980s. The alternative of state public (re) ownership of network infrastructures to allow regulated competition to then take place across them seems highly unlikely to be proposed by the EU, nor to be accepted by Member States.

Delivering Public Media Services Through Regulated Competition

The issue of the provision of content in future NGN contexts raises a series of interesting and controversial issues around the role that public service media will play in the future. There is little doubt that the overwhelming majority of content services provided across NGNs will be delivered in a system of regulated competition. The previous section has illustrated that the EU has become involved in a consideration of some of the state funded activities of public service broadcasters in new areas of content creation and service delivery which point towards the kind of future NGN service environment which is likely to evolve. In so doing, the EU has provided evidence that it is likely to be a significant policy actor. Further to this, as noted above, the EU's recent Communication on state aid to public broadcasting has delivered a general message of rhetorical support for the public funding of new service in online scenarios. However, tempering this, a key

message, consistently promoted by the EU is that any such activity fundamentally must not distort competition in the single market. Though very early days, to what extent, then, is the EU likely to develop policy positions on (re) articulations of public media service provision according to the parameters of regulated market competition?

A key issue for the EU, in its treatment of public resources allocated to broadcasting and extensions of it into the online environment, has been the need to provide a justification for the level of resourcing in question. More broadly, recent debates on public service broadcasting have focused on creating a methodology for the public utility of any extension of the PSB remit to be examined. So-called public value tests (PVT) in the UK and three step tests, “Drei-Stufen-Test” (DST), in Germany, are prominent examples of developments to address this challenge. The creation of the DST Germany is a direct consequence of the EU Commission’s controversial intervention in respect of complaints made to it, under the state aid framework described above, by German commercial broadcasters regarding the extension of activities of the publicly funded broadcasters ARD and ZDF. This resulted in an accommodation agreement between the EU and the German government, part of which is the DST. Here, the public licence fee payments were deemed compliant with EU competition law on the condition that a system was evidently in place in Germany to define and justify the remit of the PSB, of most concern being the possible move of PSBs into the provision of Internet based services. The DST, in the revised 2009 *Inter-State Treaty on Broadcasting*, became an important part of this. The new law stated that all PSB online services, existing and new, had to undergo a test to determine the extent to which the service is necessary to address societal, cultural, democratic and social needs, as well as the degree to which it contributes diversity in editorial content. The DST also considers the extent to which the public resources allocated to the service are necessary for its delivery. According to Radoslavov and Thomass (2010: 6-7), an assessment of ‘contribution to the journalistic and editorial competition (publizistischer Wettbewerb), which is specifically not a quantitative but a qualitative dimension, is the decisive element of the three step test’.

In the UK, the development of the PVT was initiated by the UK PSB, the BBC, itself and became part of its charter at the latest renewal point in 2006. Whilst possibly not a direct result of the EU's decision in respect of the complaints by German commercial broadcasters, it is likely that past and potential future investigation by the EU into activities of PSBs played some role. The UK case provides an important illustration of the policy dilemma in respect of the continued public funding of media services within an expanding and increasingly market-oriented communications environment, epitomised by the evolution to NGN environments. On the one hand, the PVT contains a public value assessment (PVA) conducted by the BBC's self-regulatory Trust. By contrast, the PVT also contains a market impact assessment (MIA) which is conducted independently by the UK's convergence communications regulator, the Office of Communications (Ofcom), whose remit lies very much in the domain of market regulation and monitoring.

At the end of a process set out to take, at most, six months in each case under consideration, it is the BBC's Trust which takes a final decision on whether to permit any extension in the BBC's public service activities. Here, the decision should hinge on it being satisfied that 'any likely adverse impact on the market is justified by the likely public value of the change' (BBC Trust 2007: 4). Overall, the PVT must consider impact on users; the financial implications of the change; the degree of novelty it would entail and, finally, its duration. In the PVA aspect of the test, a determination of the likely individual value to licence payers, as well as the overall societal value of the change is undertaken. Interestingly, this element of the PVT also contains an assessment of the value for money of any proposed change focusing on what it would cost. The PVA contains four key criteria, called 'drivers of public value': reach, quality, impact and cost and value for money. The degree of difficulty in providing a systematic analysis of public value is betrayed by the Trust's assertion that 'the exact definition of each of these drivers of public value will be determined in the PVA and may vary depending on the nature of the relevant proposals' (BBC Trust 2007: 14).

The MIA aims to provide an assessment of the current and likely future effect of any extension of the BBC's activities on other services offered in the market in question. It is

important to note that while Ofcom undertakes the MIA, the process and outcome is overseen by a Joint Steering Group of Ofcom and BBC Trust members in equal numbers. An early example of an MIA carried out by Ofcom concerned a BBC proposal to set up local online video services. Here, Ofcom found that the BBC's proposal would have a significantly negative impact on commercial service providers' revenue streams. This provides an early clear example of the kind of exercises which will be increasingly conducted across the EU as Member States move towards NGN environments. The BBC's move to create a PVT could be seen as something of an anticipatory, defensive move (Humphreys 2010). However, it is clear that its component parts resonate with the issues which make up the much earlier enunciated elements of the EU's 1997 Protocol on Public Service Broadcasting in the Treaty of Amsterdam. Whilst the determination of the PSB remit remains very much at the national level, it is the case that the EU's ability to question it through various means, not least its competition policy investigative powers, will mean that it is likely to become a more influential actor in the way in which the content and service aspects of NGNs evolve.

