

## **The Applicability of the Electronic Communications Networks & Services ('ECNS') Regulatory Framework to Next Generation Networks ('NGNs')**

The deployment of so-called NGNs<sup>1</sup> by fixed incumbent operators which have traditionally operated copper-based networks has raised the general policy issue of whether the existing access obligations imposed under the ECNS Framework on such operators should be maintained in the future.<sup>2</sup> A more specific issue arises, however, as to whether the ECNS Framework is both sufficiently flexible and clear to be able to effectively target remedies to address access-related market failures, or whether further clarification is required to overcome any identified enforcement 'gap' in light of NGN deployment.

At the outset, it needs to be acknowledged that there are numerous references under the various legal instruments which constitute the ECNS Framework (and those more recent consultation documents regarding its review) that consider the implications of the deployment of NGNs and fibre local access networks. As the Commission's *Communication* on the review of the ECNS Framework notes, the migration to IP networks and the deployment of fibre in the local access

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<sup>1</sup> The Commission refers to IP core networks as NGNs. ECTA (the European Competitive Telecommunications Association) distinguishes between two types of NGNs, namely: (1) "access" NGNs, which involve the deployment of fibre into the local loop, either to the incumbent's street cabinet (+/- 1 km from the customer premises) in conjunction with VDSL(2) deployment or the deployment of fibre all the way to the customer premises (typically, apartment blocks rather than individual homes); and (2) "core" NGNs, which involve the replacement of legacy transmission and switching equipment by IP technology in the core (or 'backbone') network, which results in the changing of telephony switches and the installation of routers and VOIP equipment.

<sup>2</sup> The debate as to whether regulatory forbearance should apply to NGNs has arisen in a number of jurisdictions around the world, including the European Union, the US and Australia.

network will have far-reaching impacts on existing network architectures and services.<sup>3</sup> The 2003 *Recommendation* referred to the fact that fibre local access networks were being constructed, thereby clearly envisaging that the ECNS Framework was an appropriate analytical tool to identify and address the impact of any such construction.<sup>4</sup> As such, fibre core and access networks are not a 'brave new world' innovation that is beyond the scope of the ECNS Framework. According to the Commission: "*the move to NGNs does not provide an opportunity to roll back regulation on existing services if the competitive conditions have not changed.*"<sup>5</sup> However, it is imperative that the nature and quality of any changes to network architecture and ECSs brought about through the deployment of NGNs be appropriately reflected in the application of the ECNS Framework to "markets" into which such ECSs fall.

The implications of deploying IP networks and fibre local access networks for the purposes of market definition, market analysis and the design of regulatory obligations imposed on entities designated to hold SMP in a relevant market, should be considered against the broad policy bases which underpin the ECNS Framework. In particular:

- the creation of a stable and predictable regulatory environment that encourages innovation and stimulates new investment in communications networks and services;<sup>6</sup>

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<sup>3</sup> "Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on the Review of the EU Regulatory Framework for electronic communications networks and services", (the Communication) COM(2006) yyy final, at page 6.

<sup>4</sup> "Commission Recommendation on Relevant Product and Service Markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services" (the Recommendation), 2003/311/EC, at page 24.

<sup>5</sup> "Public Consultation on a draft Commission Recommendation on Relevant Product and Service Markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services" (the Public Consultation), COM(2006) 334 final, at Section 3.3.

<sup>6</sup> "Commission staff Public Consultation Annex to the Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on the

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- mandated access services intended to provide a means of increasing competition, through providing access to facilities that are essential for the provision of competing services,<sup>7</sup> safeguarding service-based competition and consumer choice until sufficient infrastructure-based competition exists;<sup>8</sup>
- actions by NRAs should not reduce incentives for competitors to invest in alternative facilities that will secure more competition in the long-term;<sup>9</sup>
- *ex ante* regulation can protect against the distortion of competition, particularly in relation to vertically integrated undertakings supplying services to entities with whom they compete downstream;<sup>10</sup>
- the need to observe and protect technology neutrality;<sup>11</sup>
- service innovation and differentiation will continue to hinge on the technical limitations effectively resulting from the functionality of the access services provided;<sup>12</sup> and
- in order to achieve the appropriate degree of long-term infrastructure-based competition, new entrants should be encouraged to continue make sustainable infrastructure investment, maintaining and augmenting their existing infrastructure.<sup>13</sup>

