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## Access regulation on NGA—A financial, market-led solution to bridge the gap between US and European diverging regulatory approaches

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### ABSTRACT

How to regulate wholesale access on next generation access (NGA) networks is probably the most pressing issue faced by European telecoms regulators today. The lack of actual competitive restraint from cable operators precludes the replication of US-like regulatory forbearance, as it might lead to the (re-) monopolization of broadband markets by telecoms incumbents, thus spoiling the celebrated achievements over the last decade, whereby competing operators have penetrated the market thanks to widespread access regulation over the DSL platform. However, as NGA networks are largely yet to be deployed, the threat of similar measures being extended is keeping incumbents from undertaking investments into NGA. This is particularly so given the perceived uncertainty about consumers' willingness to pay for next-generation Internet access services, which raises deep reservations about the viability of the business case for NGA. Such a stalemate is exacerbated by the difficulty of envisaging practical solutions to reach a "new regulatory contract", where conflicting interests are effectively balanced out for the benefit of the society overall. This article represents an attempt to address this vacuum. A "division of labour" between regulators and the market is proposed, in order to reflect distinctive capabilities in an incentive-compatible way. In particular, while regulators would be responsible for setting wholesale access terms, the market would be left to price the risk in NGA deployment through the functioning of a commodity option market.

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### 1. Introduction

Regulatory-wise, the issue of next generation access (NGA) can be framed in terms of a friction between supply-side and demand-side prevailing conditions. From a supply-side perspective, the deployment of optical fibre closer to consumers' premises would strengthen the importance of scale and scope economies, thus potentially leading to an enduring economic bottleneck.<sup>1</sup> From a demand-side perspective, investors face uncertainty about consumers' willingness to pay (WTP) for services that could be specifically delivered over upgraded access networks, while traditional sources of revenues are, and will increasingly be, commoditised and cannibalised.<sup>2</sup> This friction is a challenge to European telecoms regulators. The conventional regulatory approach—focused on cost orientation, price control and service quality—evolved on a widely deployed infrastructure whose cost had been largely recovered, whereas NGA networks are yet to be deployed.

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In this respect, a new divide has emerged between US and EU regulatory approaches.<sup>3</sup> In the former case, concerns about demand-side uncertainties and the degree of inter-platform competition—primarily from cable companies—led to a reshaping of the regulatory framework. The previous unbundling obligations on incumbent local-exchange carriers were eliminated, thus providing them with strong incentives to undertake widespread investment plans.<sup>4</sup>

On the other side of the Atlantic, supply-side concerns predominantly shaped regulators' stance toward announced investment initiatives in NGA, in the view that intra-platform competition must be safeguarded to prevent retail monopolization by fixed incumbents. However, *ex-ante* regulatory intervention – or the threat of it – might spoil incentives to invest in NGA, as investors face the risk of asymmetric regulatory treatment where returns are (not) capped under (negative) positive scenarios.<sup>5</sup> At the same time, regulators are keen not to promote investment *per se*, which might turn out to be inefficiently too large or/and too fast.

This tension is at the core of the European debate on regulatory principles of NGA and has so far precluded the development of effective and pragmatic solutions capable of balancing out the incentives for fixed incumbents with the interests of other stakeholders – notably, regulators and potential access seekers. This difficulty is witnessed by the current focus on potential remedies, which have been so far envisaged mainly in terms of promoting facility-based competition – that is, sub-loop unbundling and duct/facility sharing. This is at odds with the growing consensus that in an NGA environment the main competitive mode will take the form of either service-based competition (i.e., via bitstream access)<sup>6</sup> or risk-sharing initiatives through cooperative arrangements.<sup>7</sup>

This article is aimed at addressing this vacuum by introducing a “division of labour” between regulators and the market in order to reflect distinctive capabilities in an incentive-compatible way. In short, regulators set the wholesale access price and the risk in NGA deployment is priced through the functioning of a commodity option market. This approach would also comply with the European Regulatory Framework for Electronic Communications (the Regulatory Framework), which prevents regulators from entering into contingent commitments over a long period of time.<sup>8</sup>

While the next section investigates the economic aspects of NGA deployment from both supply-side and demand-side perspectives, Section 3 explains the current regulatory *impasse* in light of the described economic conditions. Similarly, Section 4 presents and analyses the proposal advanced in this article as a solution to the described regulatory *impasse*. Section 5 concludes.

## 2. The economics of NGA

Although NGA is an agnostic concept that encompasses a number of alternative access technologies (e.g., copper/fibre; cable; terrestrial fixed and mobile wireless; satellite; and power line), the debate has so far primarily focussed on the upgrading of wireline access networks, through substitution of copper with optical fibre, mainly undertaken by fixed incumbents. In this respect, telecoms incumbents typically argue that alternative technologies such as cable, wireless or powerline shall not be discounted as alternative technological platforms. On the other hand, the trade body of competing operators (COs) – ECTA – contested that wireless at present is not a sufficiently ubiquitous platform.<sup>9</sup> As a matter of fact, both the European Commission and sector regulators are focussing on fibre-based networks that are intended to replace in whole or to a large extent the copper-based broadband networks or, where present, current cable networks.<sup>10</sup>

With respect to the former platform, two main scenarios were initially broadly defined according to how far fibre is rolled out towards the end-user's premises, specifically: (i) fibre to the cabinet (FTTCab), or to the node (FTTN), where the copper is maintained between the end-user and the street cabinet; and (ii) fibre to the home/building (FTTH/B), which is a fully optical solution going to the end-user's premises.<sup>11</sup>

More recently, the European Commission moved away from this approach, by focussing primarily on FTTH networks, on the grounds that the former network architecture does not present the same investment risk profile.<sup>12</sup> In particular, the Commission appeared to favour the deployment of FTTH networks based on multiple fibre line,<sup>13</sup> which “is a form of fibre deployment in which the investor deploys more fibre lines than needed for its own purposes ... in order to sell access to additional fibre lines to other operators”.<sup>14</sup>

Given the transitional nature of NGA investments, the description of the underlying economic conditions should be assessed with reference to the current generation of broadband platforms. As regards cost conditions, the deployment of NGA is likely to increase the importance of scale economies at the local level. The denser the network topology at the

<sup>3</sup> Crandall (2007).

<sup>4</sup> Bauer & Bohlin (2007).

<sup>5</sup> Ofcom (2007).

<sup>6</sup> ERG (2007); Ofcom (2008, para. 6.35).

<sup>7</sup> European Commission (2009a, Recital 19 p. 4).

<sup>8</sup> Ofcom (2007).

<sup>9</sup> ERG (2009, p. 6).

<sup>10</sup> European Commission (2009b, para. 48 and footnote 44); European Commission (2009a, Article 8, p. 10).

<sup>11</sup> ERG (2007).

<sup>12</sup> European Commission (2009a, p. 19).

<sup>13</sup> European Commission (2009a, Recital 20, p. 4).

<sup>14</sup> European Commission (2009a, Article 8, p. 11).

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