Based on the evidence to date, and in respect of the idea of developing regulated competition to compete for public service resources to be made available for PMS, the EU is likely to be sympathetic towards changes which would result in sharing PMS revenues more among a range of broadcasters. This idea, though controversial, shows some signs of gaining influence at the national level. Its most high profile introduction has occurred in Ireland since 2005 with the sharing of a significant proportion of licence fee revenue (currently around Euro 14 million) among a range of broadcasters in addition to the main PSB, RTE (Rafter 2010). In the UK, a recent review of PSB with a focus on 'preparing for the digital future' raised the possibility of its more extensive distribution among organisations other than the BBC, citing evidence of public support for a possible move in this direction (Ofcom 2008: 92). Moves like these towards a competition for public revenue streams appear compatible with the EU's thinking on the evolution of PMS in NGN environments and are likely to elicit its support. The EU has a by now very well established view of the kind of Information Society that the move toward NGN would be an important manifestation of. Here, social welfare enhancement can be

delivered through market based activities and practices. Its influence on this kind of agenda is thus likely to become more significant in the future should support for its introduction be located beyond the confines of Ireland and the UK.

CONCLUSION: THE EMERGING CHARACTER AND FUTURE POTENTIAL OF THE EU AS AN ACTOR IN NGN POLICY

Next Generation Networks is a complex and somewhat embryonic topic in the communications policy landscape in which the EU has only recently begun to develop a policy position. The task of creating NGN is enormous in resource terms, has a strong international character and logic, and cuts across many aspects of electronic network communication. For the EU, therefore, this complexity and uncertainty can serve to create a context within which it will grow as a key policy actor. There are also, however, strong limitations to the ability of the EU to determine NGN policy developments in its Member States.

The EU is already showing clear signs of being a significant policy actor in the area of infrastructural development of NGN. Here its mandate is clear and well-established due, largely, to its policy successes in telecommunication. Through its legal remit and institutional activities around the liberalisation and harmonisation of markets that make up NGN infrastructural environments, the EU will play a key role alongside regulatory authorities at the national level across the EU. The EU has also recently begun to develop policy on NGN in respect of its legal powers covering state aid, the idea having come to prominence that the market alone may not be able to create NGN as quickly nor as extensively as European society would require. The basis of the EU's remit in both these regards is market-making and market-shaping. Given that NGN environments are likely to be driven predominantly by market forces and have an international dimension, the EU is thus well placed to become an influential policy player in NGN infrastructural evolution and monitoring, though is unlikely to play any significant role their resourcing.

Whilst the infrastructural creation aspect of NGN is fairly well developed, thinking on the content and service dimensions of NGN is arguably at an earlier stage. Given the

historically significant role of public service provision in broadcasting, a key issue concerns the place for such activity in content extensive, commercially dominated, NGN service environments. Central here is the extent to which publicly funded providers should be allowed to extend activities into the online world. This provides an apposite foretaste of NGN environments, where it is likely that most, if not all, services will be 'online' and delivered convergently. Bound up in this are concerns over ensuring a level competitive playing field, determining that public money is providing value and, more broadly, a debate on whether the public service remit might be shared through competitive tender in a diverse media environment that is likely to characterise NGN. As illustrated, the EU has already shown considerable interest, and arguably considerable policy muscle, in these areas. The more content rules related to NGN are articulated through a marketised agenda, and the more internationalised in outlook this develops as, then the greater is the scope for the EU to expand its influence as the policy ground shifts in a direction in which it has more legal authority and legitimacy. The European Commission, in the context of its considerable powers under the state aid framework exercised to some degree already in cases related to public service broadcasting, has also begun to develop policy and take decisions in respect of public service media providers in the online world.

Much more than in the case of NGN infrastructures, set against this move, however, is a strong conviction at the national level to determine individually the parameters of public service media in NGN contexts. In all but the case of services of a transnational character, the EU is likely to be happy to leave this to the Member State, not least because of its complexities and potential for controversy. The EU has set regulatory parameters for electronic commercial activity through its directive on e-commerce (see Christou and Simpson 2007) which may need to be modified if public service media remits allow for the selling of individually tailored media services to users. For the most part, however, the EU is likely to operate with more of a 'light touch' in this part of the NGN policy environment, through the use of measures from the soft governance toolkit. Its entry point here lies in its mandate in cultural policy, and its established Protocol on Public Service Broadcasting which succinctly sums up the EU's market dominated

perspective on the evolution of public service media and which may need to be modified as NGNs come on stream. The EU is also likely to produce light touch (non legally prescriptive) contributions to the debate on NGN content and services issues through extensions of the Commission's work on media pluralism.

Thus, the EU has the potential (and is likely therefore) to become a highly significant policy actor in NGN environments. However, a key problem it faces is presenting itself as an actor with a coherent, coordinated policy remit and package on NGN. Whilst its recently announced *Digital Agenda for Europe* is a useful marketing tool, it remains to be seen how the measures highlighted in this paper, where its remit and scope for action vary considerably, can be accommodated convincingly. The EU also faces the long-running challenges of achieving policy coordination between its key institutions, the European Council, the European Parliament and the European Commission, each of which is likely to take strong and potentially divergent positions on NGN policy matters. In any event, policy controversies, contradictions and successes (likely to be illuminated by scholars of European communications policy and the media as they arise) will do nothing to diminish the profile of the EU as a policy actor in NGN environments, which is already considerable and likely to grow.

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¹ Between December 2003 and August 2009, the European Commission has made 47 decisions in respect of state aid to broadband (European Commission Competition DG, 2009). Of the 22 decisions taken until 2006, the Commission adopted a negative conclusion in only one case.