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*Review of the EU Regulatory Framework for electronic communications networks and services" (the Impact Assessment), COM(2006) 334 final, at Section 5.1.1.*

<sup>7</sup> *Access Directive*, Recital 19.

<sup>8</sup> *The Recommendation*, at Section 4.2.2.

<sup>9</sup> *Access Directive*, Recital 19.

<sup>10</sup> *Access Directive*, Recital 17.

<sup>11</sup> Refer to speech of Commissioner Erki Liikanen, "EU Policy for the Development of the European Telecoms Sector", Barcelona, 21 November 2003, *Speech/03/568*. See also Alexiadis & Cole "The Concept of Technology Neutrality", *ECTA Annual Review 2004*, pp. 76-80 . Refer most recently to Cave/Stumpf/Valletti, "A Review of Certain Markets Included in the Commission's Recommendation on Relevant Markets Subject to *ex ante* Regulation", *Independent Report for the European Commission*, July 2006, at para. 3.5.

<sup>12</sup> *The Recommendation*, at Section 4.2.2.

It is imperative that these policy goals are reflected at all stages of the implementation of that ECNS Framework: namely, the separate and distinct exercises of market definition, market analysis, and the imposition of appropriate obligations on entities found to have SMP in relevant markets.

## **I. Market Definition**

### ***The Impact of NGNs***

As noted above, the *Recommendation* clearly contemplated, as at 2003, the deployment of both NGNs and fibre access networks, referring to the varying degrees to which such deployment has occurred and was occurring across Europe at the time. Accordingly, it is wholly appropriate that the Commission is taking the markets defined in the *Recommendation* as the starting point for its current review. While the introduction of 'new' services may in particular circumstances warrant the definition of new retail markets and the revision of the scope of existing access markets that support the provision of retail services (*e.g.*, because of a fundamental change in the technology used in the new access network), the market definition analysis should always begin by considering whether such services fall within existing relevant product market definitions. The introduction of a new service, however, does not necessarily warrant the definition of a new relevant product market.

Further, the market definition process must adhere to the principle of technology neutrality, at both wholesale and retail levels. As such, the platform used to provide services should only be relevant to market definition to the extent that technological differences between platforms change the nature of the service provided, so that it ceases to be (or becomes) substitutable with services provided on other platforms. The Commission's *Impact Assessment* regarding proposed

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<sup>13</sup> As noted at page 5 of the *Communication*, relative to their turnover, new entrants are investing more than fixed incumbents.

changes to the ECNS Framework clearly makes this point (at page 11), stating that the current framework allows inter-platform competition to be fully taken into account, and avoids technology-specific regulation, applying the same regulatory principles regardless of which existing or new technology is involved. It is important that the definitions of relevant markets reflect this approach.

Wholesale markets should be defined to include all substitutable services that constitute the inputs necessary to provide relevant downstream retail services. Great care must be taken not to exclude newer services simply because they are 'emerging' or 'embryonic'. The distinction between emerging markets, on the one hand, and emerging services, on the other, is both material and significant under the ECNS Framework. While there are clearly valid reasons for concluding that emerging markets are often so new and volatile that it is not possible to determine whether the '3 criteria' *ex ante* threshold test is met,<sup>14</sup> it is important that new services are properly considered in terms of their substitutability with other services falling within a relevant product market. It may be the case that differences in functionality, price or ubiquity impact on the issue of substitutability, but it will be important that each case-by-case assessment considers whether there has been any material impact on the issue of substitutability. It should not, for example, simply be assumed that new services are not substitutable with those falling within existing product markets, or that 'emerging markets' and 'emerging services' are interchangeable concepts.<sup>15</sup> As the Commission notes, the use of more efficient technology to provide existing regulated services does not alter the justification for that regulation.<sup>16</sup>

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<sup>14</sup> See the *Public Consultation*, at Section 3.4, para. 1.

<sup>15</sup> Cf. the *Public Consultation*, at Section 3.4, para. 3.

<sup>16</sup> The *Public Consultation*, at Section 3.3. Moreover, in Case IV/36.539 – *British Interactive Broadcasting/Open* (OJ L 312/5 of 6.12.1999), the Commission took the view that it would be inappropriate to distinguish between pay-television markets on the basis of their modes of transmission (namely, analogue and digital). A material factor in reaching this conclusion was the fact that analogue broadcast pay-television would be completely superseded by digital broadcast pay-television (in other words, a new generation technology) at some point in the future (see discussion at paragraphs 24 -27).

Further, it is also important to ensure that the inclusion of services based on NGNs and fibre access networks is reflected in the identification of necessary ancillary services. For example, to the extent that the collocation, duct access or backhaul services that are either an inherent part of fibre access networks, or are required for the efficient operation of services provided over NGNs and fibre access networks, relevant markets defined should include such new ancillary services, where they differ from existing ancillary services.<sup>17</sup>

### ***The Public Consultation***

There are a number of elements of the market definitions set forth recently by the Commission in its *Public Consultation* that do not appear to reflect the principles set out above.

In particular, while Section 4.2.1 notes that "broadband connections are also capable of facilitating delivery of narrowband services", it concludes that fixed retail broadband and narrowband access do not fall within the same market. The reasoning behind this conclusion appears to rest on whether consumers would switch to broadband connections. Given the discussions elsewhere in the *Public Consultation* concerning the deployment of fibre access networks, it would be more appropriate if Section 4.2.1 were to also consider whether access services provided over such connections fall within either the narrowband or broadband access markets defined or, indeed, whether they may require a re-definition of the relevant markets as and when a material number of customers acquire access services over such connections. The discussion (at page 25 of the *Public Consultation*) regarding the impact of cable networks or the advent of fibre access connections on the effective competitiveness of the retail market simply assumes that access provided over such networks falls within the relevant product market. However, even that discussion expressly defines that market as being limited to "access to the public telephone network".

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<sup>17</sup> These types of ancillary services are already widely mandated by NRAs in their market reviews, as the principle remedy would be ineffective without such ancillary services. Indeed, the examples of obligations listed in Article 12 of the *Access Directive* already contain examples of such ancillary services (as opposed to the narrower concept of "associated facilities", which are specifically defined in Article 2 of the *Framework Directive*).

Largely as a result of the proposed definition of a retail market for "access to the public telephone network", the discussion concerning the definition of the upstream wholesale market is focused on copper access networks. Again, in view of the advent of fibre access networks and other technologies referred to expressly in the retail context by the Commission, it would be appropriate to discuss the extent to which access and origination services provided through the use of such technologies fall within the particular relevant product market or otherwise have an impact on the scope of such relevant markets. In addition, 'wholesale access' is addressed in the Commission's discussion only in the context of wholesale services provided in support of "data services or multiple voice channels". This limitation is unfortunate. As the introduction of Wholesale Line Rental products across many Member States demonstrates, wholesale access has proven in practice to be equally important for the provision of non-data services as it is for data services.

While reflecting the narrowband/broadband distinction discussed above, Section 4.2.2 of the *Public Consultation* does note that the principle of technology neutrality requires consideration of the substitutability of xDSL, cable, satellite, fibre and terrestrial TV networks in providing broadband access. Unfortunately, the discussion of networks based on these technologies does not consider the impact of such higher capacity connections on the broadband/narrowband distinction.

Largely as a result of this unfortunate technology-specific "categorisation" of networks, the wholesale access markets defined are technology-specific, in that they refer to metallic loops and DSL technology. It would be more appropriate for the defined markets to be technologically neutral, so that services that are substitutable for unbundled local loops and wholesale broadband access can be included in the relevant markets, as appropriate. A narrowly defined market along such lines tends to undermine the language used otherwise throughout the ECNS Framework regarding the principle of technology neutrality and its relationship to the introduction of NGNs and fibre access networks.

Finally, the narrow technology-specific wholesale access market definitions which the *Public Consultation* appears to be embracing have quite serious potential policy ramifications for the market transition to services that are based on NGNs and fibre access. For example, the express exclusion of services based on technologies other than metallic loops sends significant signals to the marketplace, namely:

- it can be construed as inadvertently granting the "regulatory holiday" sought by a number of incumbent operators for their investments in NGNs and fibre access networks, which the Commission has otherwise stated that it is not prepared to grant on the basis of the general principles underlying the ECNS Framework;<sup>18</sup>
- it sends signals to those entities constructing NGNs and fibre access networks that they need not begin to plan for potential access obligations relating to such infrastructure, either in terms of services to allow third parties to backhaul services and otherwise connect to such constructions, or in terms of access to physical infrastructure such as ducts and street boxes;<sup>19</sup>
- greater certainty and predictability would be provided by a review of the relevant markets that acknowledges that the underlying infrastructure supporting many services is being migrated, and that it is appropriate to begin industry-wide planning for service migration at this stage;

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<sup>18</sup> The *Communication*, at page 5; cf. discussion above which include references to footnotes 4-13 inclusive. The most recent set of Article 7(3) comments by the Commission regarding an NRA measure imposing regulatory obligations where a regulatory holiday had been sought is to be found in the Commission's letter of 21 August 2006 regarding case DE/2006/0457 (relating to the Market for IP bitstream access with handover at IP level).

<sup>19</sup> Indeed, given the wording used by the Commission in Recital 19 of the *Access Directive* that "[an] operator with mandated access obligations cannot be required to provide types of access which are not within its powers to provide", it would appear that existing SMP-designated fixed operators might be encouraged to configure their new network deployment in such ways as to be unable to satisfy access requests, nor to be able to comply with the decisions of NRAs to grant access within any meaningful timeframe.



- a failure to encourage consistent approaches to the development of migration strategies across the Member States will lead to market fragmentation between jurisdictions; and
- it suggests that the Commission is contemplating allowing the assets of, and investments made by, alternative network operators to be stranded, despite the fact that the nature and location of those assets is essentially a function of current and historic regulation, thereby discouraging any further investment.

## ***Conclusions***

To the extent that the Commission does not clarify its position in a manner which reflects the principle of technology neutrality, there is every possibility that fixed incumbent operators will exploit the lack of clarity discussed above by embarking upon network deployment strategies designed to thwart the future imposition of access obligations.<sup>20</sup> Moreover, even if an NRA were to interpret the ECNS Framework flexibly so as not to permit such circumvention, a national appeals body, especially one of a judicial character, would be tempted to read any ambiguity in Community "soft law" to the advantage of an operator on whom a regulatory obligation would otherwise be imposed. As existing appeals from NRA decisions have already demonstrated,<sup>21</sup> the upholding of such appeals does much to weaken the strength of the ECNS Framework.

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<sup>20</sup> In this regard, it is important to note that, according to the terms of Paragraph 102 of the *Access Notice* (Notice on the application of the competition rules to access agreements in the telecommunications sector – OJ, C 265/2 of 22.8.98): "Network configuration by a dominant network operator which makes access objectively more difficult for service providers could constitute an abuse unless it were objectively justifiable." It should not be assumed that the deployment of fibre to the home, although resulting in an increase in capacity which facilitates the provision of a greater range of services, is in itself efficiency enhancing (and hence "objectively justifiable"). Moreover, in the case of the vast majority of service providers, access to NGNs will not simply be rendered "more difficult", but impossible (refer to discussion in the *Annex* of technical restrictions to access).

<sup>21</sup> For example, refer to: Case No. 1047/3/304 [2005] CAT39 (Hutchinson 3G UK); Decision N.02/05 Appeal No. ECAP 2004/01 (Hutchinson 3G Ireland).

## II. Access to NGNs/Fibre Access Networks

### *Rationale for Regulation*

As the Commission notes, both fixed incumbents and new entrants have been investing, and continue to invest, in extending and upgrading network infrastructure, in order to be able to provide innovative services.<sup>22</sup> However, while new entrants are investing more than incumbents (relative to their size), it is clear that the sustainable deployment of competitive infrastructure is unlikely to lead to ubiquitous nation-wide network construction, at least in the majority of Member States. As such, the availability of wholesale access services will continue to be essential for the provision of competing retail services as networks migrate to fibre access and incumbents follow new entrants in adopting NGN in the cores of their networks. Only when sufficient investment has occurred to create effective competition can regulation be lifted.<sup>23</sup>

The ECNS Framework seeks to balance flexibility and predictability, and to promote investment and innovation.<sup>24</sup> Although the ECNS Framework is characterised by this degree of flexibility, for the reasons explained above in the discussion on Market Definition, it is nevertheless the case that the existing guidance under the ECNS Framework requires reconsideration and extension so that, in a period when the platforms over which services are being provided are migrating to either or both of fibre access and NGNs, there is less uncertainty as to the ability of the current approach to address access-related issues.

For example, the manner in which a number of issues will be addressed requires greater precision, namely:

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<sup>22</sup> The *Communication*, at page 5.

<sup>23</sup> The *Impact Assessment*, at page 11. Moreover, as the Commission has also noted (at page 10): "*The investments needed for network modernisation are substantial, but the fact that investments in NGN represent large capital outlays is not in itself justification for regulatory forbearance, since the operational savings from rationalisation and the use of modern technology are also considerable*".

<sup>24</sup> The *Impact Assessment*, at Section 5.1.1.

- the circumstances in which existing access obligations will be *withdrawn*;
- clarification of the circumstances in which access obligations relating to either or both of fibre access networks and NGNs will be *enforced*;
- strategies for the smooth transition to the *enforcement* of fibre access/NGN access obligations; and
- any requirements to provide *ancillary services* required to support fibre/NGN access for to such ancillary services .

In determining the nature of the changes likely to be required to create greater legal certainty, the migration or transition of obligations to reflect technological evolution within a relevant product market should take into account the key dynamics of the relationship between access providers and access seekers. First, access providers rarely extend the scope of an existing access service to encompass new technologies, ancillary services or related (or associated) facilities. For example, the provision of collocation and backhaul services and Wholesale Line Rental had to be mandated with the advent of local loop unbundling and to allow new entrants to establish a single billing relationship with voice customers, respectively. Access providers firmly resisted the voluntary provision of such services.

Second, there is an inherent relationship of dependency between the access provider and the new entrant.<sup>25</sup> This dependency must be borne in mind when contemplating either withdrawing or amending obligations, otherwise the risk of stranding assets is almost certain to materialise.<sup>26</sup>

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<sup>25</sup> The concept of "dependency" is a long established competition law principle which is relied upon under Article 82 EC to prevent the refusal of supply by dominant undertakings to parties with whom they have historically dealt with in the past. Refer to discussion in Section 9.2.1 of the *DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses – Public Consultation*, Brussels December 2005.

<sup>26</sup> Such concerns are particularly important in connection with fibre access networks, especially when one considers the policy priority accorded to the unbundling of local loops by regulators across the EU, and to the

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Third, it is important to acknowledge that some obligations are genuinely inappropriate, unnecessary or rendered redundant by technological change. For example, carrier selection and carrier pre-selection are likely to be both unnecessary and technologically impossible in an IP-based NGN environment. However, the policy challenge is to ensure that functionally equivalent access services are made available, and that current obligations to provide such services are not simply withdrawn without replacement.

### ***Proposals***

The *Framework Directive* and the *Access Directive* provide the legal basis for the imposition, maintenance and amendment of appropriate obligations imposed on SMP-designated undertakings where relevant markets are found to be not effectively competitive. These provisions require that an appropriate period of notice be given to parties affected by the withdrawal of an obligation. They also require that obligations be appropriate and proportionate to the market failure identified. However, they do not provide express guidance regarding the amendment of obligations in general or the amendment of obligations to accommodate technological change within a relevant product market, such as that which might result from the deployment of NGNs and fibre access networks.

In each case, it is a matter for the NRA in question to determine the most appropriate manner in which to ensure that existing obligations remain in place for as long as is necessary, that appropriate third party migration planning is conducted and services are made available, and that services providing "equivalent inputs" are made available. In each such case, a different combination of amendments to, and/or maintenance of, existing obligations, and the imposition of new obligations, may well be appropriate.

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importance attached to the climbing of the "investment ladder" by alternative operators in the formulation of appropriate remedies: refer to discussion in the *Annex* to this memorandum.

In relation to the amendment of existing obligations and the imposition of new obligations, we propose that the most appropriate approach to ensure that mandated access services keep pace with technological change (including the resulting effects on network architecture, changes to relevant equipment and the relocation of network functionality and intelligence), is to adopt an "*equivalence of inputs*" approach.<sup>27</sup> Guided by this principle, NRAs should be able to amend and impose obligations in a manner that ensures that access obligations, in particular, are modified over time to keep pace with changes in the nature and location of the access bottleneck to which they are addressed. Ultimately, to the extent that the central question of whether there exists SMP is answered in the affirmative, access remedies should be adapted to be able to continue addressing the lack of effective competition resulting from the existence of SMP.

In addition, because of the potentially significant ramifications of withdrawing access services on which entities using such services are likely to have become dependent over time, we would suggest that the following principles be used to provide an analytical framework for requiring that access services continue to be made available, under Article 12(1)(c) of the *Access Directive*, in a manner that increases certainty and predictability. Access providers should only be permitted to withdraw an access service if the following conditions, all of which are consistent with the underlying policy goals of the ECNS Framework, are satisfied:

- there is clear evidence that the incumbent no longer has SMP in the relevant market (where the market is accurately defined to include all relevant substitutable services);<sup>28</sup>
- there is no reasonable demand for the mandated service; and


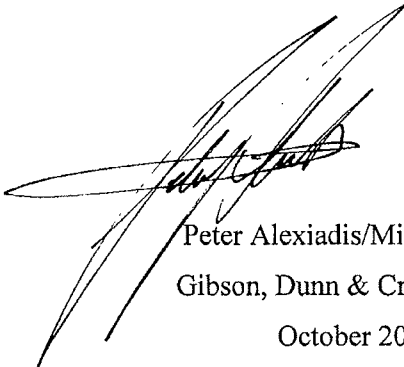
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<sup>27</sup> As that concept has been developed by OFCOM in its *Final Statements on the Strategic Review of Telecommunications* on 22 September 2002, and introduced into the United Kingdom in 2005.

<sup>28</sup> It is important that the assessment of "effective competition" under the Commission's so-called "modified greenfield approach" take into account the impact of access services already being provided on commercial terms (*i.e.*, on a non-mandated basis). This will facilitate subsequent reappraisals of market conditions if, for example, any such voluntarily provided services are terminated in the future.

- it is reasonable for those using the existing access service to migrate to an alternative product, taking into account both the functional substitutability of both products and the relative costs to be incurred by the access seeker (including the actual cost of the alternative product and the cost of any additional investments required to be able to use it in place of the existing service).

In the absence of such clarifications being provided in the "soft" Community law instruments which purport to interpret the scope of the relevant provisions in the *Framework Directive* and the *Access Directive* that govern access relationships, there will be continued uncertainty as to the ability of NRAs to address perceived market failures through the regulation of access relationships with SMP-designated operators in the face of increasing NGN deployment.



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